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

The Portland Planning Board will hold a meeting on 2-26-19, City Hall, **ROOM 209**, 2nd Floor of 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 PM

i. Level III Site Plan and Subdivision; 10 Hammond Street; The Preserve at South Ridge, LLC., Applicant. (estimated time 4:30 - 5:30 p.m.) The Planning Board will hold a workshop on a proposal for a 3-story building with 16 residential units consisting of 6 one bedroom, 7 two-bedroom, and 3 three-bedroom units. The lot has 15,433 sf with one driveway proposed from Hammond Street. The building is proposed with a footprint of 8,276 sf and a total floor area of 32,242 sf. Sixteen (16) parking spaces are proposed. The application is subject to review under Portland's subdivision, site plan and inclusionary zoning ordinances.

PUBLIC HEARING - 6:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON 1-22-19 AND 2-12-19

1-22-19: For the Workshop, Public Hearing and Evening Workshop - All members were present.

2-12-19: Workshop - All members were present. Public Hearing - Cancelled due to storm.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON 1-22-19

i. Cultural Plan Update, Creative Portland. Mazer moved and Stanley seconded a motion to find the proposed Cultural Plan Update is consistent with Portland's Comprehensive Plan and recommends adoption of the plan to the City Council. Vote: 7-0

ii. Zoning Text Amendments to B-2, B-2b and B-2c, Drive-throughs in buildings with upper floor residential uses, City of Portland. Mazer moved and Stanley seconded a motion to find the proposed text amendments to the Section 14-182, Permitted Uses, and Section 14-183-Conditional Uses of the B-2, B- 2b, and B-2c zones of the Land Use Code are consistent with the Comprehensive Plan and recommends adoption of the amendments to the City Council. Vote: 7-0

5. NEW BUSINESS

i. Level III PlanAmendment and IZ Conditional Use Amendment; 56 Hampshire Street; New Height Group, LLC., Applicant. (estimated time 6:30 - 7:15 p.m.) The Planning Board will hold a public hearing on the amended Level 3 subdivision and site plan application at 56 Hampshire Street. The revisions include adding a residential unit for a total of 31 units and revising the exterior materials for the building facades. The application is subject to Portland's site plan, subdivision and affordable housing ordinances.

ii. Level III Site Plan; 150 Riverside Street; Patagon Storage, LLC., Applicant. (estimated time 7:15 - 8:00 p.m.) The Board will hold a public hearing to consider the redevelopment of 142 and 150 Riverside Street into a 3 story, self-storage building with a footprint of 33,344 sf and a total floor area of 100,343 sf. The 3.6 acre site is located in the B-4 zone. The site plan is subject to Portland's site plan and stormwater permit standards.

iii. Level III Site Plan; 56 Milliken Street; Jeff Witherell, representing Plymouth Industrial REIT, Inc., Applicant. (estimated time 8:00 - 8:45 p.m.) The Planning Board will hold a public hearing on a proposed 72,000 sf warehouse at 56 Milliken Street. The warehouse is proposed adjacent to an existing 200,035 sf warehouse, which will remain. Access is currently from Milliken Street and a second one-way access is proposed off of Riverside Industrial Parkway. A total of 2.98 acres of impervious surface area will be added to the development site. A project is in the Industrial IM Zone and will be reviewed under Portland's Site Plan Standards and under the delegated review for the Site Location of Development Act.

iv. Level III Site Plan, Subdivision, and IZ Conditional Use; 50 Monument Square; 50 Monument LLC, Applicant. (estimated time 8:45 - 9:30 p.m.) The Planning Board will hold a public hearing on the conversion of the upper floors into 21 residential nits. The existing building has a total of 47,551 sf on the site with 0.16 acres. The first two floors will remain retail and commercial uses. The site is in the B-3 and Downtown Entertainment Overlay Zones. The proposal is subject to Portland's subdivision, site plan, Inclusionary zoning conditional use, and historic preservation standards.

Memorandum
Planning and Urban Development Department
Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Matthew Grooms, Planner
Date: February 22, 2019
Re: Sixteen Unit Residential Condominium, 10 Hammond Street, Hammond House LLC
Project #: PL-000418-2018 CBL: 12-C-4, 12-C-6 and 12-C-11
Meeting: February 26, 2019

I. INTRODUCTION

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

A total of 157 notices were sent to property owners within 500 feet of the site and a legal ad ran in the February 15th and 18th 2019 editions of the Portland Press Herald.

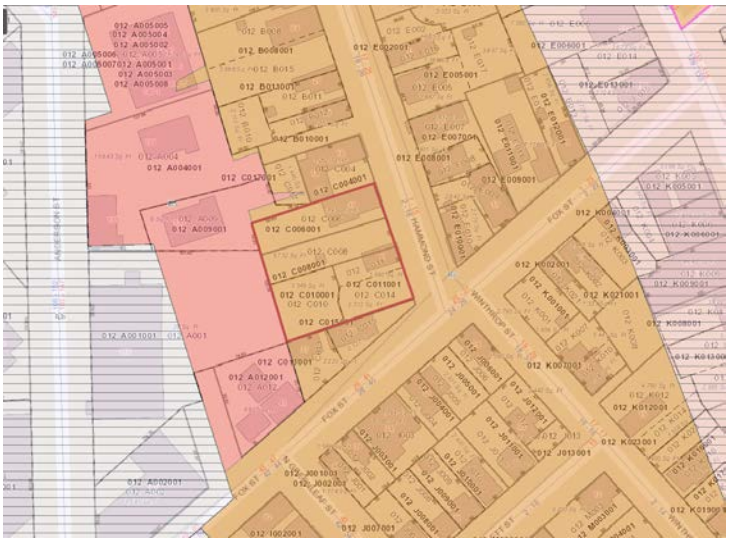

Figure 1: Subject parcel and zoning information

Applicant: Kevin O'Rourke, Hammond House, LLC
Consultants: Will Savage, P.E., Acorn Engineering; Sam Level, Acorn Engineering; Ryan Senatore, Ryan Senatore Architecture; Richard Eaton, R.W. Eaton Associates.

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Driveway Aisle width – 18' feet Staff Comments: The City's Traffic Engineer supports a waiver from the City's Technical Standards for driveway width given low traffic volumes and traffic characteristics of Hammond Street.	Technical Manual, *Section 1.7.2.3,* requiring a minimum driveway aisle width of 20 feet for two-way ingress and egress
Driveway Separation – Reduce to less than 100' feet Staff Comments: The City's Traffic Engineer supports a waiver from the City's Technical Standards for Driveway Separation, based upon the need to provide maximum separation between the driveway and Fox Street, and low traffic volumes along Hammond Street and from the proposed development.	Technical Manual, *Section 1.7.2.7.* requiring 100' feet of separation between driveways for a 25 mph road.
Review	***Applicable Standards***
Site Plan	*Section 14-526*
Subdivision	*Section 14-497*
Inclusionary Zoning (IZ)	*Section 14-474, Section 14-487*

III. PROJECT DATA

Existing Zoning	R-6 Residential
Existing Use	Single-Family (2 units)

Proposed Use	16 Residential Units
- Bedroom Mix	3 three-bedroom units, 7 two-bedroom units, 6 one-bedroom units
Parcel Size	15,433 SF

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

IV. EXISTING CONDITIONS

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

Figure 2: Existing buildings on-site. To be demolished under this proposal

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

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

V. PROPOSED DEVELOPMENT

The development is proposed as a new three-story, sixteen-unit residential condominium, composed of a mixture of one-, two- and three-bedroom units with subsurface structured parking for fourteen (14) vehicles, including one handicap space, and two (2) exterior parking spaces. As measured from average grade, the building is forty (40) feet tall, though it includes a number of rooftop appurtenances and roof decks that extend up to fifty (50) feet above grade. The building itself emphasizes pedestrian access and activity at street level, with front entrance and unit patios fronting Hammond Street. Vehicular access is deemphasized by shifting the garage entrance towards the rear of the site, that is accessible via an eighteen (18) foot driveway located along the northerly property boundary. The use of a driveway is consistent with other developments along Hammond Street. The project also features closure of two (2) existing curb cuts, for a net reduction of one (1).

As mentioned in the existing conditions section, the development site is approximately 25% developed, with significant open space and vegetation. While much of that existing area is to be developed, and vegetation is to be

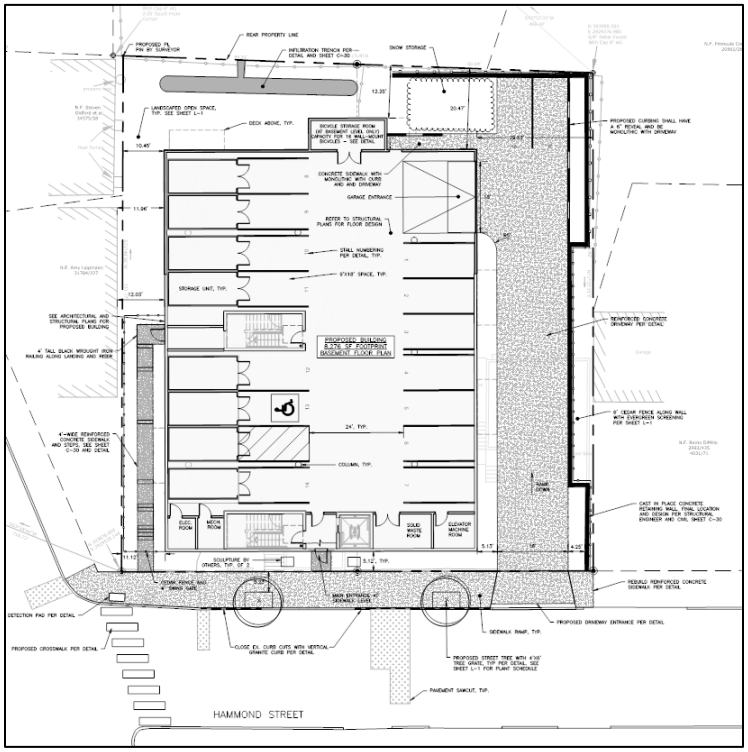

Figure 3: Proposed Site Plan

removed, existing vegetation located within the building setback areas will be preserved where possible, and will be significantly augmented through additional plantings. A mixture of native ornamental grasses, perennials, shrubs and trees are proposed along the building's exterior, at the rear of the site and along the driveway edge for additional buffering, and along the property frontage. Based upon the width of the property's frontage, two street trees are being provided to partially satisfy the city's street tree requirement. A retaining wall and six (6) foot cedar fence is proposed along the northerly property boundary to provide additional noise and visual buffering between the neighboring property.

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

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

Figure 4: Proposed Front Elevation (East)

Figure 5: Proposed Fox Street Elevation (South)

VI. Public Comment and Neighborhood Meeting

As of the writing of this report, three written comments have been received by the Planning Division. The concerns raised by abutters were primarily focused on building design, particularly the height and massing of the proposed building as it compares with the largely one- and two- story buildings found elsewhere along Hammond Street and in the vicinity. Other concerns raised included the affordability of new units and limited consideration of the impacts of climate change.

City staff also met with Cynthia Cochran, President of

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

In response to these concerns, the staff would note that design review comments for both the first and second iteration of the building's design have focused on the massing and scale of the building, particularly as it related to the façade visible from Fox Street, proposed rooftop features, and pedestrian scale features along Hammond Street and at the building entrance. The design review process requires that development relate in terms of scale and massing to nearby development, but does not require that a new development replicate existing development. Given that this scale of development is permitted by right in the R-6 zone, the staff are instead suggesting that the design of the building continue to be revised so as to be more complementary of and integrated within its context. Please see the design review memo for more information (Attachment 2).

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

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

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

a. The owner of the property is Kevin O'Rourke, Hammond House, LLC. The applicant has provided a copy of the warranty deed, recorded at the Cumberland County Registry of Deeds (Book 6420, Page 257), which demonstrates their right, title and interest in the property. (Attachment C)

b. As evidence to demonstrate sufficient financial and technical capacity, the applicant has provided a letter from Camden National Bank indicating that between the applicant's funds and bank financing, that applicant has sufficient financial capacity to complete the proposed project. Similarly, information has been provided on the development team demonstrating the capacity to design and construct the project. (Attachment G)

VIII. ZONING ANALYSIS

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

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

	Required	Proposed
Lot Size	2,000 SF	15,433 SF
Area Per Dwelling Unit	725 SF	965 SF
Minimum Street Frontage	20' FT	120' FT
Front Yard Minimum	0 (Abutter Average)	5.12' FT
Front Yard Maximum	N/A	5.12' FT
Rear Yard	10' FT	13.4' FT
Side Yard	5' FT	29.5' FT (Right), 10.5' FT (Left)
Maximum Lot Coverage	60%	56%
Maximum Height	45' FT	39.8' FT
Open Space	20%	25%
Maximum Impervious Surface	80%	75%

Off-Street Parking	13 (1 space/unit, first 3 not required)	16 (1 space/unit)

While the proposed height of the building is compliant with the standards of the R-6 zone, it should be noted that the height of the building with appurtenances based upon average grade is approximately fifty (50) feet. Based upon the elevation change within the vicinity of this site, it is anticipated that there will be long views of the building from multiple vantage points. In order to mitigate the visual impacts of this building, the staff are encouraging the applicant to reconsider proposed rooftop features, notably the multiple roof decks proposed for third floor units, to better integrate the development within the surrounding neighborhood.

IX. DEVELOPMENT REVIEW

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

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

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):

   - It is suggested that additional permanent erosion control be provided on the adjacent slope beyond the spillway outlet. The Applicant has noted that the slope currently exists with rip rap. Please provide information on this existing condition that is adequate without modification for a point discharge location.
   - The proposed infiltration trench is located immediately adjacent to a steep slope on the neighboring property. The applicant should address the potential of the infiltration trench compromising the slope, i.e. flow exiting the side of the trench instead of draining vertically into the ground. Additional soil condition information should be obtained to ensure that the system will drain as intended. The application has noted that they will be working with a geotechnical engineer, and will adjust design as required based on their analysis. This information should be submitted to the City.

2. *Sufficient Water Available (Section 14-497 (a) 2 and 3)*
   The project will be served by a new 4-inch domestic service and 6-inch fire service drawn from the existing water main in Stevens Avenue. An 'Ability to Serve' letter was provided by the Portland Water District.

3. *Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)*
   The proposed project closes two curb cuts and shifts the driveway to the north. The proposed driveway would measure eighteen (18) feet in width and would provide both ingress and egress to the site. The proposed relocation of the driveway provides greater separation between the driveway and intersection. 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 3):

   - The Applicant has noted that acceptable sight distance will be provided. A condition of approval should include details that requires the property line fence to be designed to maximize sight distance to both vehicles and pedestrians.
   - The driveway location is based on maximizing the distance from Fox Street and building design. Given these factors and low traffic volumes on Hammond Street and from the development, I support a waiver from City Standards.
   - Contractor parking in the neighborhood is not permitted and should be specifically noted. Additionally, sidewalk impacts and closure details shall be provided.

- Status Update: The applicant has noted that contractor parking restrictions have been incorporated. No details on sidewalk closures have been provided and I suggest that this be resolved prior to issuance of any City Permit.

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 six (6) inch sanitary sewer service connection into the existing sewer main beneath Hammond Street. The Department of Public Works is currently reviewing this request, and will weigh in prior to the public hearing.

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- see Subdivision discussion regarding traffic congestion and site circulation above.

b. Sidewalks
The applicant is proposing to close two existing curb cuts, and repair the concrete sidewalk along the property's frontage to match the existing condition. A crosswalk is proposed between across Hammond Street at the intersection of Hammond and Fox Street. A detectable warning panel is proposed on the west side of the street, though no improvements are proposed at the opposite corner.

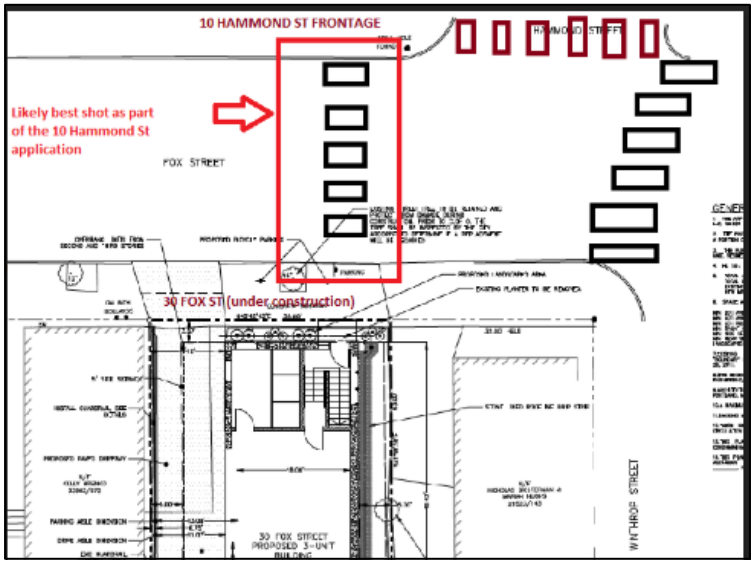

Figure 6: Suggested location proximate to project at 30 Fox Street

Based upon public input and Section 14-526(a)(1) of the City's site plan standards, the staff have requested that a crosswalk be provided across Fox Street in the vicinity of the project due to projected impacts. The standard specifically states, in regards to impacts on surrounding street systems, that a site makes provisions for, "*vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets and ways*". Given the scale and scope of the project, the anticipated impacts are significant enough to warrant this off-site improvement.

c. Public Transit Access
The public transit requirements do not apply to this project.

d. Parking
Sixteen (16) parking spaces are being proposed, including two (2) spaces located outside of the subsurface structured parking, at the end of the driveway. The proposed parking meets city zoning requirements for off-street parking.

e. Bicycle Parking
The proposal includes a bicycle storage room with space for more than five (5) bicycles which meets the site plan standard requiring a minimum of two bicycle parking spaces for every five dwelling

units.

2. *Environmental Quality Standards*

a. Preservation of Significant Natural Features
There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation
A landscaping plan was submitted as part of the application. The plan shows two street trees, a variety of shrubs and trees as buffer plantings along the northerly and westerly property boundaries, and shrubs, perennials and ornamental grasses along the building's exterior and adjacent to on-site walkways and driveways. Along the northerly property boundary, a retaining wall and cedar fence is proposed for both site stabilization and additional site buffering.

Jeff Tarling, the City Arborist, has reviewed the proposed landscaping plan and offers the following comments:

Many of the plants selected, while they have ornamental value, do not have much in the way of screening/buffering value. Given the scale of the proposed project, it is recommended that landscape screening and buffering be used to help the project fit into the neighborhood.

The Hammond Street frontage is acceptable as shown. Portions of the site along Fox Street, buffer plantings at the rear of the site and plantings along the driveway edge pose the greatest concern.

Based upon the city's street tree requirements, a total of two (2) trees are required, spaced thirty (30) to forty-five (45) feet apart. This requirement is being met.

c. Water Quality, Storm Water Management and Erosion Control
Once developed, on-site impervious surface will increase from 4,009 square feet, to 11,565 square feet, a net increase of greater than 1,000 square feet, which necessitates compliance with the city's requirements for stormwater quality and quantity management.

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

- In accordance with Maine DEP Chapter 500 Regulations and Section 5 of the City's Technical Manual, the Applicant is required to meet the Basic, General and Flooding Standards for Stormwater Management. The applicant has proposed erosion and sedimentation control features to meet the Basic Standard, and an underdrained subsurface sand filter and infiltration trench to meet the General and Flooding Standards. The applicant has addressed prior comments. The Following comments remain to be addressed on the stormwater management plan.
    - It is suggested that additional permanent erosion control be provided on the adjacent slope beyond the spillway outlet. The applicant has noted that the slope currents exists with rip rap. Please provide information on this existing condition and that it is adequate without modification for a point discharge location.
    - The proposed infiltration trench is located immediately adjacent to a steep slope on the neighboring property. The Applicant should address the potential of the infiltration trench compromising the slope, i.e. flow exiting the side of the trench instead of draining vertically into the ground. Additional soil condition information should be obtained to ensure that the system will drain as intended. The applicant has noted that they will be working with a geotechnical engineer, and will adjust design as required based on their analysis. This information should be provided to the City.

3. *Public Infrastructure and Community Safety Standards*

a. Public Safety and Fire Prevention

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

- The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
- The new building shall not affect the egress, escape or required fire department access for the neighboring building(s)
- The street address shall be marked on the structure and shall be approved by the City E-911 Addressing Officer.

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

4. Site Design Standards

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

b. View Corridors
This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

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

d. Exterior Lighting
The applicant has submitted a lighting and photometric plan. The plan shows exterior, building mounted wall packs near the entrance, pedestrian walkway and driveway. All exterior site lighting including lighting of building entrances will be full cutoff with no light emitted above the horizontal plane and light trespass falls within the allowable limits as stipulated under Section 12 of the Technical Manual.

e. Noise and Vibration
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 is adverse conditions related to noise and vibration.

f. Signage and Wayfinding
This standard does not apply to the proposal.

g. 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 multi-family dwelling at 10 Hammond Street. The design review was performed by Caitlin Cameron, Urban Designer, Christian Roadman, Planner and Matthew Grooms, Planner. The project was reviewed against the R-6 Small Infill Development Design Principles & Standards (Appendix 7 of the Design Manual) as well as the Two-family, Special Needs Independent Living Units, Multiple-family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (Section I of the Design Manual).

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

a. Proposed design is consistent with all of the Principle Statements
b. The majority of the Standards within each Principle are met
c. The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale,

materials, and siting, as well as the general character of the established neighborhood, thus Standards A-1 through A-3 shall be met.

d. The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:
The proposed design **does not pass** all of the criteria of the R-6 Alternative Design Review, with findings listed below – for full design review, please see attached memo (Attachment 2):

- When a project deviates in type and scale from what is found in the context, it is the responsibility of the design to integrate and relate that building into the established fabric. The proposed project is a sixteen-unit building, four stories tall, and 80' wide on the street – much larger than the predominantly single-family homes surrounding it.
- Staff review finds that the combination of the scale (width, length, and height), the form (especially roof form with superfluous roof decks and appurtenances), and abrupt building interface with the street are all aspects of the project that do not meet the standards to relate and respect in a harmonious way the predominant character-defining architectural features of the neighborhood.
- The character-defining architectural features of the neighborhood include:
  - Simple forms, including simple roof forms (front-end gable or flat roofs with few examples of dormers, roof top additions, or complex forms)
  - Vertically proportioned front façade
  - Small-scale buildings - One and half to two and a half story single family homes with gabled roofs, three-story multi-family buildings with flat roofs
  - Building widths ranging from 15' to 25'
  - Symmetrical façade composition with very few window types, vertically proportioned, double-hung windows
  - Simple material palette with masonry foundation and clapboard siding
  - Articulation through bay windows and entrance stoops or porches, overhanging eaves and cornice lines – especially on multi-family buildings

Figure 7: Rendering of Building from 30 Fox Street Site

Figure 8: South facing elevation showing rooftop appurtenances.

C. INCLUSIONARY ZONING (Section 14-487)

As required by the City's Inclusionary Zoning Ordinance, residential developments with ten (10) or more units are required to provide a minimum of ten percent (10%) of the dwelling units as Workforce Housing units, and the units themselves must contain in total, ten percent (10%) of the total bedroom count for the entire development. The City's Housing Program Manager, Victoria Volent, has reviewed the application and offers the following comments (Attachment 5):

> To comply with the Division 30, Section 14-487, the applicant is required to provide one two-bedroom unit or two one-bedroom units and a fractional fee-in-lieu of $63,654 ($106,090 x 0.6). As an alternative to providing Workforce Housing Units, the developer shall pay a fee-in-lieu of $169,744 (1.6 x $106,090). The fee-in-lieu shall be paid into the Housing Trust Fund as defined in Section 14-489 on or before the date upon which the Certificate of Occupancy is issued.
>
> Based on recent conversations between the developer and Housing Program Manager, the developer continues to consider his compliance options, but is fully aware that a final decision is necessary in accordance with Division 30, Section 14-487 prior to the Public Hearing.

X. 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

XI. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Planning, Fire and Civil Engineering Comments
2. Design Review Comments
3. Traffic Review Comments

4. Landscape Review Comments
5. Inclusionary Zoning Review Comments
6. Public Comment
    a. Jason Wentworth (1.3.19)
    b. Jonathan Garland (1.4.19)
    c. Jessica Lockhart (1.5.19)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Application Form
C. Right, Title & Interest
D. Zoning Assessment
E. Easements
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion and Sedimentation Control Report
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Architectural Design Narrative
P. Utility Cover
Q. Construction Management Report
R. Solid Waste Disposal
S. Stormwater Maintenance Agreement
T. Certification Letter
U. Comment Response Letter
V. Design Review Response Letter
W. Sign in Sheet
X. Neighborhood Meeting Notice
Y. Neighborhood Meeting Minutes

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Existing Conditions Plan
Plan 4. Demolition, Construction Management
Plan 5. Site Plan
Plan 6. Landscape Plan
Plan 7. Utility Plan
Plan 8. Grading & Drainage Plan
Plan 9. Site Details I
Plan 10. Site Details II
Plan 11. Landscape Details
Plan 12. Utility Details I
Plan 13. Utility Details II
Plan 14. Drainage Details
Plan 15. USSF Details
Plan 16. Erosion & Sedimentation Control Notes
Plan 17. Garage Floor Plan
Plan 18. First Floor Plan
Plan 19. Second Floor Plan
Plan 20. Third Floor Plan
Plan 21. Roof Plan
Plan 22. Front Elevation
Plan 23. Rear Elevations
Plan 24. South Elevation

Plan 25. North Elevation
Plan 26. Contextual Rendering from Hammond
Plan 27. Contextual Rendering from Winthrop
Plan 28. Building Renderings
Plan 29. Subdivision Plat
Plan 30. Contextual Rendering from 30 Fox Street
Plan 31. Contextual Rendering from Downhill Fox Street

PLAN CORRECTIONS REPORT PL-000418-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 10 Hammond St
Portland, Maine 04101

PARCEL: 012 C006001

APPLICATION DATE: 11/26/2018
EXPIRATION DATE:

SQUARE FEET: 0.00
VALUATION: $0.00

DESCRIPTION: Construction of a 3-story, 16-unit residential structure with underground parking garage with vehicle entry at the rear corner of the building.

CONTACTS	Name	Company	Address
Agent/Representative	Will Savage	Acorn Engineering	158 Danforth Portland, ME 04104

Comments & Corrections Required

Civil Engineering - Third Party Reviewer Lauren Swett

Comment(s)/ Recommendation(s):

In accordance with the Maine DEP Chapter 500 Regulations and Section 5 of the City's Technical Manual, the Applicant is required to meet the Basic, General, and Flooding Standards for Stormwater Management. The Applicant has proposed erosion and sedimentation control features to meet the Basic Standard and an underdrained subsurface sand filter and an infiltration trench to help meet the General and Flooding Standards. The following comments should be addressed on the proposed stormwater management plan:

- The erosion and sedimentation control detail sheet includes a detail for silt fence. The plan calls for erosion control berm. Please provide an erosion control berm detail to be consistent with the plan
- It is suggested that additional permanent erosion control be provided on the adjacent slope beyond the spillway outlet. This would require a temporary construction easement.
- The stormwater management report and the details note that inspection ports will be provided within the Stormtech Chambers within the underdrained subsurface sand filter. The plan should show locations of these features.
- The proposed infiltration trench is located immediately adjacent to a steep slope on the neighboring property. The Applicant should address the potential of the infiltration trench compromising the slope, i.e. flow exiting the side of the trench instead of draining vertically into the ground. Additional soil condition information should be obtained to ensure that the system will drain as intended.
- The Applicant has received confirmation of ability to serve from the Portland Water District. The letter from PWD notes that a new 6-inch fire service and 4-inch domestic water service may be installed from the water main in Hammond Street. The plans show a single combined connection to the main. Please confirm that the layout as shown is acceptable to the Portland Water District.

Fire Robert Thompson

Comment(s)/ Recommendation(s):

- The new building shall not affect the egress, escape, or required fire department access for the neighboring building(s)
- The street address shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

Planning Matt Grooms

Comment(s)/ Recommendation(s):

- It is understood that required bicycle parking will be located interior to the building. Would the applicant consider providing publicly accessible bicycle racks as well?
- The application includes lighting details, though no photometric plan. This plan should be made available as part of the final plan submittal. Also, what lighting is being provided for lighting along pedestrian pathways and how are CPTED standards being met?
- The proposed development appears to encroach upon the property line. Does the applicant anticipate needing temporary construction easements from adjacent property owners?
- The site plan shows storage units in the garage with doors that open outward. Would it be feasible to change out these doors for roll-up garage doors?

Traffic - Third Party Reviewer — Tom Errico

Comment(s)/ Recommendation(s):

- Contractor parking in the neighborhood is not permitted and should be specifically noted. Additionally, sidewalk impacts and closure details shall be provided.
- Dimensions for the two outside parking spaces shall be provided.
- I support a waiver from the City's Technical Standards for driveway width given low traffic volumes and traffic characteristics on Hammond Street.
- Sight distance measurements shall be provided at the driveway.
- The Applicant shall provide additional information in support of the waiver from the City's standard for driveway separation. This shall include the proposed driveway separation and factors that prevent maximizing separation.
- The Applicant should identify strategies for avoiding backing maneuvers for the two outside parking spaces.

Planning and Urban Development Department
Planning Division

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

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, February 19, 2019

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

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

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

Findings of the Design Review:
The proposed design **does not pass** all of the criteria of the R6 Alternate Design Review – please refer to comments below:

- When a project deviates in type and scale from what is found in the context, it is the responsibility of the design to integrate and relate that building into the established fabric. The proposed project is a sixteen unit building, four stories tall, and 80' wide on the street – much larger than the predominantly single-family homes surrounding it.
- Staff review finds that the combination of the scale (width, length, and height), the form (especially roof form with superfluous roof decks and appurtenances), and abrupt building interface with the street are all aspects of the project that do not meet the standards to relate and respect in a harmonious way the predominant character-defining architectural features of the neighborhood.
- The character-defining architectural features of the neighborhood include:
    - Simple forms, including simple roof forms (front-end gable or flat roofs with few examples of dormers, roof top additions, or complex forms)

- Vertically proportioned front façade
- Small-scale buildings - One and half to two and a half story single family homes with gabled roofs, three-story multi-family buildings with flat roofs
- Building widths ranging from 15' to 25'
- Symmetrical façade composition with very few window types, vertically proportioned, double-hung windows
- Simple material palette with masonry foundation and clapboard siding
- Articulation through bay windows and entrance stoops or porches, overhanging eaves and cornice lines – especially on multi-family buildings

Design Review Comments *(red text denotes principles or standards that are not met)**:***
Appendix 7: R-6 Infill Development
Principle A Overall Context –Not Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions. In those rare instances where a larger scale, wider building has been built, the scale is mitigated by keeping setbacks as a buffer and through massing variation with elements such as bay windows and porches, and scaling elements such as canopies, material variation, and balconies. Some scale mitigation has been achieved in this proposal by varying the massing at the front balconies, maintaining a three-story flat roof, and varying materials. The design creates façade compositions reminiscent of triple-deckers at the corners of the building to create a relatable scale and form. Overall, the project is much larger in scale and massing than found in the context – staff do not find the design relates enough to the scale and form of the surrounding residential buildings. Staff suggest mass and scaling elements be incorporated and that the roof form be simplified in order to meet the standard.
- *A-2 Composition of Principal Facades:* The façade composition takes the approach of using material placement and articulation elements to relate to a triple-decker composition. The strategies emphasize vertical proportions and provides local symmetry and windows. The façade composition is largely impacted by placement of circulation at the front façade and the overall width of the building, which at 80', is much wider than the surround buildings with which it shares the streetscape. Predominantly, traditional façade compositions include vertical proportions and narrower buildings. More is needed to relate the Fox and Hammond Street facades to what is found in context.
- *A-3 Relationship to the Street:* The street wall is maintained and building placement in relationship to the street is consistent with the neighboring properties. The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which

does respect the building placement patterns of the streetscape/neighborhood. At a detailed level, the building interface with the street is not compatible with the predominant character-defining architectural features of the neighborhood – raised planters, entrance stoop or porch with canopy.

Principle B Massing – Not Met – The building is larger in scale than what is found in the context in both height and width of the building. The project does vary the massing at the Hammond Street façade corners which is encouraged. However, staff do not find the massing as proposed to meet the standard to be harmonious with the massing of the existing buildings – especially regarding scale and form. The roof form is adulterated by numerous rooftop appurtenances and stair towers that do not reflect or reinforce the traditional building character of the neighborhood which is predominantly simple forms, including roof forms.

- *B-1 Massing:* The proposed mass is wider on the street and longer in length on Fox Street than the typical building context. Given the scale and massing of this new project is taller and wider than the residential context, other design elements must be used to meet the standards around compatibility. In this case, the balconies, three-story flat roof, and material placement/articulation define portions of the building into smaller, vertical proportions that are harmonious with the massing of the existing buildings. But one has only to look at the renderings of the project to understand that the material placement and articulation elements have limited effect – mostly visible from a front view of the building. The overall massing of the building is not successfully broken down to relate to the scale of the surrounding buildings.
- *B-2 Roof Forms:* The proposed flat roof form is in keeping with the traditional multi-family building types found in the context. However, additional complexity is added with the circulation tower, entrance feature, and multiple rooftop appurtenances – these are not found to refer to the architectural forms found within the context made up of mostly one and a half and two and half story buildings with simple roof forms. Simple forms define the context – the roof must be simplified to meet this standard.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.
- *B-4 Roof Pitch:* The roof is flat.
- *B-5 Façade Articulation:* The project employs a covered entry, bay window.
- *B-6 Garages:* The garage is attached and buried with a side entry and living space above.

Principle C Orientation to the Street – Not Met –There are some living spaces at the ground level separated from the sidewalk with a front setback and balconies – these provide a positive and contextual level of activity towards the street while appropriately raised above and setback from the sidewalk for privacy. The project entrance lacks a sense of transition appropriate to the small-scale residential street.

- *C-1 Entrances:* The main entry directly faces the street and is emphasized by a bay window projection. However, the entrance lacks emphasis, especially lacking contextual articulation elements and an approachability typical of traditional residential buildings. The typical residential features are not employed – raised planting bed, stoop or porch, recessed entry, canopy at the entry.
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; all living spaces are elevated.
- *C-3 Transition Spaces:* The transition from the sidewalk to the building entrance is abrupt. The front setback with ground level plantings and artwork and the direct vestibule provide a transition but convey a commercial/institutional use rather than residential.

Principle D Proportion and Scale – Partially Met – The proportion of the front façade is not one typically found in the context which is usually a discernable vertical proportion – this is addressed by creating a façade composition through materials and articulation that relates to the proportions found in the context. Some individual building elements are human-scaled. Staff feel more could be done to introduce substantial scaling elements beyond applied material and trim elements.

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

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

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

Principle F Articulation – Met – Articulation is provided through material and trim texture, changes in façade planes, and emphasized entry.

- *F-1 Articulation:* The design uses balconies, a bay window, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* More than two window types are used – there is design justification for some of the variation (circulation, inactive uses). Windows are rectangular with vertical proportion but type differs from the double-hung windows found in the surrounding residential context.
- *F-3 Visual Cohesion:* The visual cohesion of the Hammond Street façade is good – however, a massing change rather than material change would better differentiate the central circulation portion of the building from the living spaces. The bay window is not related to the function inside and does not benefit the façade composition and visual cohesion. Visual cohesion of Fox Street façade is not met – standardize or simplify the material placement.
- *F-4 Delineation between Floors:* The central circulation area is delineated with a different material and trim board. Otherwise, the windows and balconies provide some delineation of the upper floors.
- *F-5 Porches, etc.:* Without a recess, stoop, porch, or canopy, the entrance design differs from the residential character – lacking in approachability, transition, or scale. The balconies meet this standard – integrated into the overall massing and façade composition.
- *F-6 Main Entries:* The main entry is emphasized with prominent placement facing the street, the use of a bay window – the bay window is not functional or related to the use inside and therefore is incongruous with the façade character of other multi-family

buildings in the neighborhood. However, staff found the design of the entry to be out of character with the small-scale single and two-family houses in the context – the entrance should be revised to have a more residential character. The predominant characteristics in the neighborhood include stoops or porches, elevated planters, canopies and recessed entries. Artwork at the entrance is not appropriate.

- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; no trim; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Partially Met – The material choices of clapboard and panel with brick foundation are contextual and fine-grained. Material placement is used to mitigate the scale of the building. Staff are not supportive of the variety and random placement of materials on the Fox Street elevation – these materials do not relate to the existing patterns of simple material placement and do not help mitigate the scale of this long and flat façade.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard and brick are fine-grain materials in keeping with the context. Brick at the ground floor is logical and grounds the building. The additional, accent materials on the Fox Street façade are not contextual and should be removed.
- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature, except there is some concern that the materials are creating a commercial character rather than integrating with the small-scale residential buildings. The material placement on Hammond Street helps break down the façade composition and delineate the circulation and entrance from the living spaces.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* More than two window types are used on the front façade – the variation in most cases follows program. Detailing is consistent throughout. The window type differs from the double-hung type found in the surrounding residential buildings.
- *G-5 Patios and Plazas:* n/a

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

Standard 1 – Partially Met – The project design includes certain strategies of material placement and articulation to create proportions and scale that relate to the context of single and two-family homes. Simple roof forms are predominant throughout the East End context – a flat roof is appropriate here for a multi-family building but additional complexity is added with the circulation, entrance feature, and rooftop appurtenances – these are not found to "complement or enhance the nearest residential neighborhood" made up of mostly one and a half and two and half story buildings with simple roof forms. Given the scale and massing of this new project is taller and wider than the residential context, additional design elements must be used to meet the standards around compatibility especially around scale, simplicity of materials, form, and articulation.

Standard 2 – Partially Met – The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this

proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which does respect the building placement patterns of the streetscape/neighborhood. The entrance and building interface with the street is not residential in character – the artwork, in ground landscape, and lack of stoop or entry porch create a commercial or institutional character. This building does differ from the established context in the width of the building itself – this building is much wider than the residential buildings in the context and does not incorporate enough scaling, articulation elements to relate to its residential context or the predominant character surrounding.

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

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

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

Standard 6 – Not Applicable

Att. 3

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

10 Hammond Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Fri, Feb 22, 2019 at 9:44 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Michael Tremblay <mtremblay@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Matt – I have reviewed updated application materials and offer the following Final Traffic Comments.

- Sight distance measurements shall be provided at the driveway.

Status: The Applicant has noted that acceptable sight distance will be provided. A condition of approval should include details that requires the property line fence to be designed to maximize sight distance to both vehicles and pedestrians.

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

Status: I have no further comment.

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

Status: The driveway location is based on maximizing the distance from Fox Street and building design. Given these factors and low traffic volumes on Hammond Street and from the development, I support a waiver from City Standards.

- The Applicant should identify strategies for avoiding backing maneuvers for the two outside parking spaces.

Status: The Applicant has noted that vehicles in the noted spaces can utilize the garage entry for maneuvering. I find this to be acceptable.

- Dimensions for the two outside parking spaces shall be provided.

Status: Dimensions have been provided and I have no further comment.

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

Status: The Applicant has noted that contractor parking restrictions have been incorporated. No details on sidewalk closures have been provided and I suggest a condition that this be resolved prior to issuance of any City Permit.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

Att. 4

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

10 Hammond Street - Preliminary Comments

Jeff Tarling <jst@portlandmaine.gov> Thu, Jan 17, 2019 at 2:02 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt -

The proposed Hammond Street project is quite large in scale compared to the surrounding residential properties. The proposed landscape is somewhat weak in providing scale and buffering a project of this scope would ideally provide. While the available planting space is minimal, a more robust tree and landscape plant is recommended.

On the south side, for example, we note Rhododendron, Clethra, Lily Turf, and Tiger Lily, none of these plants provide much in the way of buffering or landscape screening value.

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

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

Thanks

Jeff

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

[Quoted text hidden]

Att. 5

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

10 Hammond Street

Victoria Volent <vvolent@portlandmaine.gov> Fri, Feb 22, 2019 at 2:38 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt,

10 Hammond Street is a proposed 16 unit condominium project subject to Division 30, Section 14-487, Ensuring Workforce Housing.

Subsequently, the applicant is required to provide at least ten percent (10%) of the dwelling units in the development as Workforce Housing units for sale and requires the number of bedroom in the Workforce unit to be at least 10% of the total number of bedrooms made available as part of the development.

The development at 10 Hammond Street proposes the creation of 16 dwelling units of owner occupied housing.

To comply with the Division 30, Section 14-487, the applicant is required to provide one two-bedroom unit or two one-bedroom units and a fractional fee-in-lieu of $63,654 ($106,090 x .6). As an alternative to providing Workforce Housing Units, the developer shall pay a fee-in-lieu of $169,744 (1.6 x $106,090). The in-lieu fee shall be paid into the Housing Trust Fund as defined in Section 14-489 on or before the date upon which the certificate of occupancy is issued.

Based on recent conversations between the developer and Housing Program Manager, the developer continues to consider his compliance options but is fully aware that a final decision is necessary in accordance with Division 30, Section 14-487 prior to the Public Hearing.

Thank you,

Victoria

Victoria Volent
Housing Program Manager
Housing and Community Development
Phone: 207-482-5028
Fax: 207-874-8949
www.portlandmaine.gov

Att. A

ACORN ENGINEERING, INC.

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

November 26, 2018

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

To Whom It May Concern:

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

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

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

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

Sincerely,

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

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

- Section A: Cover Letter
- Section B: Level III Final Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waiver Table
- Section G: Financial Capacity
- Section H Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utility Cover
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Stormwater Maintenance Agreement

Drawings:

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

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 II APPLICATION
Yes ✓ NA Plan	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA ✓ Plan	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes ✓ NA Plan	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards 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

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☑ Site Considerations

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☑ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

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

Section C

Right, Title, Interest

Warranty Deed
(Maine Statutory Short Form)

DLN: 1001840038397

KNOW ALL PERSONS BY THESE PRESENTS THAT, WE, Robert A. DiDonato and Mary A. DiDonato, with a mailing address of 10 Hammond Street, Portland, Maine 04101, for valuable consideration paid by **Kevin P. O'Rourke,** with a mailing address of 94 South Street, Yarmouth, Maine 04096, the receipt and sufficiency whereof is hereby acknowledged, does hereby GIVE, GRANT, BARGAIN, SELL AND CONVEY, unto the said **Kevin P. O'Rourke,** his heirs and assigns, with ***WARRANTY COVENANTS,*** a certain lot or parcel of real property, with the buildings thereon, situated in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

PROPERTY DESCRIBED IN "EXHIBIT A" ATTACHED HERETO AND MADE A PART HEREOF

Meaning and intending to convey the premises conveyed to Robert A. DiDonato and Mary A. DiDonato, as joint tenants, by virtue of a deed dated April 4, 1984 and recorded in the Cumberland County Registry of Deeds at Book 6420, Page 257.

The premises are conveyed together with and subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable.

Witness our hands and seals this 14 day of September, 2018.

_____ Robert A. DiDonato
WITNESS

_____ Mary A. DiDonato
WITNESS

STATE OF MAINE
COUNTY OF CUMBERLAND

Personally appeared before me on this 14 day of September, 2018 the above-named Robert A. DiDonato and Mary A. DiDonato and acknowledged the foregoing instrument to be their free act and deed.

JACQUELINE V. JORDAN
Notary Public-Maine
My Commission Expires
September 25, 2020

_____
Notary Public/Attorney At Law

Exhibit A

A certain lot or parcel of land, with the buildings thereon, situated in the City of Portland, County of Cumberland and State of Maine, on the westerly side of Hammond Street, bounded as follows:

Beginning at the northerly corner of the lot of land which James Dinsmore, Jr. conveyed to John R. Morse by deed dated February 23, 1853 and recorded in the Cumberland County Registry of Deeds in Book 244, Page 273, and from said point of beginning running southerly by said Hammond Street about thirty (30) feet to land which said John S. Morse conveyed to Josiah Murch by deed dated June 24, 1854 and recorded in said Registry of Deeds in Book 255, Page 411, and from these two points extending westerly, holding the width of about thirty (30) feet as aforesaid, one hundred twenty (120) feet, more or less, to the rear line of said lot conveyed to said Morse by said Dinsmore.

Warranty Deed
(Maine Statutory Short Form)

DLN: 1001840038396

KNOW ALL PERSONS BY THESE PRESENTS THAT, WE, Robert A. DiDonato and Mary A. DiDonato, with a mailing address of 10 Hammond Street, Portland, Maine 04101, for valuable consideration paid by **Kevin P. O'Rourke,** with a mailing address of 94 South Street, Yarmouth, Maine 04096, the receipt and sufficiency whereof is hereby acknowledged, does hereby GIVE, GRANT, BARGAIN, SELL AND CONVEY, unto the said **Kevin P. O'Rourke,** his heirs and assigns, with ***WARRANTY COVENANTS,*** a certain lot or parcel of real property, with the buildings thereon, situated in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

PROPERTY DESCRIBED IN "EXHIBIT A" ATTACHED HERETO AND MADE A PART HEREOF

Meaning and intending to convey the premises conveyed to Robert A. DiDonato and Mary A. DiDonato, as joint tenants, by virtue of a deed dated February 5, 2015 and recorded in the Cumberland County Registry at Book 32075, Page 4.

The premises are conveyed together with and subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable.

Witness our hands and seals this 14 **day of September, 2018.**

Robert A. DiDonato

WITNESS

Robert A. DiDonato

Mary A. DiDonato

WITNESS

Mary A. DiDonato

STATE OF MAINE
COUNTY OF CUMBERLAND

Personally appeared before me on this 14 **day of September, 2018 the above-named Robert A. DiDonato and Mary A. DiDonato and acknowledged the foregoing instrument to be their free act and deed.**

JACQUELINE V. JORDAN
Notary Public-Maine
My Commission Expires
September 25, 2020

Notary Public/Attorney At Law

Exhibit A

A certain lot or parcel of land together with any buildings thereon, situated on the westerly side of Hammond Street, in said the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on said westerly side of Hammond Street at the easterly corner of Lot 27 on plan recorded in Cumberland County Registry of Deeds in Book 19, Page 182; thence northwesterly by Hammond Street thirty (30) feet and from these two points extending southwesterly at right angles and holding the width of thirty (30) feet, one hundred twenty (120) feet, more or less, said premises are otherwise described as follows: Land with house and garage on the west side of Hammond Street, Number 8, Portland, Maine, one the City Assessors' Plan 12, Bock C, Lot 8, Area thirty-seven hundred and thirty-two (3732) square feet.

Warranty Deed
(Maine Statutory Short Form)

DLN: 1001840041592

KNOW ALL PERSONS BY THESE PRESENTS THAT, I, Maryann Maloney, with a mailing address of 6 Hammond Street, Portland, Maine 04101, for valuable consideration paid by **Kevin P. O'Rourke,** with a mailing address of 94 South Street, Yarmouth, Maine 04096, the receipt and sufficiency whereof is hereby acknowledged, does hereby GIVE, GRANT, BARGAIN, SELL AND CONVEY, unto the said **Kevin P. O'Rourke,** his heirs and assigns, with ***WARRANTY COVENANTS,*** a certain lot or parcel of real property, with the buildings thereon, situated in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

PROPERTY DESCRIBED IN "EXHIBIT A" ATTACHED HERETO AND MADE A PART HEREOF

Meaning and intending to convey the premises conveyed to Maryann Maloney by virtue of a deed dated February 25, 1982 and recorded in the Cumberland County Registry of Deeds at Book 4927, Page 92.

The premises are conveyed together with and subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable.

Witness my hand and seal this 19 **day of October, 2018.**

_____
WITNESS

Maryann Maloney
Maryann Maloney

STATE OF MAINE
COUNTY OF CUMBERLAND

Personally appeared before me on this 19 **day of October, 2018 the above-named Maryann Maloney and acknowledged the foregoing instrument to be her free act and deed.**

JACQUELINE V. JORDAN
Notary Public-Maine
My Commission Expires
September 25, 2020

_____
Notary Public/Attorney At Law

Exhibit A

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

Beginning on said westerly side of said Hammond Street at the northeasterly corner of land formerly occupied by M. Purcelle; thence westerly by said Purcelle land about sixty-three (63) feet to land formerly of one Powers; thence northerly by said Powers land about twenty-five (25) feet to land formerly of Bridget Clougherty; thence easterly by said Clougherty land about sixty-three (63) feet to said Hammond Street; thence southerly by said Hammond Street about twenty-five (25) feet to the place of beginning; being premises numbered six (6) on said Hammond Street as delineated on a plan recorded in Cumberland County Registry of Deeds in Plan Book 5, Page 12, to which plan reference is hereby made.

Also, all our interest in a parcel of land on the westerly side of Hammond Street, on the southerly side of the above-described premises, which a frontage of thirty-five (35) feet, more or less, on Hammond Street and a depth of sixty-five (65) feet, bounded southerly by lot numbered 25 on the plan of division recorded in said Registry of Deeds in Book 36, Page 247, and northerly by the first parcel herein, which parcel has been occupied and used in connection with the house numbered 6 Hammond Street, for many years.

Also, a certain lot or parcel of land located in the rear of 11-13 Cove Street in said City of Portland, more particularly described as follows:

Beginning at the northeasterly corner of land of Gertrude L. Curran, said corner being seventy-five (75) feet distant, more or less, southwesterly from the easterly sideline of Cove Street and said bound also marking the northwesterly corner of land of Bessie McCarthy; thence southeasterly by the northeasterly sideline of land of said McCarthy and land of Ralph Tucci, et al. fifty-eight (58) feet, more or less, to a point and land of Lincoln R. Guimond et al; thence in a general northerly direction by the westerly sideline of land of said Guimond on three different courses a distance of sixty (60) feet, more or less, to the northwesterly corner of land of the said Guimond and land of Rocco DiDonato et al., thence in a general westerly direction by the southerly sideline of land of the said DiDonato sixty (60) feet, more or less, to the southwesterly corner of land of the DiDonato and land of the Portland Renewal Authority; thence southeasterly by other land of said Authority sixty (60) feet, more or less, to the northeasterly corner of land of said Curran and the point of beginning.

This conveyance is subject to all of the restrictions, covenants and agreements contained in the Indenture by which said premises were conveyed to Lincoln R. Guimond and Patricia A. Guimond by Portland Renewal Authority.

The foregoing, as all the other covenants contained in the aforesaid Indenture to Lincoln R. Guimond and Patricia A. Guimond from Portland Renewal Authority, shall be a covenant running with the land and shall be enforceable in the same manner as prescribed in said Indenture for the enforcement of the covenants therein contained.

Section D

Zoning Assessment

ZONING ANALYSIS Relevant Zone: R-6

All Projects:

	Required	Proposed
Lot Size	2,000 sf	15,433 sf
Area Per Dwelling Unit	725 sf	965 sf
Minimum Street Frontage	20'	120'
Front Yard Minimum	0 (abutter avg)	5.12'
Front Yard Maximum	NA	5.12'
Rear Yard	10'	13.4'
Yard Right	5'	29.5'
Yard Left	5'	10.5'
Side Street Setback	N/A	N/A
Step Back	10' @ 35'	> 10'
Maximum Lot Coverage	60%	56%
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	39.8'
Open Space	20%	25%
Maximum Impervious Area	80%	75%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	13	16
Loading Bays		
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):			

Section E - Easements

There were no existing easement identified by the Surveyor within the Existing Conditions Plan.

There are no proposed easements at this time.

Section F

Request For Waivers

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1.7.2.3 Driveway Width	Any site with driveway access to a street shall have a minimum width of 20 feet for two-way ingress and egress	We are requesting toreduce the driveway width to 18'	The waiver is being sought to reduce the impervious area, the impact of the development, and the width of the curb cut. The circulation has been verified to be functional. Additonally, due to the low turnover, the driveway will rarely see two opposing vehicles
Technical Manual 1.7.2.7 Location and spacing of driveways	100' separation between driveways for a 25 mph road.	To reduce the 100' requirement	Given the density of the neighborhood, it is not feasible to provide 100' of separation. As discussed at at the pre-app meeting, the intent is locate the driveway as far away from the intersection as possible from a safety perspective. Furthermore, the design of the building and site is in line with the City's design standards for "hiding" the parking and allowing for livable space along the front facade. Overall, the existing condition will be improved upon by closing one of the two existing curb cuts which is relatively close to the intersection of Hammmond and Fox.

Att. G

Camden
NATIONAL BANK

November 19, 2018

City of Portland, Planning Division

389 Congress Street, 4th Floor

Portland, ME 04101

RE: 16 unit Condominium Project

To whom it may concern:

Kevin O'Rourke and his related companies are well known to Camden National Bank. I have worked with Kevin for more than 5 years and have been directly involved in the financing of successful projects. With the expected financial contribution from Kevin and Bank financing that we will be entertaining, there is expected to be sufficient financial capacity to successfully complete the proposed project. We are looking forward to more substantive conversations as the project materializes.

Please feel free to contact me should you need any additional information, I can be reached at (207) 930-3909.

Sincerely,

Paul Doody

Vice President

Camden National Bank

Section H - Technical Capacity

Acorn Engineering, Inc. and Ryan Senatore Architecture have successfully permitted and engineered over 20 level II/III projects in Portland in the past 5 years, many of which have been constructed. Some examples include:

- Eldredge Lumber Expansion
- 127 York Street – Harborview Townhomes
- Munjoy Heights
- 89 Anderson St. – East Bayside Lofts
- 667 Congress St – The Hiawatha

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526 as well as the City of Portland Technical Manual, Chapter 14 Standards for Local Site Location of Development Review.

OVERVIEW

The proposed 3-story, 16-unit residential multi-family building space has been designed to conform to City standards where possible as well as improve upon existing non-conformities. This project conforms with the majority of the applicable standards of Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The site is located at the corner of Hammond and Fox Streets, which are both classified as local streets and currently support a low traffic volume. A minimal traffic increase along Hammond Street is expected for this project due to the low turnover of the proposed principal land use.

2. Access and Circulation:

   a. Site Access and Circulation:

      This project conforms with the majority of design standards of Section 14-526 as demonstrated in the following narrative, with one minor dimensional variance of the driveway to reduce the site's impervious area.

      (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan.

      (ii) The proposed driveway has been located as far away form the Fox/Hammond intersection as possible. Additionally, the site will reduce the curb cuts from two to one.

      (iii) The site does not feature drive up services as mentioned in this requirement.

   b. Loading and Servicing:

      (i) There are no anticipated loading and servicing needs.

   c. Sidewalks:

      (i) A reinforced concrete sidewalk exists along Hammond Street which will be rebuilt as part of the project.

      (ii) The existing sidewalk will be rebuilt from the new driveway to Hammond Street.

      (iii) The main entrance to the building will be 5' off the Hammond Street sidewalk with a continuation of the concrete walk. Pedestrian access to the rear of the site will be provided by a sidewalk to a mid-level doorway between the garage and the first floor. Please refer to

the Site Plan, Sheet C-10, for more information.

3. Public Transit Access:

   a. Not applicable.

   b. Not applicable.

   c. Not applicable.

4. Parking:

   a. Location and Required Number of Vehicle Parking Spaces:

      (i) The proposed project will provide 16 parking spaces which meets the requirement.

      (ii) A parking study is not required.

      (iii) The amount of parking exceeds the minimum requirement by more than 10%. The proposed 16 spaces exceed the requirement by 3 spaces. This is due to provide one space per unit, therefore decreasing the demand for on-street parking within East Bayside which is seeing a development boom and an overall higher demand for on-street parking. It is our professional opinion that 1 space per unit is a modest proposal that will benefit the end users as well as the entire neighborhood.

      (iv) The parking space and aisle dimensions are in conformance with the Technical Standards.

      (v) The driveway and parking areas will be constructed with reinforced concrete which will drain water without eroding.

   b. Location and Required Number of Bicycle Parking Spaces:

      (i) The site plan includes an interior bicycle storage room. This will allow for the minimum storage of 6 bicycles to be parked in a secure location, with the potential for additional storage in this room.

   c. Motorcycles and Scooter Parking:

      (i) There are no areas designated for motorcycles or scooters at this time; however, adequate room exists for the storage of these motor vehicles.

   d. Snow Storage:

      (i) The snow storage area can be seen on the site plan near the rear of the parcel. In addition, the Owner may have snow removed from the site when necessary.

      (ii) The snow storage has not been located where it will adversely impact the functionality of any part of the site.

5. Transportation Demand Management (TDM):

   a. A TDM plan is not required for this project.
   b. A TDM plan is not required for this project.

c. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

   a. Not applicable.

   b. Not applicable.

2. Landscaping and Landscaping Preservation:

   a. Landscape Preservation.

      (i) The disturbance of trees and vegetation that are not proposed to be removed as part of the project will be limited as much as possible.

      (ii) There are no trees 10 inches DBH or greater identified by the Surveyor within the setbacks.

      (iii) It is not anticipated that the project will necessitate any tree protection.

      (iv) A waiver is not requested.

      (v) Not applicable.

   b. Site Landscaping.

      (i) Landscaped Buffers:

         a. All loading and dumpster locations will be screened from view.

         b. The project has 120 linear feet of frontage along Hammond Street; per requirement, it is required that a minimum of six shrubs or shrub alternatives per 45 feet of frontage are planted. The requirement is met through a combination of landscaping within the setbacks and internally within the site. Please refer to the Site Plan for more information.

         c. Not applicable.

         d. Not applicable.

      (ii) Parking Lot Landscaping:

         a. Per Section 4.6 of the Portland Maine Technical Manual, 16 street trees are required (one per unit). Based on the property's frontage and the utilities – public and private, two shade trees are proposed to be planted within the sidewalk. The applicant will contribute to the City's Street Tree Fund in place of the 14 trees that will not be planted.

         b. There is no proposed area with greater than 40 parking spaces without interrupted pavement.

         c. Not applicable.

         d. Not applicable.

e. Not applicable.

f. Not applicable.

(iii) Street Trees:

a. Street trees are to be provided every 30 to 45 feet along the street frontage. This ratio equates to a minimum of two trees. Two shade trees are proposed to be planted within the sidewalk, thus fulfilling the requirement.

b. Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site drainage will not be directed to flow or pond onto adjacent lots. The drainage patterns will be altered to intercept the roof runoff as well as the driveway runoff, with the addition of stormwater management practices to attenuate the flows.

(ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development flows.

(iii) The runoff from the site into the City property will not increase from the pre-development condition.

(iv) Not applicable.

b. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Stormwater Management and Erosion & Sedimentation Control Plans, respectively, for more information.

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

d. Not applicable.

e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.

f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

   a. The site has been designed to promote safe and inviting public access.

   b. Adequate emergency access has been provided. Access is available from Hammond Street as well as the 18' wide driveway.

   c. A fire hydrant is located on the same side of the street as the site on the corner of Hammond Street and Fox Street

3. Availability and Adequate Capacity of Public Utilities:

   a. Public utilities in the vicinity of the site have capacity to serve the project. Ability to Serve letters have been sent to the respective companies. Responses have been included in the submission and any remaining responses will be submitted upon receipt.

   b. The electrical service will be wired underground.

   c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.

   d. The project will be served by connection to the public sewer system within Hammond Street.

   e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.

   f. Although not required, the project anticipates to provide internal solid waste storage with private hauling of the waste.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

   a. Not applicable.

   b. Not applicable.

   c. Not applicable.

2. Shadows:

   a. The shadows created by the building will not influence public open spaces.

3. Snow and Ice Loading:

   a. The structures will not distribute snow and ice onto adjacent properties.

4. View Corridors:

   a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district.

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

   a. Site Lighting.

      (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. A photometric plan has been included with this submission.

      (ii) Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.

   b. Architectural and Specialty Lighting.

      (i) No architectural or specialty lighting is proposed.

      (ii) No up-lighting is proposed.

   c. Street Lighting.

      (i) No new street lights are proposed.

7. Noise and Vibration:

   a. The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

8. Signage and Wayfinding:

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

      (i) The project is not located in a historic district or subject to Article IX.

      (ii) Not applicable.

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

9. Zoning Related Design Standards:

   a. The project has been designed to meet the standards set forth in the R-6 zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.

ACORN ENGINEERING, INC.

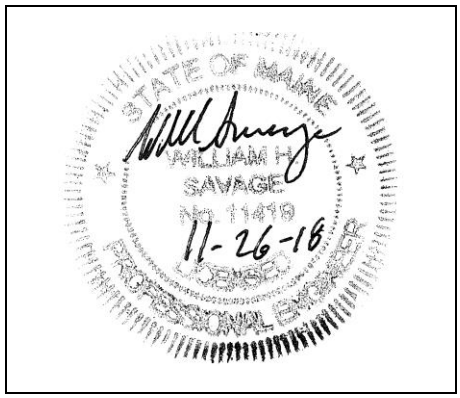
STORMWATER MANAGEMENT REPORT

Prepared For:

The Preserve at South Ridge, LLC
94 South Street
Yarmouth, Maine 04096

Prepared By:

Acorn Engineering, Inc.
P.O. Box 3372
Portland, Maine 04104



November 2018

INTRODUCTION

Acorn Engineering, Inc. has been retained by The Preserve at South Ridge, LLC to provide civil engineering services for the proposed development of the Hammond House located along 4-12 Hammond Street in Portland, Maine. The project is a 16-unit urban infill redevelopment in East Bayside set into the steep slopes that run east to west. The majority of the on-site parking is within a subsurface garage. Three living levels will sit atop the garage.

A stormwater analysis will be prepared to demonstrate that the project will meet the following requirements of the City of Portland (the City):

- City of Portland Land Use Ordinance Chapter 14, Article V. Site Plan Section 14-523. Required Approvals and Applicability (F) Level III Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

The proposed project will include the redevelopment of existing impervious area including rooftops, asphalt and gravel driveways, and parking. The current course of action is to provide water quality treatment to the stormwater through filtration utilizing a Maine Department of Environmental Protection - Underdrained Subsurface Sand Filter approved stormwater Best Management Practice (BMP). This development shall incorporate green infrastructure to provide water quality treatment for no less than 95% of the new impervious area and 80% of the new developed area.

The stormwater analysis is documented with supporting calculations and reports attached to this narrative.

EXISTING CONDITIONS

The proposed project is located at the intersection of Fox and Hammond Street. The proposed lot is a combination of multiple properties which presently include Portland Tax Map 12-C-6,8,10,11, and 14 comprising 15,433 square feet. Portland has zoned this area as an R-6 Residential Zone. An existing conditions plan has been prepared by R.W. Eaton Associates dated 9/4/2018. All abutting uses are residential (R-6 zone) except to the west (B-5 zone).

The entire site is currently developed with 26% of it being impervious area which includes the existing buildings, the paved driveways, patio stones, an old skate ramp, and a covered firewood storage area. The grassed areas are in fair condition with some patches of exposed soils. From south to east the grades are gradual up to the structures where they then fall off at an average of 12%.

The project area presently drains the entirety of its runoff the abutting property to the west (117 Anderson Street – the Portland Housing Authority's Maintenance Facility). It is likely that the runoff is contributing to the icing of the Facility's parking lot that was observed in November of 2018 after a series of rain events and freezing temperatures.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting, existing free-draining soils and steep slopes a

field inventory of significant natural feature was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

The Hammond House redevelopment proposes 16 units on 3 levels of living with a subsurface parking garage. The building will be set into the slope, taking advantage of the grade change to accommodate one parking space per unit while "hiding" the parking from the streetscape. A driveway will dive down at an average grade of 11% to the rear of the building.

The landscaping plan includes aggressive planting of trees and shrubs. The re-vegetation strategy proposes native plants in which will complement the new structure while offering environmental benefits such as reducing the heat island effect, stormwater uptake and treatment, reduction of erosion, provide wildlife habitat, and screening in between properties.

The development will be served by the Portland Water District, underground power/cable/communications, natural gas and the municipal sewer system. Solid waste and recycling will be contracted through a private waste disposal and recycling provider. The project anticipates incorporating Maine DEP approved stormwater Best Management Practices (BMP) to meet the General and Flooding Standards.

GENERAL STANDARDS - WATER QUALITY

The development shall provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area. The project includes the redevelopment of existing impervious area including rooftops and asphalt driveways and parking. Water quality treatment shall be provided through the use of an Underdrained Subsurface Sand Filter (USSF)

The USSF BMP was sized to meet or exceed the requirements set forth within the MDEP Volume III: BMPs Technical Design Manual Section 7.3. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff. The stormwater runoff shall first flow into the StormTech Isolator Row which shall provide initial treatment, although sediment levels are anticipated to be low given the relative cleanliness of roof runoff with respect to solids. The stormwater will be detained within the chambers and surrounding aggregate before flowing vertically through the sand filter layer. The treated stormwater shall then be collected within perforated pipes and released slowly by the outlet control structure at an attenuated rate. The outlet will be routed to the separated storm system within Fox Street.

The treatment of the impervious surface is as follows:

Table 1 – Impervious Treatment Area Table

	Existing Impervious Area (SF)	Proposed Total Impervious Area (SF)	Proposed Impervious Area with No Treatment (SF)	Proposed Impervious Area with Treatment (SF)	Net change in Impervious Area (SF)	% Overall New Imp. Area Treated
USSF	4,009	11,565	3,427	8,138	7,556	108%

Furthermore, the minimum 80% treatment of new developed area is met and exceeded since the entirety of the existing site is already developed.

As shown above, the project anticipates meeting and exceeding the required treatment for new impervious surfaces and developed area through the use of the underdrained subsurface sand filter. Additionally, the plethora of native plants, the infiltration trench, and the catch basin will provide additional water quality benefits in addition to the treatment of the USSF.

A calculation for sand filter area is necessary to meet the requirements below the surface of the USSF. As defined in the Volume III: BMPs Technical Design Manual, Chapter 7, the surface area of the filter shall be no less than the sum of 5% of the tributary impervious area and 2% of the tributary vegetated area. The filter area is calculated by the following formula:

$$[(\text{Imp. SF} \times 0.05) + (\text{Veg. SF} \times 0.02)] = \text{Filter Area (SF)}$$

Please refer to Table 2 below.

Table 2 – Total Filter Surface Area, displays the proposed USSF sizing requirements, actual size and the percentage of required area.

Table 2 – Total Filter Surface Area			
	Required Filter Area (SF)	Actual Filter Area (SF)	Percentage of Required Area (%)
USSF BMP	407	410	101%

As shown, the size of the soil filter area will meet and exceed the surface area requirements.

In accordance with the Volume III: BMPs Technical Design Manual, a water quality volume of 1.0 inches times the tributary impervious area plus 0.4 inches times the tributary vegetated area is required to be treated by the USSF. The water quality volume is calculated by the following formula:

$$\left(\frac{\text{Imp. SF} \times 1.0''}{12''/1'}\right) + \left(\frac{\text{Veg. SF} \times 0.4''}{12''/1'}\right) = \text{Treatment Volume (CF)}$$

The proposed water quality volume is as follows:

Table 3 – Water Quality Volume Table				
	Vegetated Area (SF)	Impervious Area (SF)	Treatment Volume Required (CF)	Treatment Volume Provided (CF)
USSF BMP	0	8,138 SF	**678**	**863***

*Derived from the HydroCAD model and the rainfall that produces 18" of ponding within the chambers. The storage volume within the crushed stone and chambers – the two layers above the filter sand – is then added together to calculate the water quality volume.

As shown, the size of the combined water quality volume will meet and exceed the treatment volume requirements.

Once the water quality volume is known an artificial rainfall event is created within HydroCAD, to mimic a storm event which equals the required water quality volume. Based upon the artificial rainfall event the depth of the water quality volume within the chamber system will not exceed 18", as required.

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

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

Isolator Row

Typically, an isolator row would have an access structure from both sides to inspect the accumulation of sediment/debris and remove when necessary. Given that many systems have a tributary area comprised of pavement and other ground-level developed areas, this requirement makes sense for these instances where the system would receive sand, debris, and organic matter eventually clogging up the filter fabric within the isolator row. However, within this project, the StormTech system will receive only roof runoff which will contain significantly less solids that would contribute to clogging of the fabric.

After consulting with a representative from Advanced Drainage Systems, the manufacturer of StormTech, they have communicated that an isolator row is not necessary when the watershed is comprised of 100% roof runoff because there are essentially no solids to remove from the inflow. This exception is routinely accepted in other states and was recently implemented in a site development project within Cumberland County. Within this project, an isolator row is proposed as a precautionary measure. There are no structures directly abutting the isolator row; however, two inspection ports and two cleanouts within the system will provide opportunity for maintenance in the unlikely event that sediment/debris builds up. Given the low sediment loading from roof runoff as well as the small footprint of the system itself, it our professional opinion that the access structure requirement for both ends of an isolator row within section 7.3 of the MDEP's Best Management Practice manual be waived.

The isolator row length was sized to meet the DEP's regulations where the number of chambers within the isolator row is equal to the peak inflow flowrate during a 1-year storm into the system divided by 0.2 cfs. The project proposes 3 chambers within the isolator row compared the yielded value of 2.45 from the above equation.

FLOODING STANDARD – WATER QUANTITY

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively.

Due to the numerous variables, and inherent inaccuracies with the modeling program used to calculate stormwater runoff it is custom at Acorn Engineering, Inc. to round to the nearest whole number. However due to the small size of the project and the minimal existing flows, the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Time of Concentration (T_c)

Within the pre-development, calculating a Tc using site specific flow paths yielded less than 5 minutes when the sheet flow regime was capped at 100 feet (due to the steep sustained slopes). A consistent time of concentration (T_c) of 5 minutes was applied to each subcatchment for both the pre and post-development conditions given the urban setting and steep slopes.

Curve Number

Within the pre-development model, the vegetated areas were considered fair grass cover within the hydrologic soil group A. The fair rating is due to some of the patches and exposed soils throughout the site. In the post-development plan, the landscaped areas were considered good grass cover within the hydrologic soil group A. This is a conservative approach given the aggressive landscape plan which may be more accurately depicted as grass/woodlands combo due to the extensive root systems and canopy cover that will exist once the landscaping has matured.

Pre-development Calculations

The entirety of the existing site was modeled as one subcatchment given the existing contours. The site's runoff flows to the abutting property on Anderson Street which ultimately drains to the public drainage system in Anderson Street.

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

Peak flow rates for the storm events are as follows:

Table 4 – Pre-Development Peak Stormwater Flows

Drainage Area	2 – Year Storm Event (cfs)	10 – Year Storm Event (cfs)	25 – Year Storm Event (cfs)
POI #1	0.1	0.5	0.8

Post-development Calculations:

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

- Subcatchment 1 – This is comprised of the roof which will be routed to the USSF.
- Subcatchment 2 – This subcatchment is characterized as the driveway, the walkways, the retaining wall, the decks above, and the swale along the property line which will drain to the infiltration trench.
- Subcatchment 3 - This is comprised of the edges of property lines which may not drain to the infiltration trench as well as the first five feet of the property in front of the proposed building.

The post-development calculations include changes to the land use, and the compensation provided by the detention facility. The following table represents comparison of pre-development and post-development condition peak runoff rates for the proposed development and tributary area.

Table 5 – Comparison of Peak Flows						
Drainage Area	**2 – Year Storm Event (cfs)**		**10 – Year Storm Event (cfs)**		**25 – Year Storm Event (cfs)**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
POI #1	0.1	0.1	0.5	0.4	0.8	0.7

As shown in Table 5 the net impact of the post development peak flows will remain at or below the predevelopment levels. A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

Down Gradient Property Owners:

The post development (proposed) peak stormwater surface flows tributary to the down gradient property owners will significantly decrease. The proposed infiltration trench dimensions have been sized to contain the runoff from up to a 25-year storm event and promote infiltration into the surrounding glacial till layer. Currently, all stormwater runoff generated by the site drains the Portland Housing Authority Maintenance Facility. In the proposed condition, the flows will be redirected to the separated storm system in Fox Street, therefore improving upon the existing conditions to the downgradient property owner.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

Given the soils information, listed above, no onsite wastewater is proposed, deep fills/cuts the applicant does not intend to perform a more intense hydric soil boundary delineation because

of the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/12 are met.

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

Table 6 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	.17	.17

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

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. As a result the design of the proposed development and stormwater system, the project does not anticipate to create erosion, drainage or runoff problems either in the development or with respect to adjoining properties. The existing flows will be maintained, but redirected to the stormwater system through LID techniques rather than the abutting property.

Attachments

Attachment A: Pre Development Watershed Map
Attachment B: Post Development Watershed Map
Attachment C: HydroCAD Calculations
Attachment D: Soil Survey

POI #1
ANDERSON ST.

FOX STREET

HAMMOND STREET

N.F. Fox Hole LLC
30563/163

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

N.F. Pininsula Community LP
20561/263

N.F. Steven Oldford et al
34575/58

N.F. Amy Lippmann
31784/227

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

Maloney
4927/92
Parcel 1

Maloney
4927/92
Parcel 2

Didonato
6420/257

Didonato
3205/4

1 1/2 story
wood frame
house

Paved
Parking Lot

Monument T102-77-1

Monument
T102-77-2

5/8" Rebar Found
With Cap 67-AG
2.55' South From
Corner

5/8" Rebar Found
With Cap 8"-AG

N 303950.501
E 2929376.980

Slope 0.012
L=241'
D = 21"

Rim 19.13'
Invert Out
9.86'

Rim 18.20'
Inv 13.95'

propane tank

Heat Pump

Deck

Porch

1st Floor Elev.
39.8'

1st Floor Elev.
39.1'

Paved Driveway

Garage

Concrete Sidewalk

SD

1

NOTE:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

PRELIMINARY
SUBMISSION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18
REVISION	REV. DATE

DRAWING NAME:
PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME:
HAMMOND HOUSE REDEVELOPMENT

CLIENT:
THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC
158 DANFORTH ST
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=20'
DESIGN BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

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DRAWING NO.
PRE

POI #1
ANDERSON ST.

POND 2: INFILTRATION TRENCH

P2

FOX STREET STORM MAIN CONNECTS TO ANDERSON STREET DRAINAGE SYSTEM DOWNSTREAM

EXISTING CONTOUR, TYP.

SUBCAT DIVIDE ALONG WALL

PROPOSED CONTOUR, TYP.

POND 1: UNDERDRAINED SUBSURFACE SAND FILTER (USSF) TO ACCEPT ROOF RUNOFF

8" USSF OUTLET INTO SEPARATED STORM MAIN

FOX STREET

HAMMOND STREET

N.F. Steven Oldford et al
34575/58

N.F. Amy Lippmann
31784/227

N.F. Pininsula Community LP
20561/263

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

NOTE:

1. REFER TO STORMWATER REPORT AND SHEET C-30 FOR MORE INFORMATION.

P1 — STORMWATER POND

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

PRELIMINARY SUBMISSION

ISSUED FOR	BY DATE
FINAL APP	WHS 11/27/18
REVISION	REV. DATE

DRAWING NAME: POST-DEVELOPMENT WATERSHED MAP

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC
158 DANFORTH ST
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=20'
DESIGN BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

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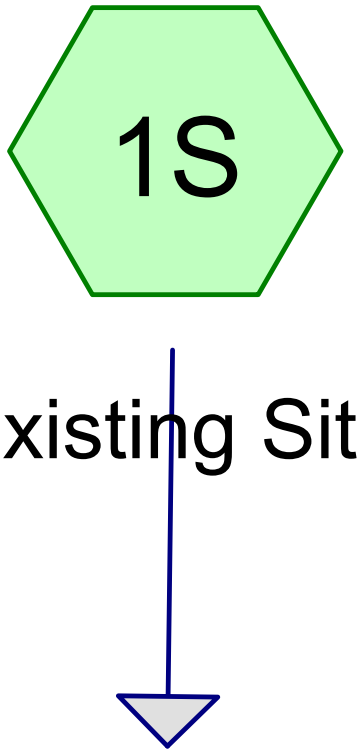
DRAWING NO.
POST



POI #1 - Anderson St.

Subcat Reach Pond Link

Routing Diagram for Pre Development
Prepared by Acorn Engineering, Inc., Printed 11/27/2018
HydroCAD® 10.00-22 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.262	49	50-75% Grass cover, Fair, HSG A (1S)
0.092	98	Pavement, roof, concrete (1S)
0.354	**62**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.262	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.092	Other	1S
0.354		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.262	0.000	0.000	0.000	0.000	0.262	50-75% Grass cover, Fair	1S
0.000	0.000	0.000	0.000	0.092	0.092	Pavement, roof, concrete	1S
0.262	**0.000**	**0.000**	**0.000**	**0.092**	**0.354**	**TOTAL AREA**	

Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 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

Subcatchment 1S: Existing Site Runoff Area=15,433 sf 25.98% Impervious Runoff Depth=0.44"
Tc=5.0 min CN=62 Runoff=0.12 cfs 0.013 af

Reach 1R: POI #1 - Anderson St. Inflow=0.12 cfs 0.013 af
Outflow=0.12 cfs 0.013 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.013 af Average Runoff Depth = 0.44"
74.02% Pervious = 0.262 ac 25.98% Impervious = 0.092 ac

Summary for Subcatchment 1S: Existing Site

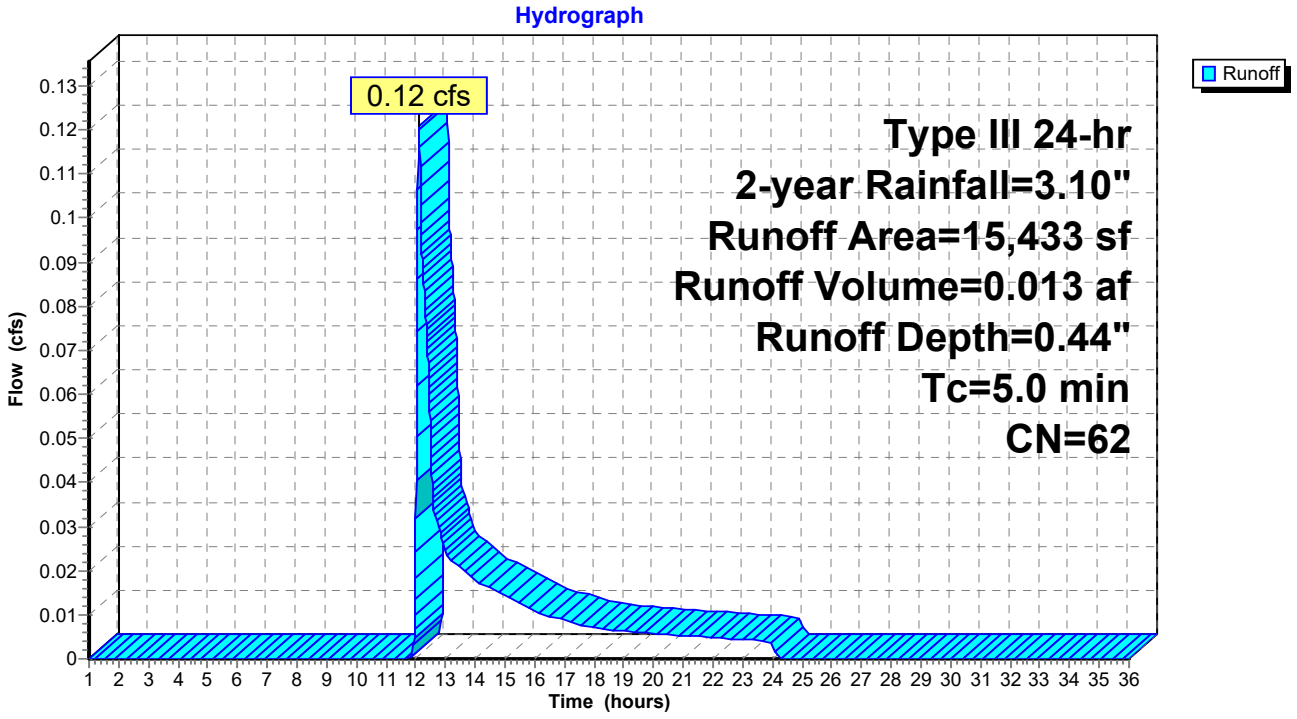
Runoff = 0.12 cfs @ 12.11 hrs, Volume= 0.013 af, Depth= 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	11,424	49	50-75% Grass cover, Fair, HSG A
*	4,009	98	Pavement, roof, concrete
	15,433	62	Weighted Average
	11,424		74.02% Pervious Area
	4,009		25.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Paved Drive to Steep Banks**

Subcatchment 1S: Existing Site

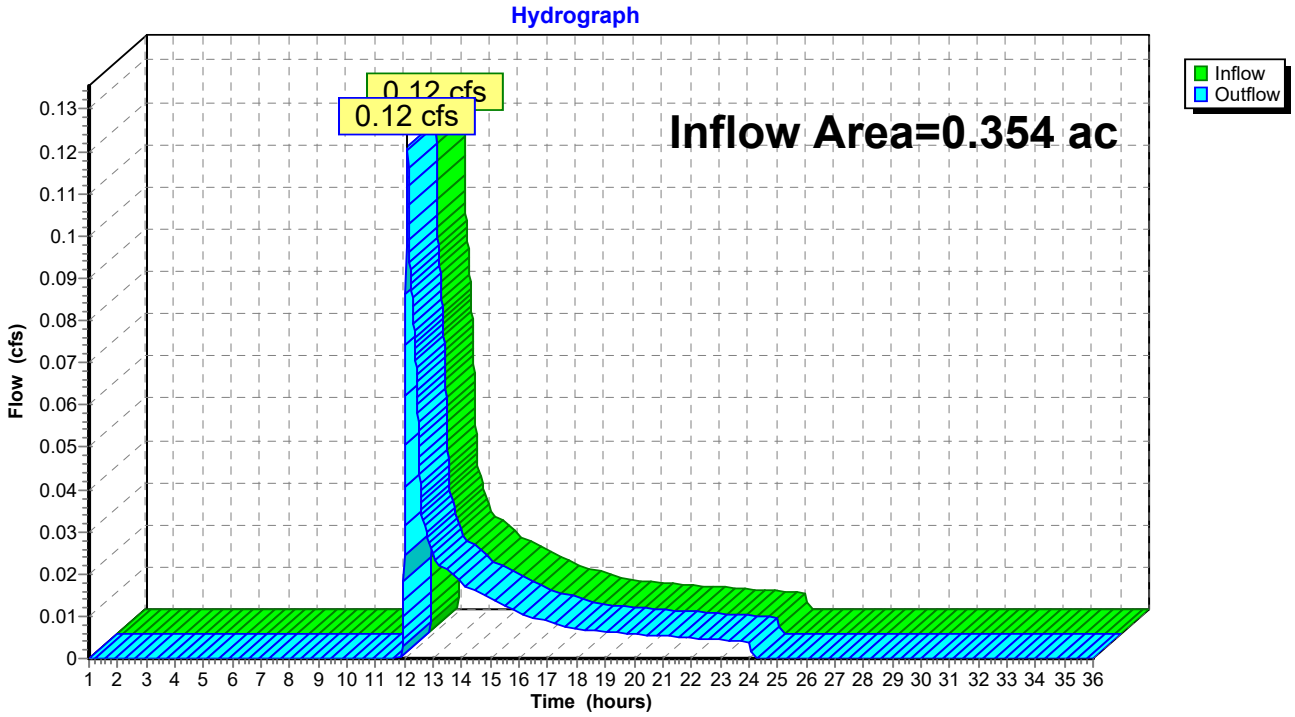


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 25.98% Impervious, Inflow Depth = 0.44" for 2-year event
Inflow = 0.12 cfs @ 12.11 hrs, Volume= 0.013 af
Outflow = 0.12 cfs @ 12.11 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 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

Subcatchment 1S: Existing Site Runoff Area=15,433 sf 25.98% Impervious Runoff Depth=1.20"
Tc=5.0 min CN=62 Runoff=0.46 cfs 0.035 af

Reach 1R: POI #1 - Anderson St. Inflow=0.46 cfs 0.035 af
Outflow=0.46 cfs 0.035 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.035 af Average Runoff Depth = 1.20"
74.02% Pervious = 0.262 ac 25.98% Impervious = 0.092 ac

Summary for Subcatchment 1S: Existing Site

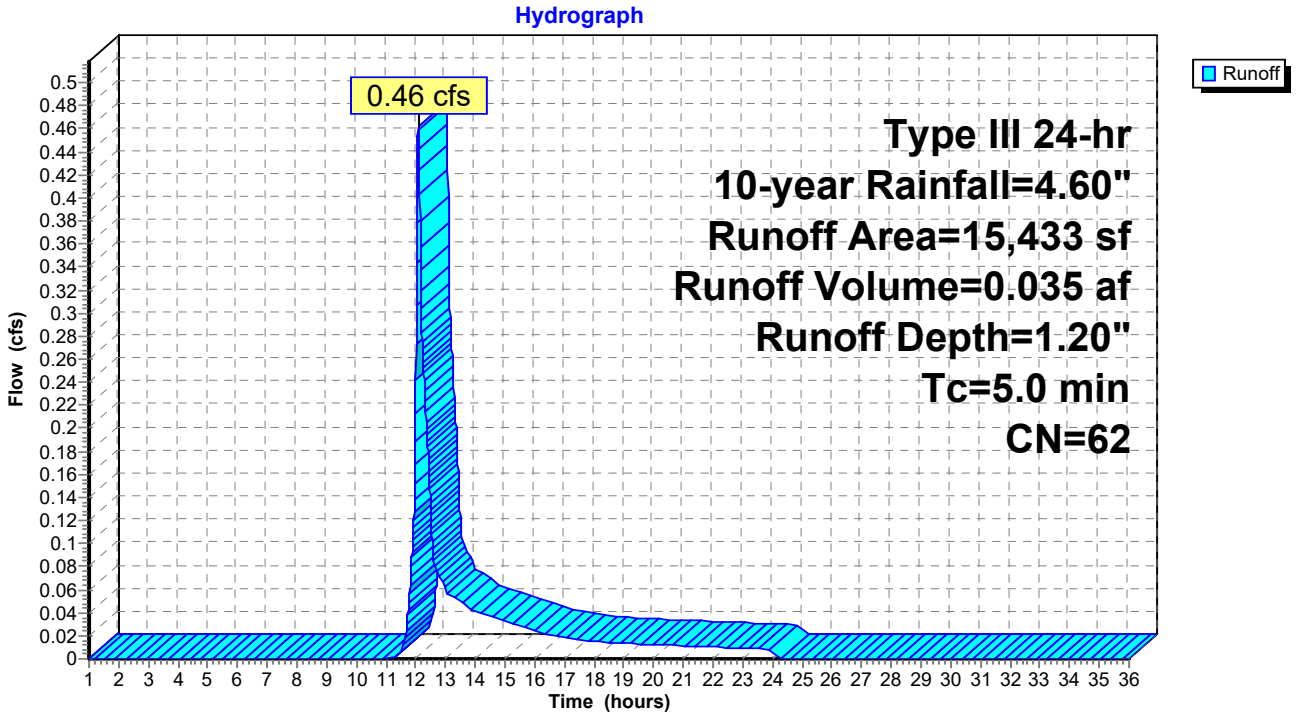
Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	11,424	49	50-75% Grass cover, Fair, HSG A
*	4,009	98	Pavement, roof, concrete
	15,433	62	Weighted Average
	11,424		74.02% Pervious Area
	4,009		25.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Paved Drive to Steep Banks**

Subcatchment 1S: Existing Site

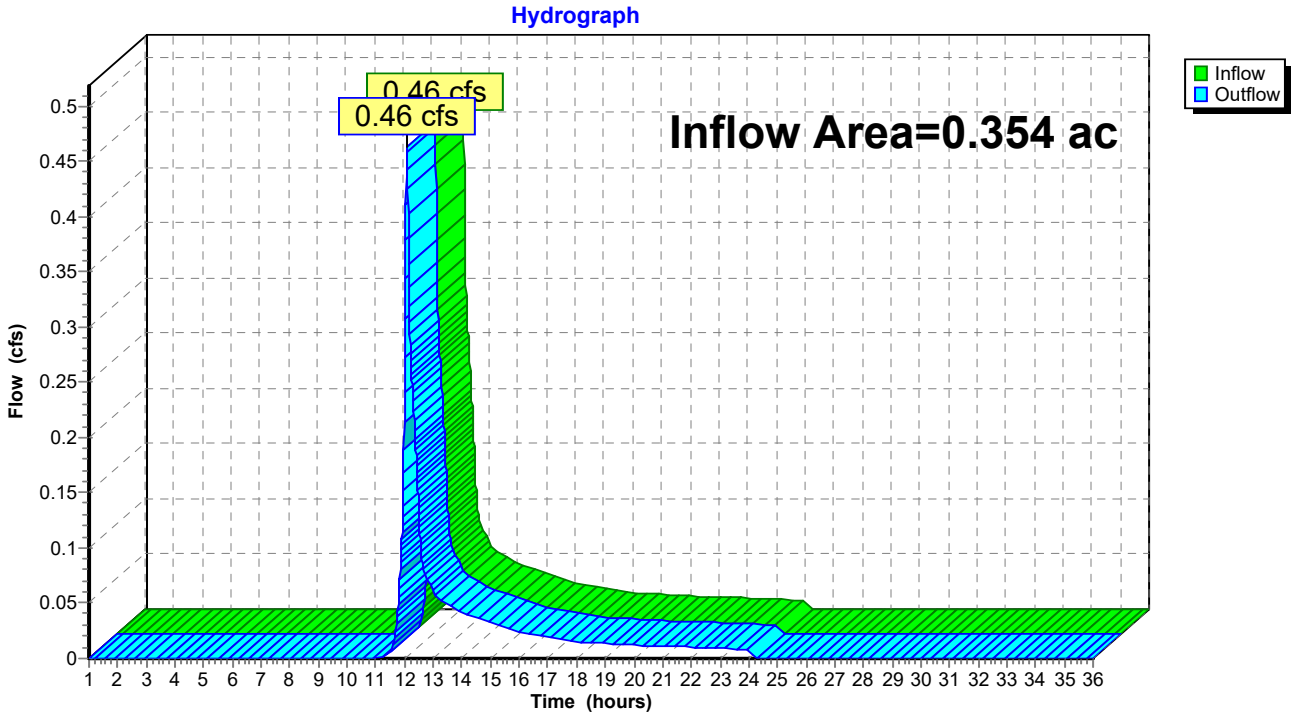


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 25.98% Impervious, Inflow Depth = 1.20" for 10-year event
Inflow = 0.46 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.46 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 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

Subcatchment 1S: Existing Site Runoff Area=15,433 sf 25.98% Impervious Runoff Depth=1.95"
Tc=5.0 min CN=62 Runoff=0.80 cfs 0.058 af

Reach 1R: POI #1 - Anderson St. Inflow=0.80 cfs 0.058 af
Outflow=0.80 cfs 0.058 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.058 af Average Runoff Depth = 1.95"
74.02% Pervious = 0.262 ac 25.98% Impervious = 0.092 ac

Summary for Subcatchment 1S: Existing Site

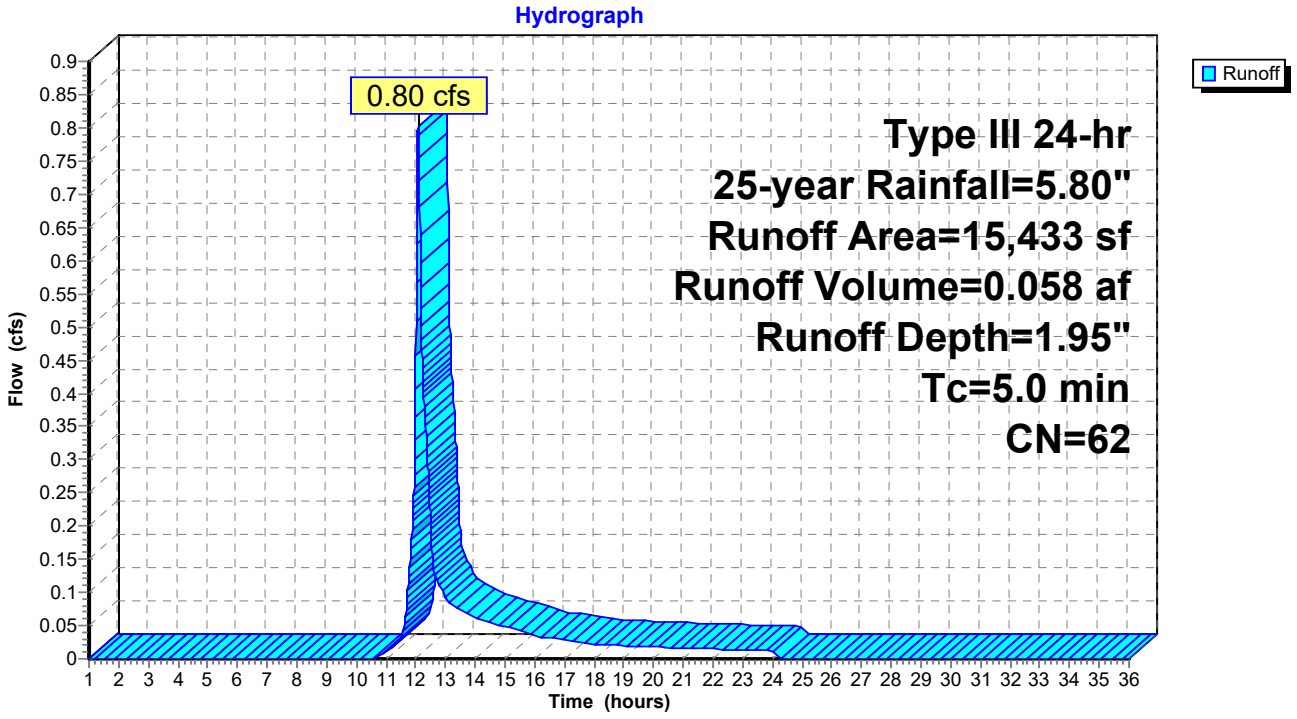
Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.058 af, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	11,424	49	50-75% Grass cover, Fair, HSG A
*	4,009	98	Pavement, roof, concrete
	15,433	62	Weighted Average
	11,424		74.02% Pervious Area
	4,009		25.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Paved Drive to Steep Banks**

Subcatchment 1S: Existing Site

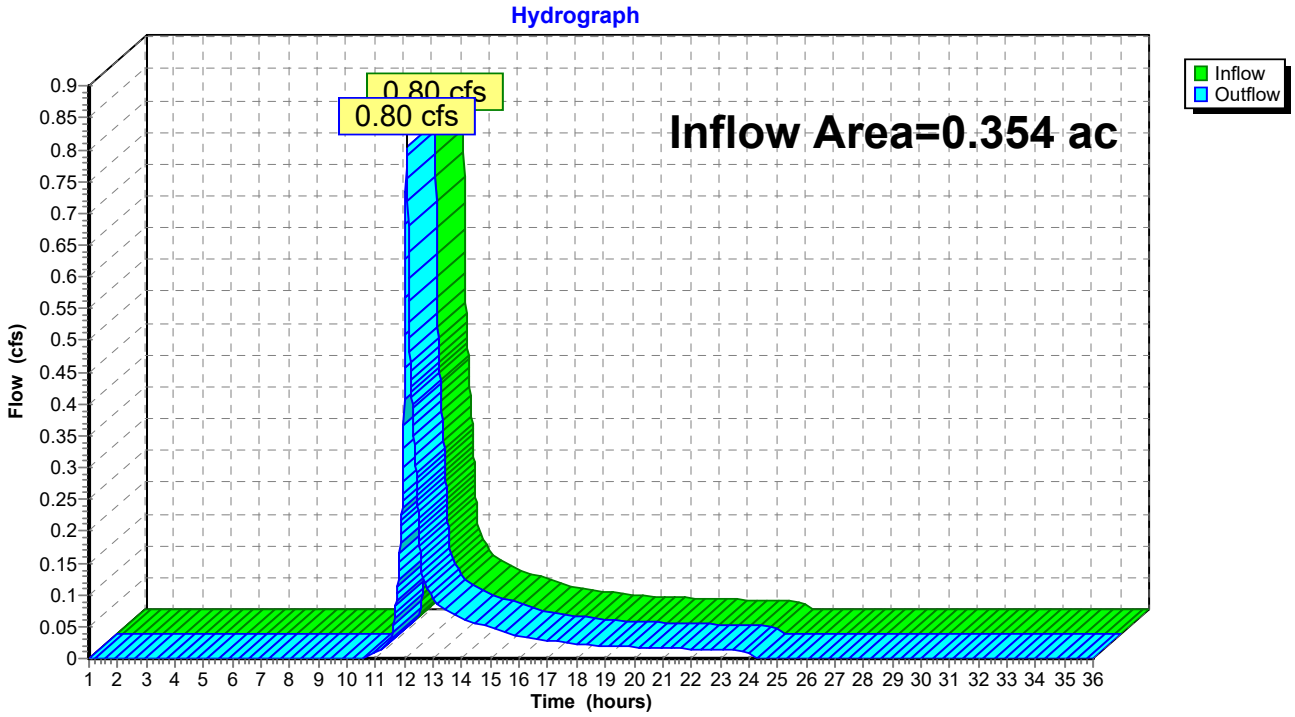


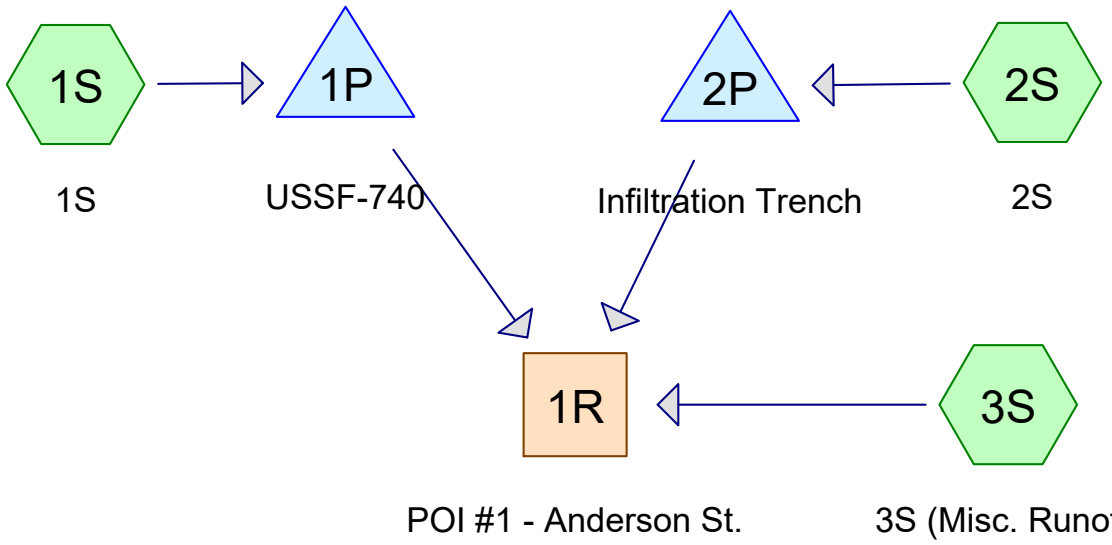
Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 25.98% Impervious, Inflow Depth = 1.95" for 25-year event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.058 af
Outflow = 0.80 cfs @ 12.08 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.





Subcat Reach Pond Link

Routing Diagram for Post Development 11-26-18
Prepared by Acorn Engineering, Inc., Printed 11/27/2018
HydroCAD® 10.00-22 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.089	39	>75% Grass cover, Good, HSG A (2S, 3S)
0.078	98	Drive, wall, walks, decks above, misc. roof (2S)
0.001	98	Front entrance walk/sculptures (3S)
0.187	98	Roof (1S)
0.354	**83**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.089	HSG A	2S, 3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.265	Other	1S, 2S, 3S
0.354		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchmen Numbers
0.089	0.000	0.000	0.000	0.000	0.089	>75% Grass cover, Good	
0.000	0.000	0.000	0.000	0.078	0.078	Drive, wall, walks, decks above, misc. roof	
0.000	0.000	0.000	0.000	0.001	0.001	Front entrance walk/sculptures	
0.000	0.000	0.000	0.000	0.187	0.187	Roof	
0.089	**0.000**	**0.000**	**0.000**	**0.265**	**0.354**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	27.65	27.00	130.0	0.0050	0.013	8.0	0.0	0.0

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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

Subcatchment 1S: 1S Runoff Area=8,138 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.58 cfs 0.045 af

Subcatchment 2S: 2S Runoff Area=6,291 sf 53.79% Impervious Runoff Depth=0.82"
Tc=5.0 min CN=71 Runoff=0.13 cfs 0.010 af

Subcatchment 3S: 3S (Misc. Runoff) Runoff Area=1,004 sf 4.28% Impervious Runoff Depth=0.01"
Tc=5.0 min CN=42 Runoff=0.00 cfs 0.000 af

Reach 1R: POI #1 - Anderson St. Inflow=0.13 cfs 0.045 af
Outflow=0.13 cfs 0.045 af

Pond 1P: USSF-740 Peak Elev=31.80' Storage=554 cf Inflow=0.58 cfs 0.045 af
Outflow=0.13 cfs 0.045 af

Pond 2P: Infiltration Trench Peak Elev=21.46' Storage=161 cf Inflow=0.13 cfs 0.010 af
Discarded=0.01 cfs 0.010 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.010 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.055 af Average Runoff Depth = 1.85"
25.06% Pervious = 0.089 ac 74.94% Impervious = 0.265 ac

Summary for Subcatchment 1S: 1S

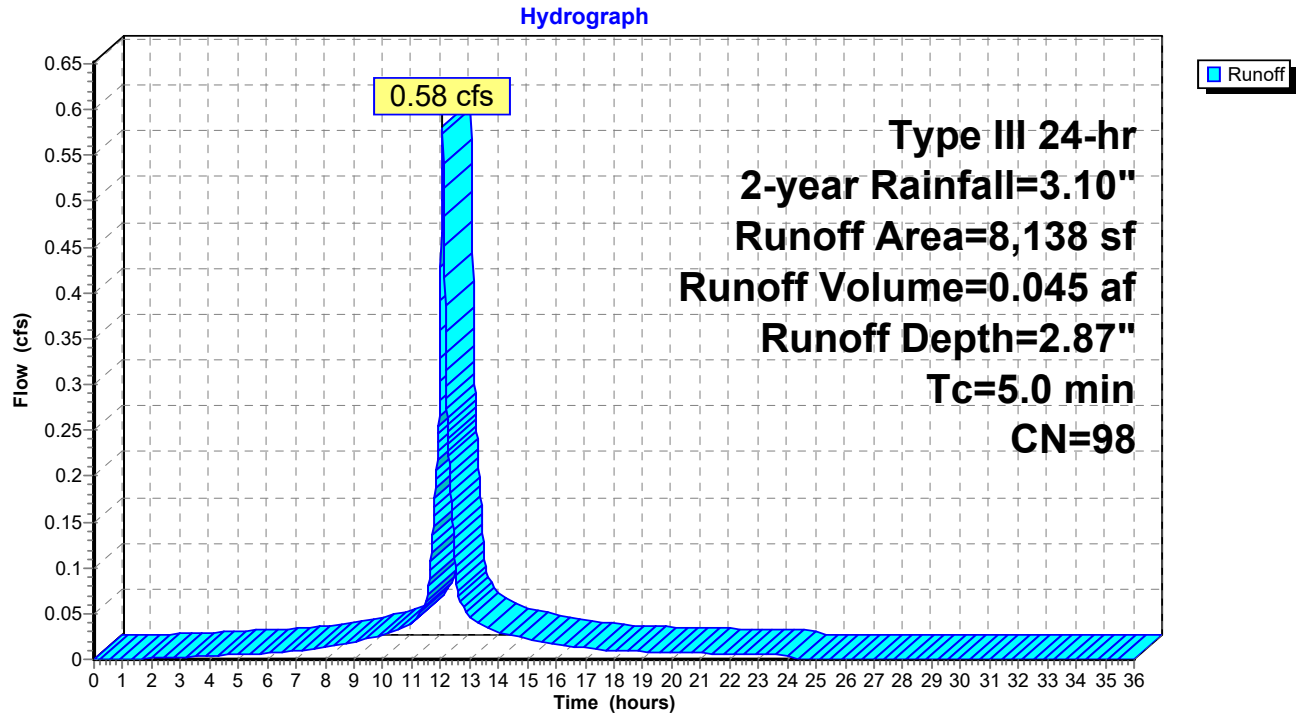
Runoff = 0.58 cfs @ 12.07 hrs, Volume= 0.045 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	8,138	98	Roof
	8,138		100.00% Impervious Area

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

Subcatchment 1S: 1S



Summary for Subcatchment 2S: 2S

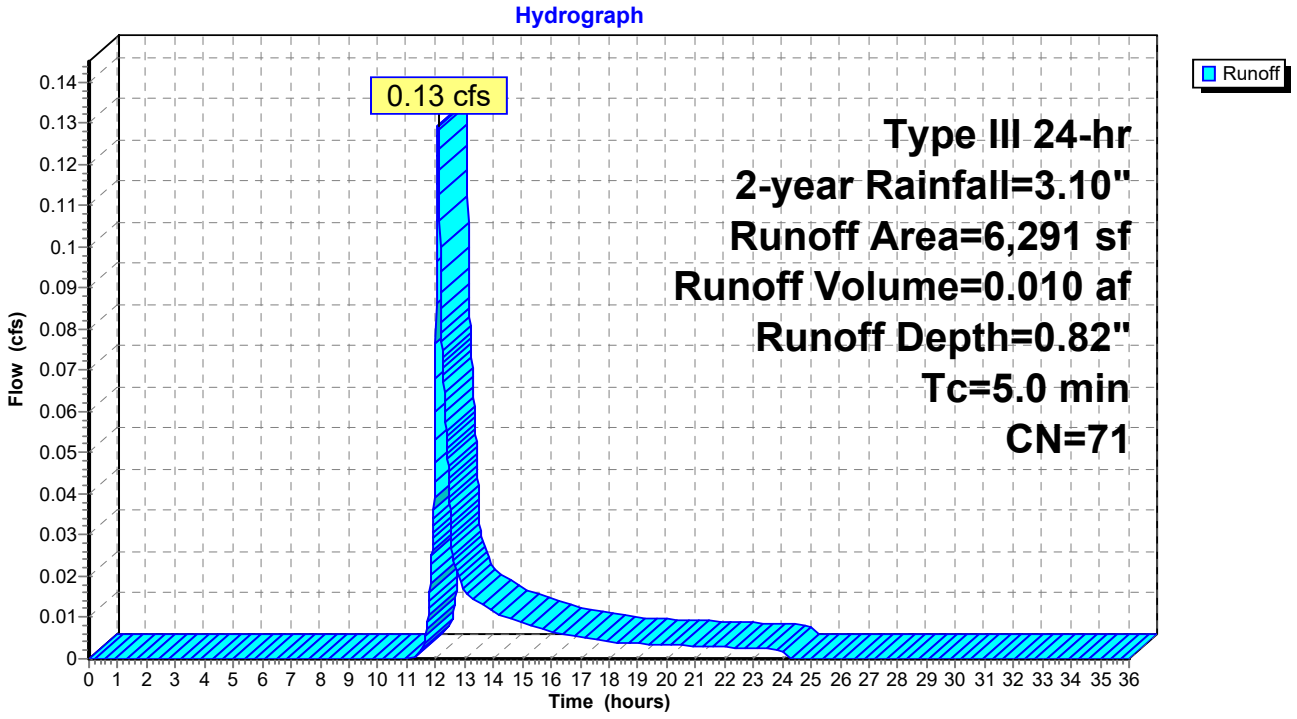
Runoff = 0.13 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,384	98	Drive, wall, walks, decks above, misc. roof
	2,907	39	>75% Grass cover, Good, HSG A
	6,291	71	Weighted Average
	2,907		46.21% Pervious Area
	3,384		53.79% Impervious Area

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

Subcatchment 2S: 2S



Summary for Subcatchment 3S: 3S (Misc. Runoff)

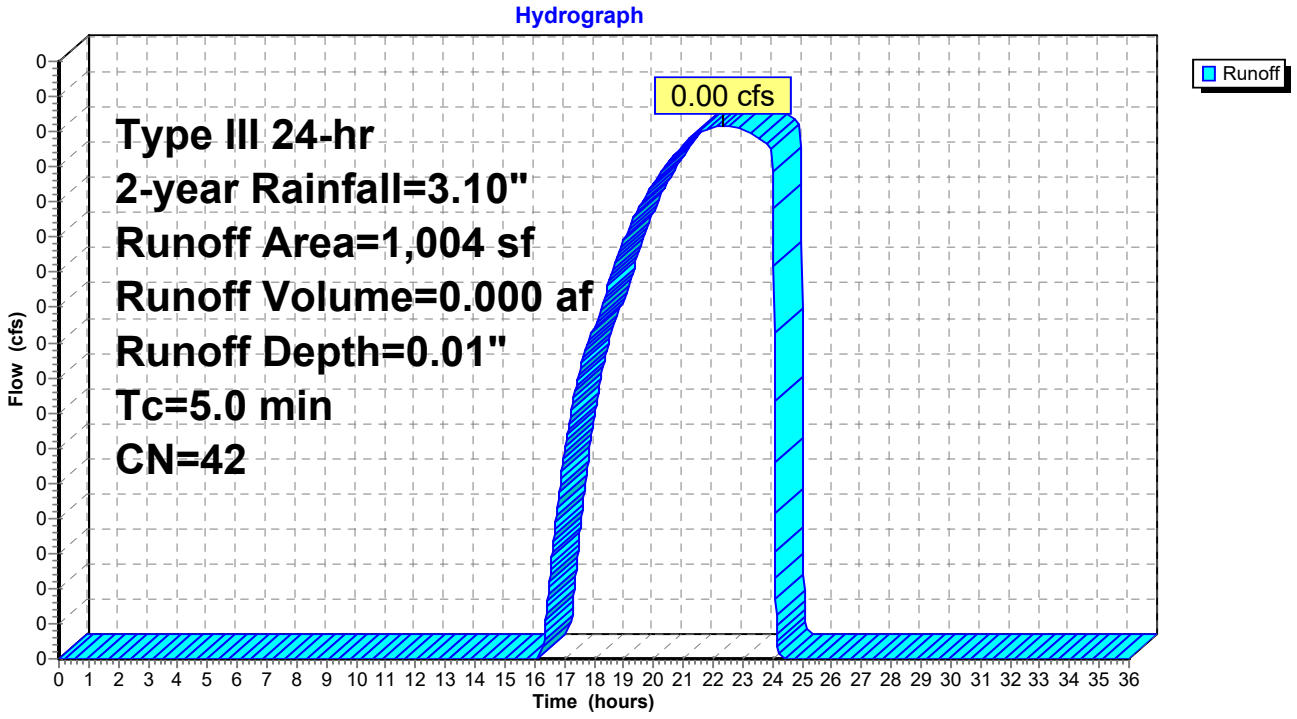
Runoff = 0.00 cfs @ 22.35 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	961	39	>75% Grass cover, Good, HSG A
*	43	98	Front entrance walk/sculptures
	1,004	42	Weighted Average
	961		95.72% Pervious Area
	43		4.28% Impervious Area

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

Subcatchment 3S: 3S (Misc. Runoff)

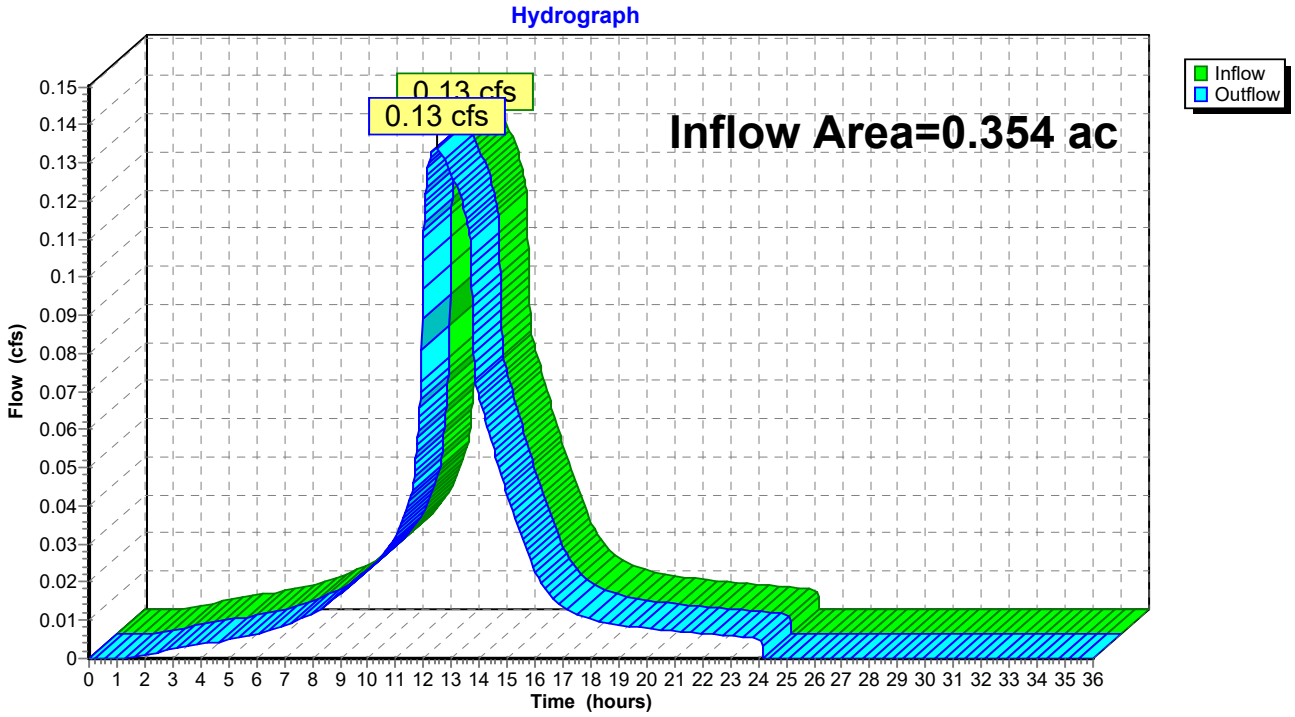


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 74.94% Impervious, Inflow Depth = 1.51" for 2-year event
Inflow = 0.13 cfs @ 12.45 hrs, Volume= 0.045 af
Outflow = 0.13 cfs @ 12.45 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Summary for Pond 1P: USSF-740

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-year event
Inflow = 0.58 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.13 cfs @ 12.45 hrs, Volume= 0.045 af, Atten= 77%, Lag= 22.7 min
Primary = 0.13 cfs @ 12.45 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 31.80' @ 12.45 hrs Surf.Area= 1,231 sf Storage= 554 cf

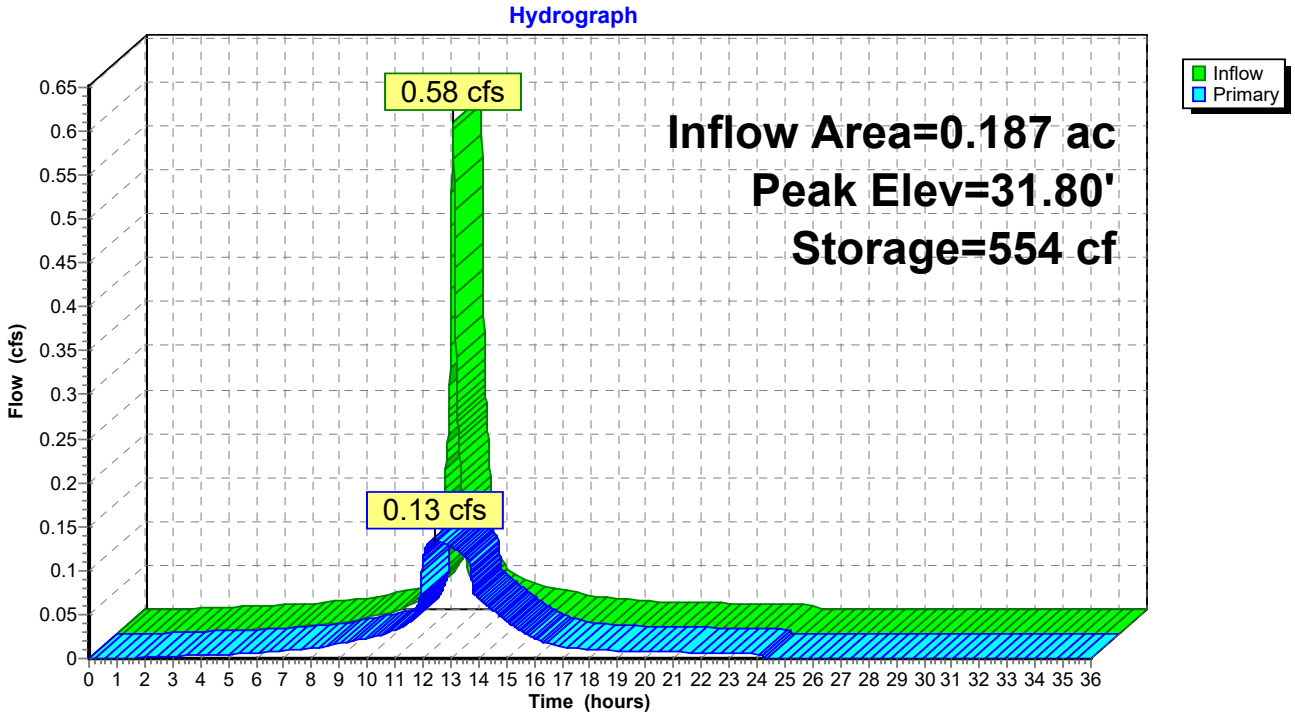
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 35.1 min (791.2 - 756.1)

Volume	Invert	Avail.Storage	Storage Description
#1	30.50'	450 cf	**25.25'W x 16.25'L x 3.75'H Crushed Stone** 1,539 cf Overall - 413 cf Embedded = 1,125 cf x 40.0% Voids
#2	31.00'	413 cf	**ADS_StormTech SC-740** x 9 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
#3	29.00'	31 cf	**16.25'W x 25.25'L x 1.50'H Sand** 615 cf Overall x 5.0% Voids
#4	27.80'	195 cf	**16.25'W x 25.25'L x 1.20'H Crushed Stone Underdrain** 492 cf Overall - 5 cf Embedded = 487 cf x 40.0% Voids
#5	28.33'	5 cf	**4.0" Round Underdrains** Inside #4 L= 61.0' S= 0.0050 '/'
		1,094 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	27.65'	**8.0" Round 8" Outlet** L= 130.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.65' / 27.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	27.75'	**1.6" Vert. Quality Outlet** C= 0.600
#3	Device 1	32.10'	**5.7" Vert. Quantity Outlet** C= 0.600
#4	Device 1	32.90'	**6.0' long x 0.7' breadth Overflow Wier** 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=0.13 cfs @ 12.45 hrs HW=31.80' TW=0.00' (Dynamic Tailwater)
- **1=8" Outlet** (Passes 0.13 cfs of 1.91 cfs potential flow)
  - **2=Quality Outlet** (Orifice Controls 0.13 cfs @ 9.61 fps)
  - **3=Quantity Outlet** (Controls 0.00 cfs)
  - **4=Overflow Wier** (Controls 0.00 cfs)

Pond 1P: USSF-740



Summary for Pond 2P: Infiltration Trench

Inflow Area = 0.144 ac, 53.79% Impervious, Inflow Depth = 0.82" for 2-year event
Inflow = 0.13 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.01 cfs @ 11.85 hrs, Volume= 0.010 af, Atten= 91%, Lag= 0.0 min
Discarded = 0.01 cfs @ 11.85 hrs, Volume= 0.010 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 21.46' @ 14.00 hrs Surf.Area= 205 sf Storage= 161 cf

Plug-Flow detention time= 140.4 min calculated for 0.010 af (100% of inflow)
Center-of-Mass det. time= 140.4 min (1,013.9 - 873.6)

Volume	Invert	Avail.Storage	Storage Description
#1	19.50'	164 cf	**3/4" Stone Detention (Prismatic)** Listed below (Recalc) 410 cf Overall x 40.0% Voids
#2	21.50'	558 cf	**Detention above Stone (Prismatic)** Listed below (Recalc)
		722 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.50	205	0	0
21.50	205	410	410

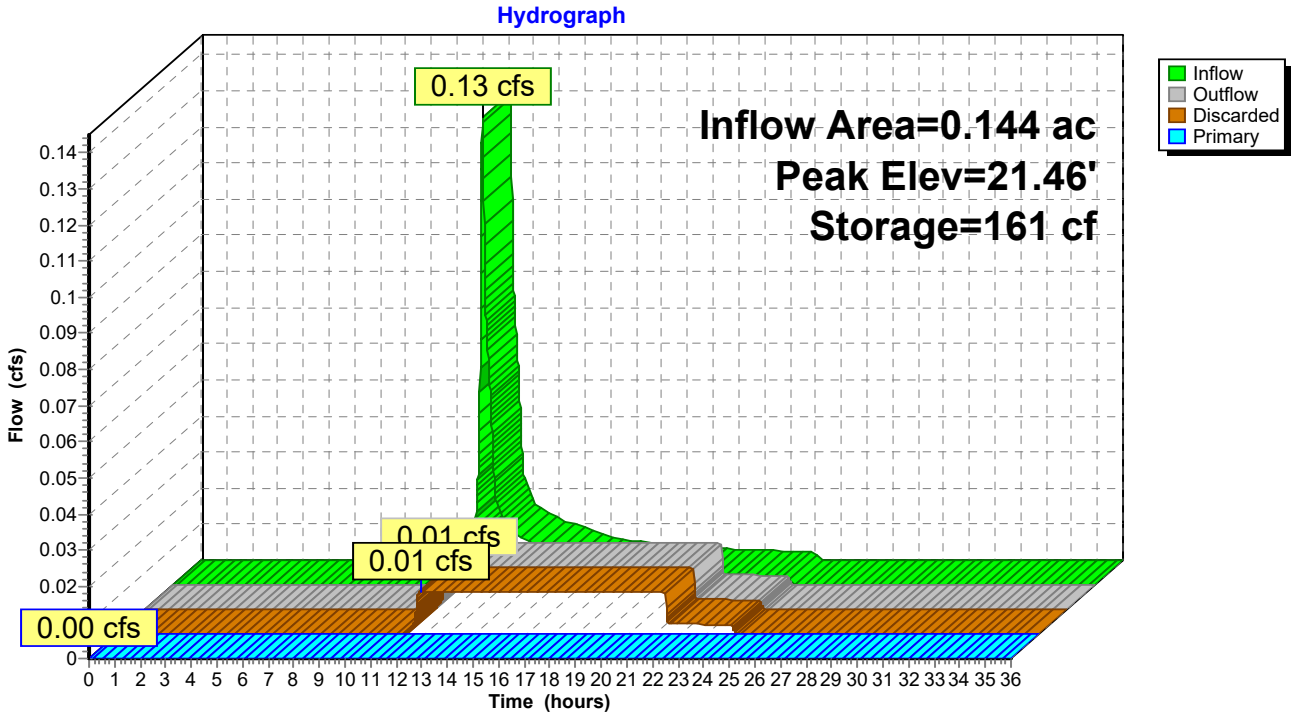
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.50	217	0	0
22.75	675	558	558

Device	Routing	Invert	Outlet Devices
#1	Discarded	19.50'	**2.410 in/hr Infiltration over Surface area** Phase-In= 0.01'
#2	Primary	22.60'	**1.0' long x 1.0' breadth Emergency Outlet** 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 11.85 hrs HW=19.53' (Free Discharge)
1=Infiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=19.50' TW=0.00' (Dynamic Tailwater)
2=Emergency Outlet (Controls 0.00 cfs)

Pond 2P: Infiltration Trench



Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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

Subcatchment 1S: 1S Runoff Area=8,138 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.87 cfs 0.068 af

Subcatchment 2S: 2S Runoff Area=6,291 sf 53.79% Impervious Runoff Depth=1.82"
Tc=5.0 min CN=71 Runoff=0.31 cfs 0.022 af

Subcatchment 3S: 3S (Misc. Runoff) Runoff Area=1,004 sf 4.28% Impervious Runoff Depth=0.22"
Tc=5.0 min CN=42 Runoff=0.00 cfs 0.000 af

Reach 1R: POI #1 - Anderson St. Inflow=0.43 cfs 0.068 af
Outflow=0.43 cfs 0.068 af

Pond 1P: USSF-740 Peak Elev=32.45' Storage=737 cf Inflow=0.87 cfs 0.068 af
Outflow=0.43 cfs 0.068 af

Pond 2P: Infiltration Trench Peak Elev=22.12' Storage=368 cf Inflow=0.31 cfs 0.022 af
Discarded=0.04 cfs 0.022 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.022 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.090 af Average Runoff Depth = 3.06"
25.06% Pervious = 0.089 ac 74.94% Impervious = 0.265 ac

Summary for Subcatchment 1S: 1S

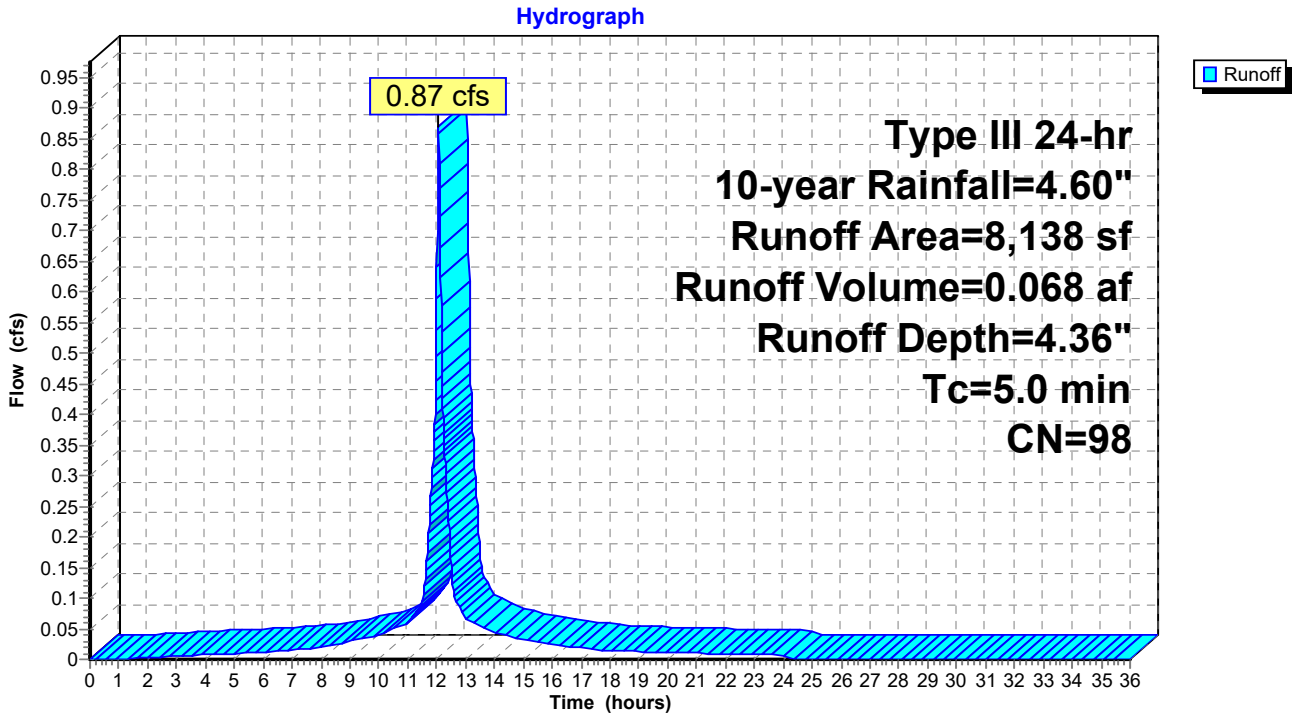
Runoff = 0.87 cfs @ 12.07 hrs, Volume= 0.068 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	8,138	98	Roof
	8,138		100.00% Impervious Area

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

Subcatchment 1S: 1S



Summary for Subcatchment 2S: 2S

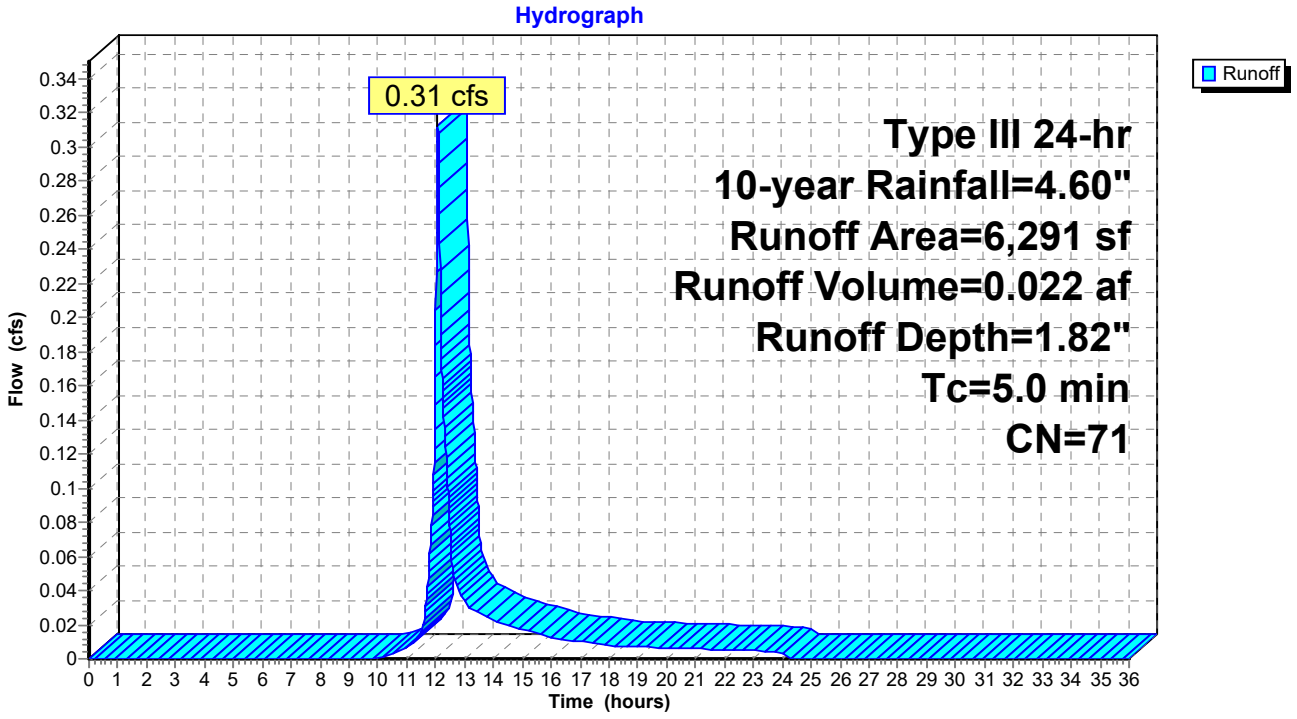
Runoff = 0.31 cfs @ 12.08 hrs, Volume= 0.022 af, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,384	98	Drive, wall, walks, decks above, misc. roof
	2,907	39	>75% Grass cover, Good, HSG A
	6,291	71	Weighted Average
	2,907		46.21% Pervious Area
	3,384		53.79% Impervious Area

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

Subcatchment 2S: 2S



Summary for Subcatchment 3S: 3S (Misc. Runoff)

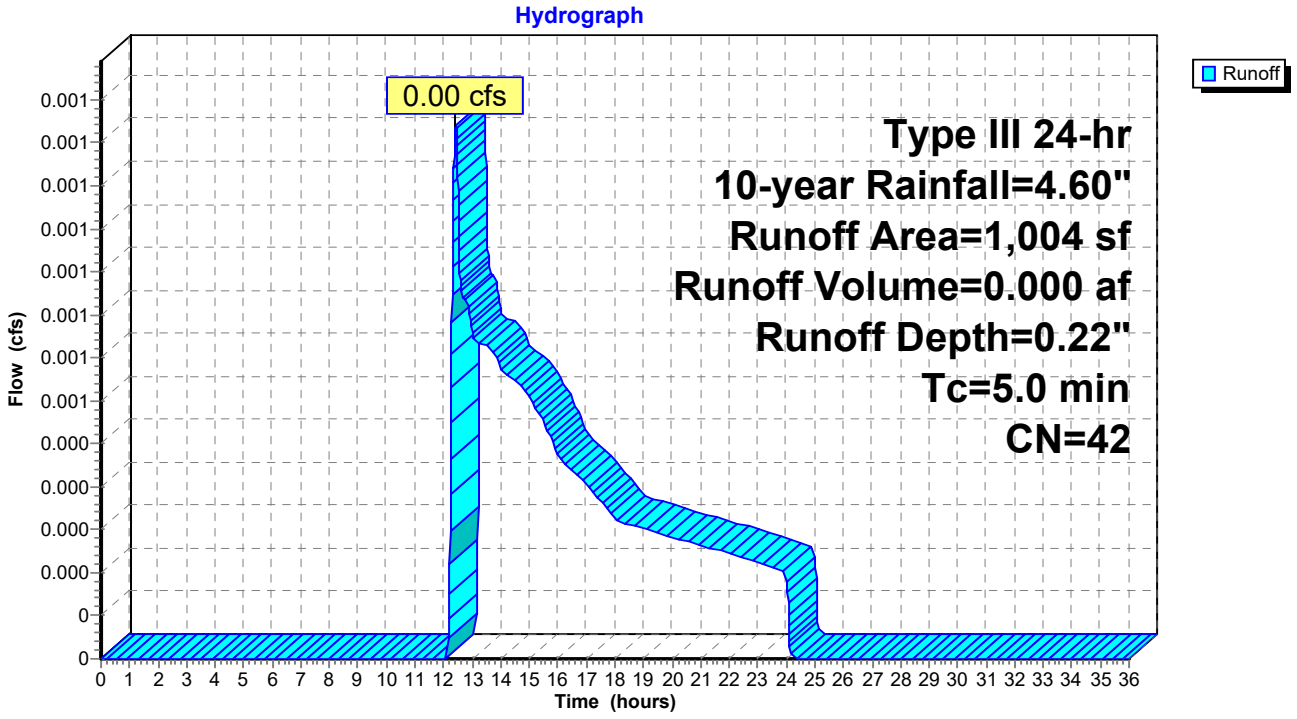
Runoff = 0.00 cfs @ 12.42 hrs, Volume= 0.000 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	961	39	>75% Grass cover, Good, HSG A
*	43	98	Front entrance walk/sculptures
	1,004	42	Weighted Average
	961		95.72% Pervious Area
	43		4.28% Impervious Area

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

Subcatchment 3S: 3S (Misc. Runoff)

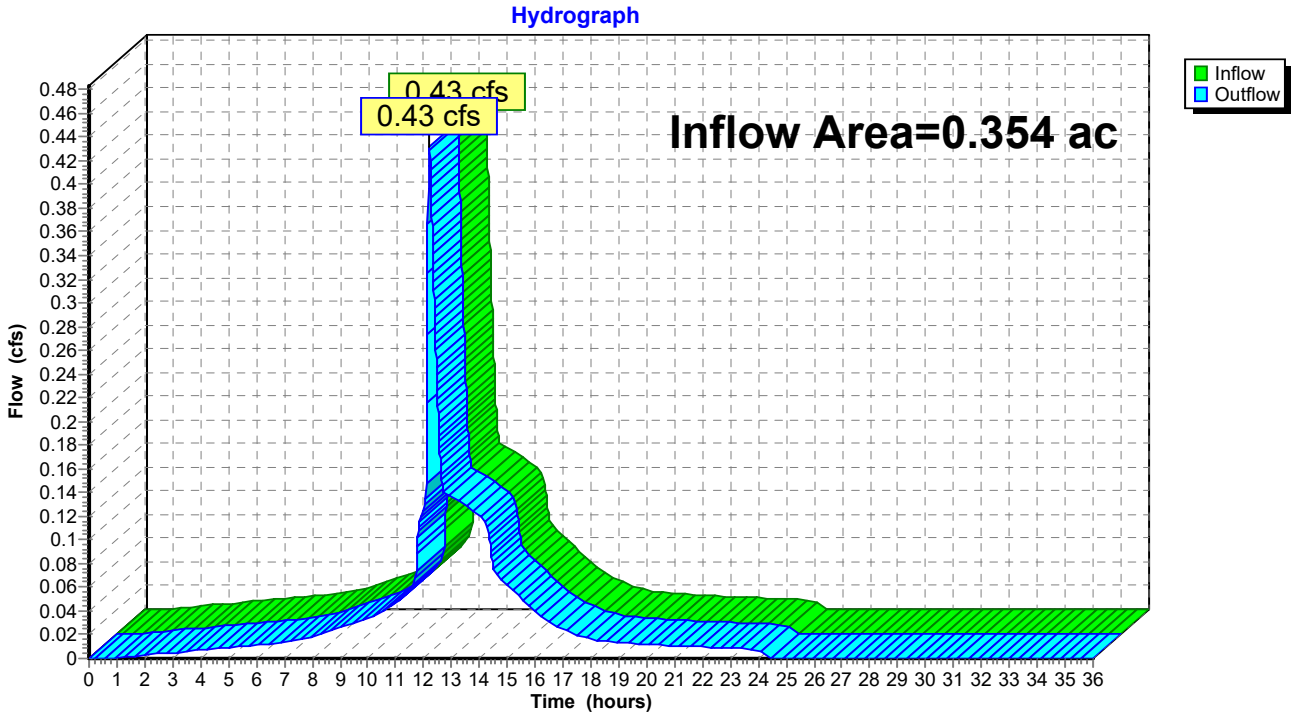


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 74.94% Impervious, Inflow Depth = 2.32" for 10-year event
Inflow = 0.43 cfs @ 12.20 hrs, Volume= 0.068 af
Outflow = 0.43 cfs @ 12.20 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Summary for Pond 1P: USSF-740

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-year event
Inflow = 0.87 cfs @ 12.07 hrs, Volume= 0.068 af
Outflow = 0.43 cfs @ 12.20 hrs, Volume= 0.068 af, Atten= 50%, Lag= 7.6 min
Primary = 0.43 cfs @ 12.20 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 32.45' @ 12.20 hrs Surf.Area= 1,231 sf Storage= 737 cf

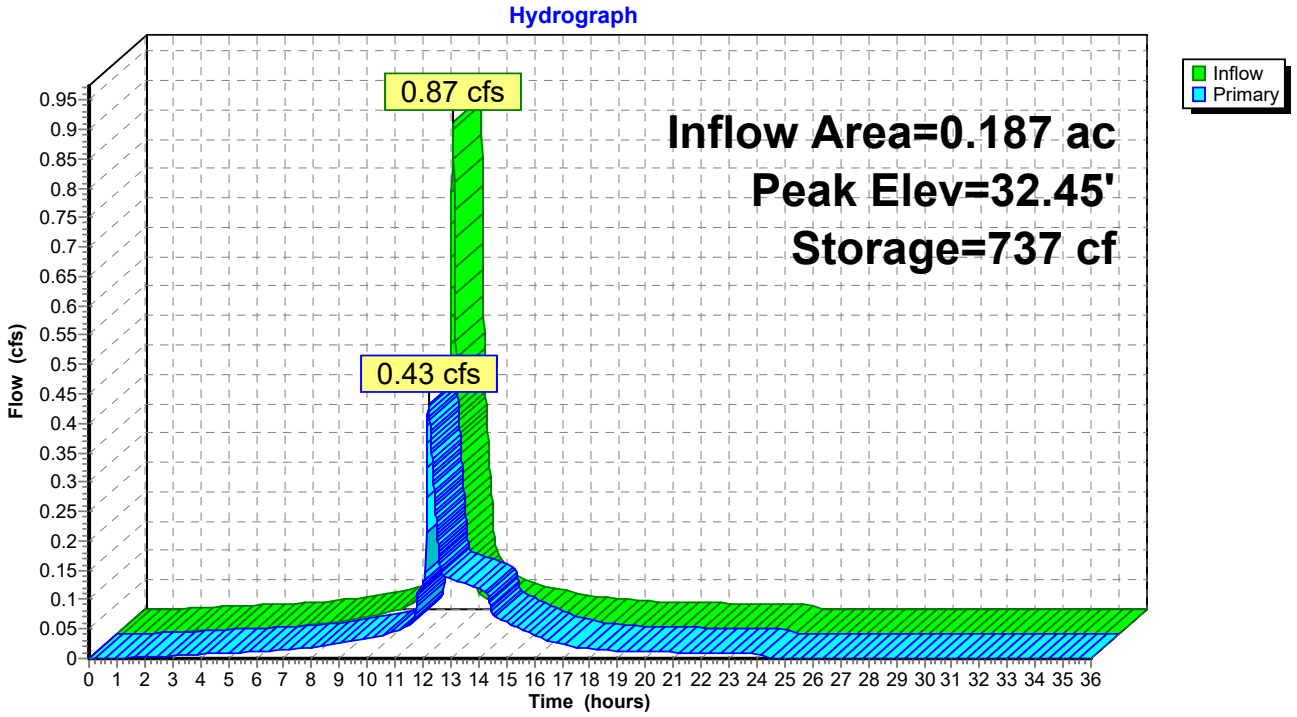
Plug-Flow detention time= 37.1 min calculated for 0.068 af (100% of inflow)
Center-of-Mass det. time= 37.1 min (785.6 - 748.5)

Volume	Invert	Avail.Storage	Storage Description
#1	30.50'	450 cf	**25.25'W x 16.25'L x 3.75'H Crushed Stone** 1,539 cf Overall - 413 cf Embedded = 1,125 cf x 40.0% Voids
#2	31.00'	413 cf	**ADS_StormTech SC-740** x 9 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
#3	29.00'	31 cf	**16.25'W x 25.25'L x 1.50'H Sand** 615 cf Overall x 5.0% Voids
#4	27.80'	195 cf	**16.25'W x 25.25'L x 1.20'H Crushed Stone Underdrain** 492 cf Overall - 5 cf Embedded = 487 cf x 40.0% Voids
#5	28.33'	5 cf	**4.0" Round Underdrains** Inside #4 L= 61.0' S= 0.0050 '/'
		1,094 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	27.65'	**8.0" Round 8" Outlet** L= 130.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.65' / 27.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	27.75'	**1.6" Vert. Quality Outlet** C= 0.600
#3	Device 1	32.10'	**5.7" Vert. Quantity Outlet** C= 0.600
#4	Device 1	32.90'	**6.0' long x 0.7' breadth Overflow Wier** 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=0.43 cfs @ 12.20 hrs HW=32.45' TW=0.00' (Dynamic Tailwater)
└─**1=8" Outlet** (Passes 0.43 cfs of 2.05 cfs potential flow)
  ├─**2=Quality Outlet** (Orifice Controls 0.14 cfs @ 10.37 fps)
  ├─**3=Quantity Outlet** (Orifice Controls 0.29 cfs @ 2.02 fps)
  └─**4=Overflow Wier** (Controls 0.00 cfs)

Pond 1P: USSF-740



Summary for Pond 2P: Infiltration Trench

Inflow Area = 0.144 ac, 53.79% Impervious, Inflow Depth = 1.82" for 10-year event
Inflow = 0.31 cfs @ 12.08 hrs, Volume= 0.022 af
Outflow = 0.04 cfs @ 12.93 hrs, Volume= 0.022 af, Atten= 88%, Lag= 51.1 min
Discarded = 0.04 cfs @ 12.93 hrs, Volume= 0.022 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 22.12' @ 12.93 hrs Surf.Area= 648 sf Storage= 368 cf

Plug-Flow detention time= 141.3 min calculated for 0.022 af (100% of inflow)
Center-of-Mass det. time= 141.2 min (989.9 - 848.7)

Volume	Invert	Avail.Storage	Storage Description
#1	19.50'	164 cf	**3/4" Stone Detention (Prismatic)** Listed below (Recalc) 410 cf Overall x 40.0% Voids
#2	21.50'	558 cf	**Detention above Stone (Prismatic)** Listed below (Recalc)
		722 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.50	205	0	0
21.50	205	410	410

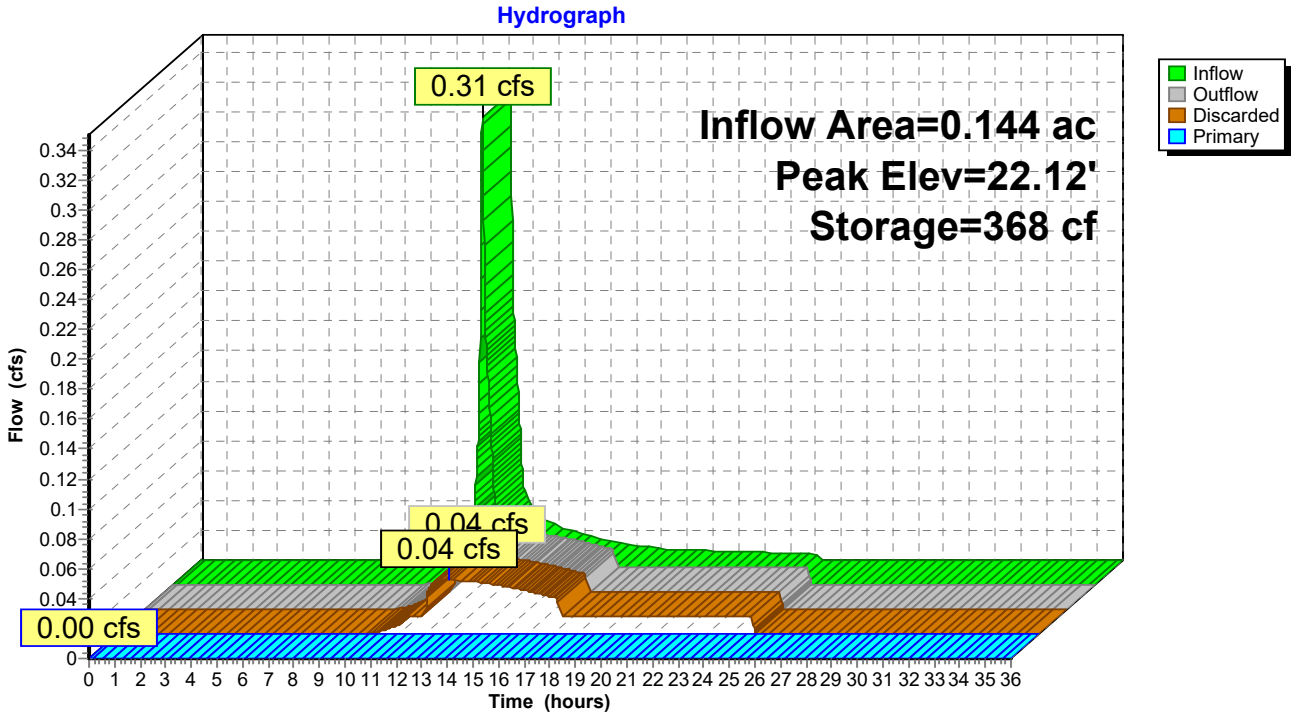
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.50	217	0	0
22.75	675	558	558

Device	Routing	Invert	Outlet Devices
#1	Discarded	19.50'	**2.410 in/hr Infiltration over Surface area** Phase-In= 0.01'
#2	Primary	22.60'	**1.0' long x 1.0' breadth Emergency Outlet** 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.04 cfs @ 12.93 hrs HW=22.12' (Free Discharge)
1=Infiltration (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=19.50' TW=0.00' (Dynamic Tailwater)
2=Emergency Outlet (Controls 0.00 cfs)

Pond 2P: Infiltration Trench



Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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

Subcatchment 1S: 1S Runoff Area=8,138 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=1.10 cfs 0.087 af

Subcatchment 2S: 2S Runoff Area=6,291 sf 53.79% Impervious Runoff Depth=2.74"
Tc=5.0 min CN=71 Runoff=0.48 cfs 0.033 af

Subcatchment 3S: 3S (Misc. Runoff) Runoff Area=1,004 sf 4.28% Impervious Runoff Depth=0.55"
Tc=5.0 min CN=42 Runoff=0.01 cfs 0.001 af

Reach 1R: POI #1 - Anderson St. Inflow=0.74 cfs 0.088 af
Outflow=0.74 cfs 0.088 af

Pond 1P: USSF-740 Peak Elev=32.80' Storage=826 cf Inflow=1.10 cfs 0.087 af
Outflow=0.73 cfs 0.087 af

Pond 2P: Infiltration Trench Peak Elev=22.58' Storage=615 cf Inflow=0.48 cfs 0.033 af
Discarded=0.05 cfs 0.033 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.033 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.121 af Average Runoff Depth = 4.08"
25.06% Pervious = 0.089 ac 74.94% Impervious = 0.265 ac

Summary for Subcatchment 1S: 1S

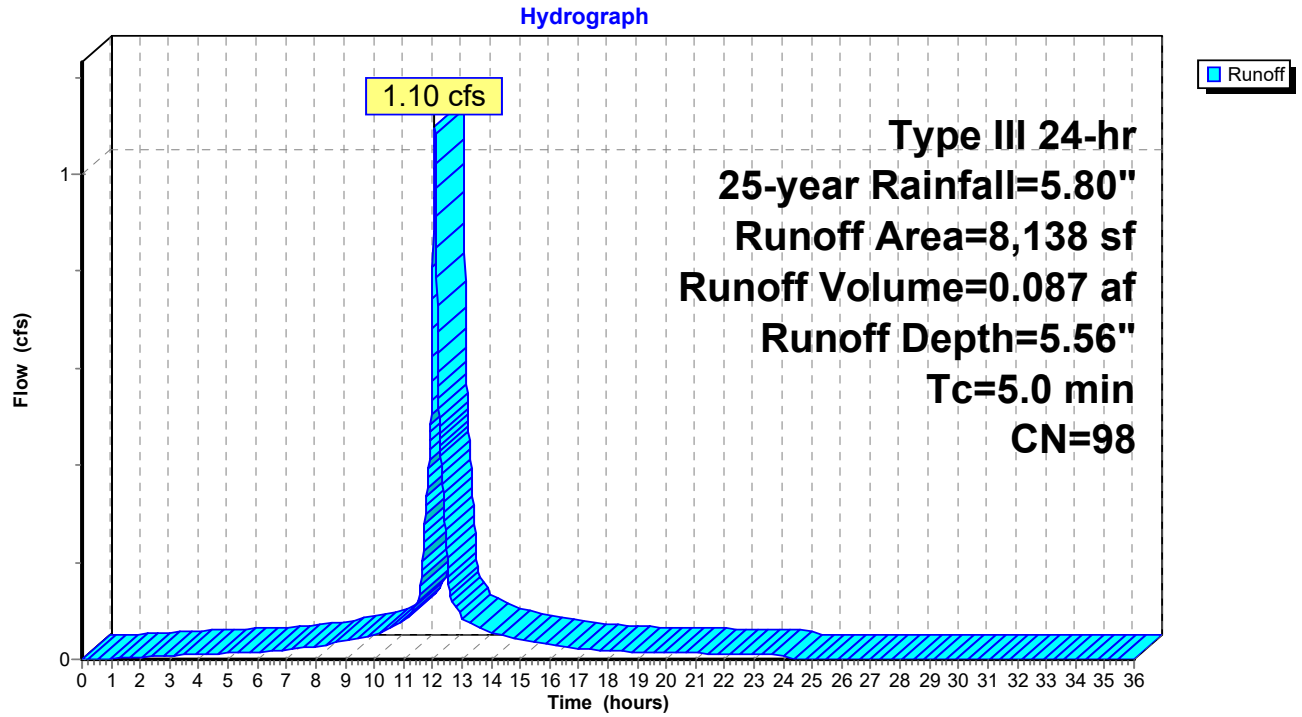
Runoff = 1.10 cfs @ 12.07 hrs, Volume= 0.087 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	8,138	98	Roof
	8,138		100.00% Impervious Area

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

Subcatchment 1S: 1S



Summary for Subcatchment 2S: 2S

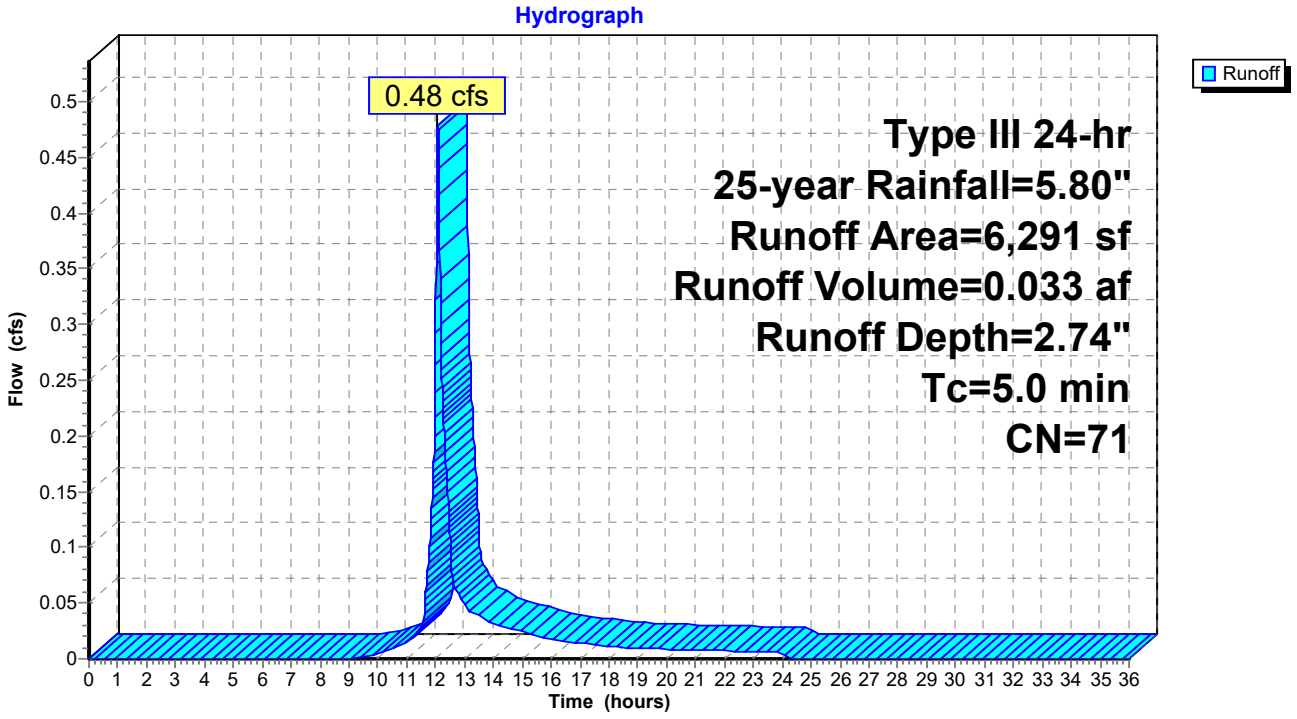
Runoff = 0.48 cfs @ 12.08 hrs, Volume= 0.033 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,384	98	Drive, wall, walks, decks above, misc. roof
	2,907	39	>75% Grass cover, Good, HSG A
	6,291	71	Weighted Average
	2,907		46.21% Pervious Area
	3,384		53.79% Impervious Area

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

Subcatchment 2S: 2S



Summary for Subcatchment 3S: 3S (Misc. Runoff)

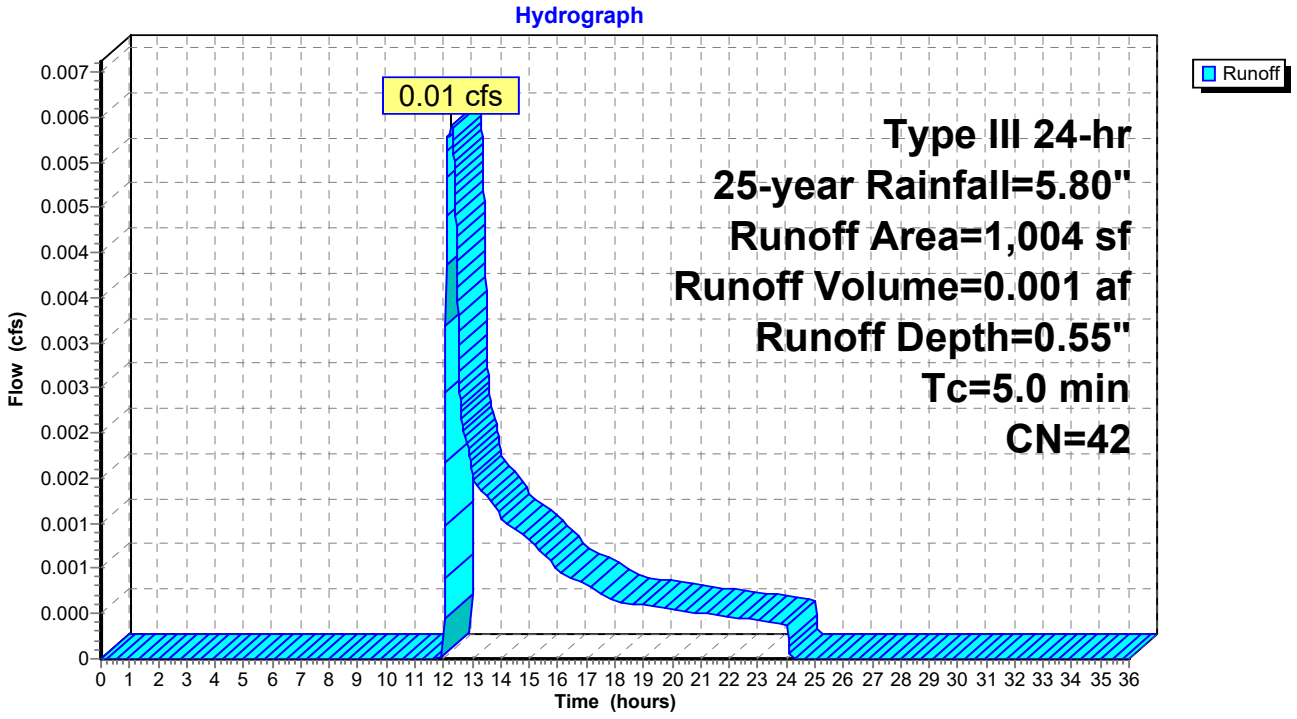
Runoff = 0.01 cfs @ 12.27 hrs, Volume= 0.001 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	961	39	>75% Grass cover, Good, HSG A
*	43	98	Front entrance walk/sculptures
	1,004	42	Weighted Average
	961		95.72% Pervious Area
	43		4.28% Impervious Area

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

Subcatchment 3S: 3S (Misc. Runoff)

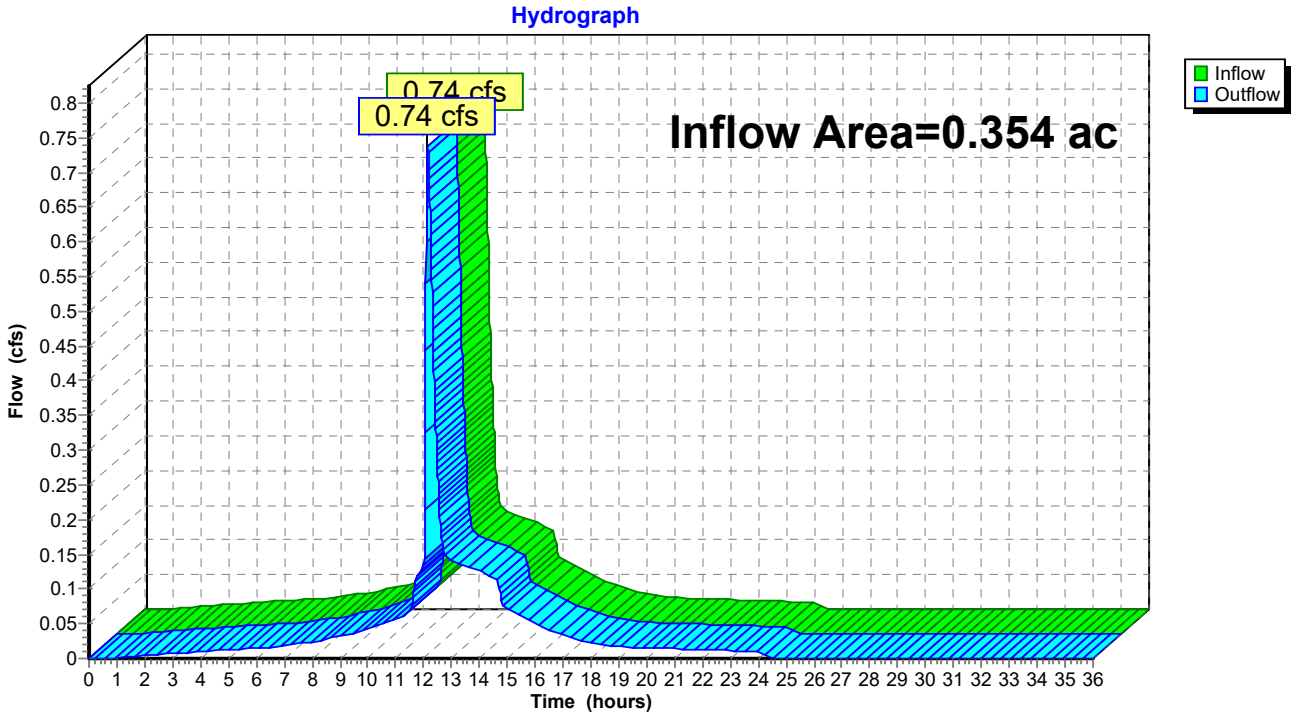


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 74.94% Impervious, Inflow Depth = 2.97" for 25-year event
Inflow = 0.74 cfs @ 12.15 hrs, Volume= 0.088 af
Outflow = 0.74 cfs @ 12.15 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Summary for Pond 1P: USSF-740

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-year event
Inflow = 1.10 cfs @ 12.07 hrs, Volume= 0.087 af
Outflow = 0.73 cfs @ 12.15 hrs, Volume= 0.087 af, Atten= 34%, Lag= 4.8 min
Primary = 0.73 cfs @ 12.15 hrs, Volume= 0.087 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 32.80' @ 12.15 hrs Surf.Area= 1,231 sf Storage= 826 cf

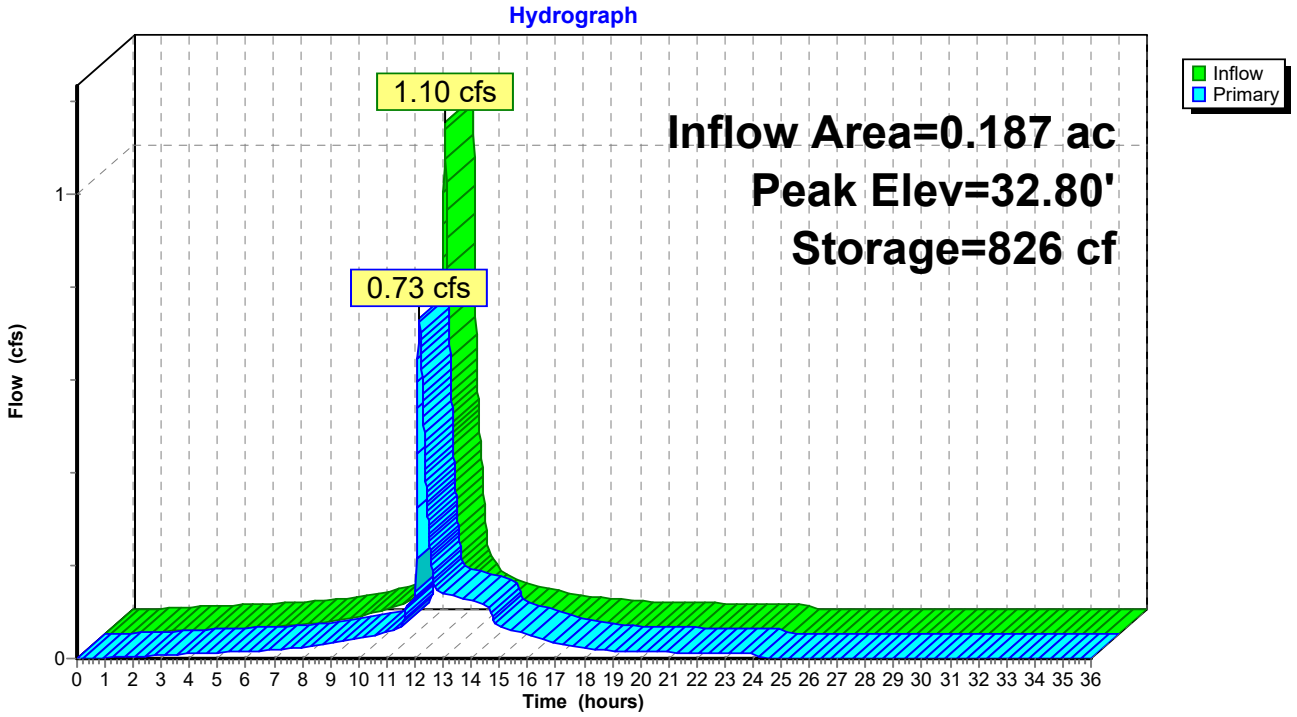
Plug-Flow detention time= 35.4 min calculated for 0.087 af (100% of inflow)
Center-of-Mass det. time= 35.4 min (780.1 - 744.7)

Volume	Invert	Avail.Storage	Storage Description
#1	30.50'	450 cf	**25.25'W x 16.25'L x 3.75'H Crushed Stone** 1,539 cf Overall - 413 cf Embedded = 1,125 cf x 40.0% Voids
#2	31.00'	413 cf	**ADS_StormTech SC-740** x 9 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
#3	29.00'	31 cf	**16.25'W x 25.25'L x 1.50'H Sand** 615 cf Overall x 5.0% Voids
#4	27.80'	195 cf	**16.25'W x 25.25'L x 1.20'H Crushed Stone Underdrain** 492 cf Overall - 5 cf Embedded = 487 cf x 40.0% Voids
#5	28.33'	5 cf	**4.0" Round Underdrains** Inside #4 L= 61.0' S= 0.0050 '/'
		1,094 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	27.65'	**8.0" Round 8" Outlet** L= 130.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.65' / 27.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	27.75'	**1.6" Vert. Quality Outlet** C= 0.600
#3	Device 1	32.10'	**5.7" Vert. Quantity Outlet** C= 0.600
#4	Device 1	32.90'	**6.0' long x 0.7' breadth Overflow Wier** 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=0.73 cfs @ 12.15 hrs HW=32.80' TW=0.00' (Dynamic Tailwater)
- **1=8" Outlet** (Passes 0.73 cfs of 2.13 cfs potential flow)
  - **2=Quality Outlet** (Orifice Controls 0.15 cfs @ 10.75 fps)
  - **3=Quantity Outlet** (Orifice Controls 0.58 cfs @ 3.28 fps)
  - **4=Overflow Wier** (Controls 0.00 cfs)

Pond 1P: USSF-740



Summary for Pond 2P: Infiltration Trench

Inflow Area = 0.144 ac, 53.79% Impervious, Inflow Depth = 2.74" for 25-year event
Inflow = 0.48 cfs @ 12.08 hrs, Volume= 0.033 af
Outflow = 0.05 cfs @ 13.05 hrs, Volume= 0.033 af, Atten= 90%, Lag= 58.1 min
Discarded = 0.05 cfs @ 13.05 hrs, Volume= 0.033 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 22.58' @ 13.05 hrs Surf.Area= 819 sf Storage= 615 cf

Plug-Flow detention time= 171.7 min calculated for 0.033 af (100% of inflow)
Center-of-Mass det. time= 171.7 min (1,008.3 - 836.6)

Volume	Invert	Avail.Storage	Storage Description
#1	19.50'	164 cf	**3/4" Stone Detention (Prismatic)** Listed below (Recalc) 410 cf Overall x 40.0% Voids
#2	21.50'	558 cf	**Detention above Stone (Prismatic)** Listed below (Recalc)
		722 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.50	205	0	0
21.50	205	410	410

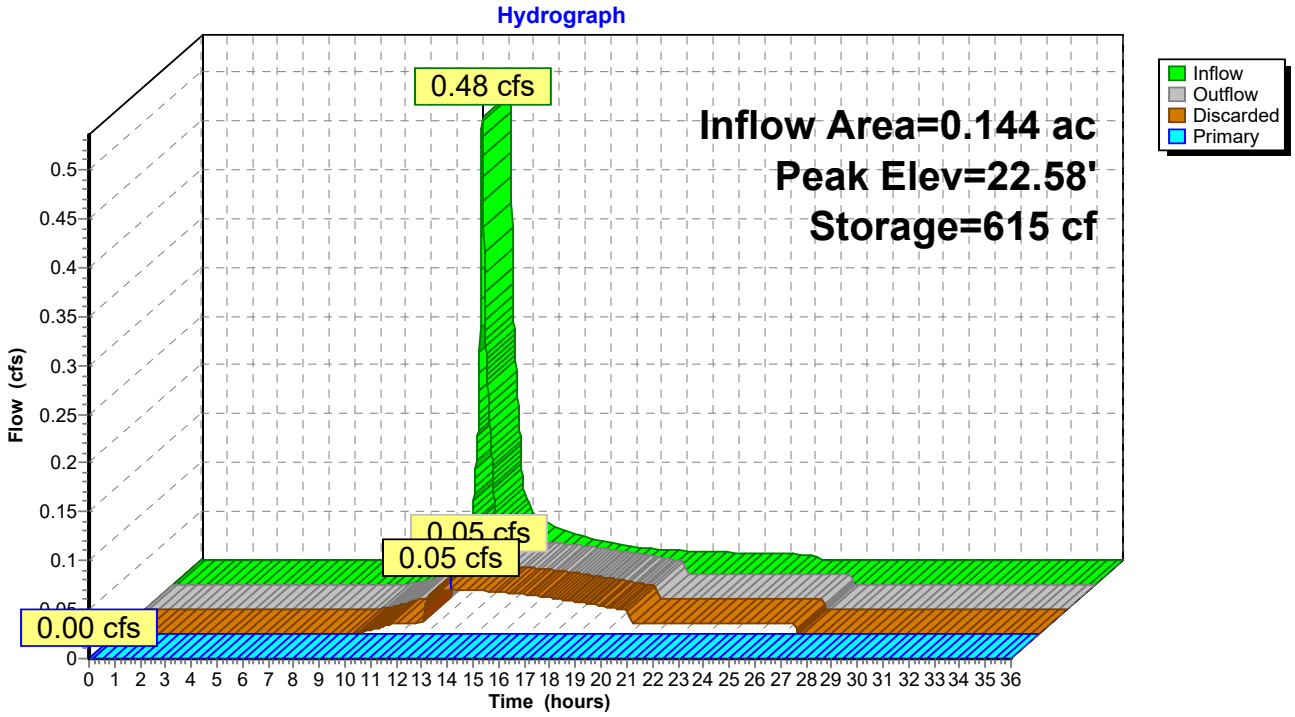
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.50	217	0	0
22.75	675	558	558

Device	Routing	Invert	Outlet Devices
#1	Discarded	19.50'	**2.410 in/hr Infiltration over Surface area** Phase-In= 0.01'
#2	Primary	22.60'	**1.0' long x 1.0' breadth Emergency Outlet** 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.05 cfs @ 13.05 hrs HW=22.58' (Free Discharge)
1=Infiltration (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=19.50' TW=0.00' (Dynamic Tailwater)
2=Emergency Outlet (Controls 0.00 cfs)

Pond 2P: Infiltration Trench



Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 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

Subcatchment 1S: 1S Runoff Area=8,138 sf 100.00% Impervious Runoff Depth=1.05"
Tc=5.0 min CN=98 Runoff=0.23 cfs 0.016 af

Subcatchment 2S: 2S Runoff Area=6,291 sf 53.79% Impervious Runoff Depth=0.05"
Tc=5.0 min CN=71 Runoff=0.00 cfs 0.001 af

Subcatchment 3S: 3S (Misc. Runoff) Runoff Area=1,004 sf 4.28% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=42 Runoff=0.00 cfs 0.000 af

Reach 1R: POI #1 - Anderson St. Inflow=0.07 cfs 0.016 af
Outflow=0.07 cfs 0.016 af

Pond 1P: USSF-740 Peak Elev=28.84' Storage=175 cf Inflow=0.23 cfs 0.016 af
Outflow=0.07 cfs 0.016 af

Pond 2P: Infiltration Trench Peak Elev=19.50' Storage=0 cf Inflow=0.00 cfs 0.001 af
Discarded=0.00 cfs 0.001 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.001 af

Total Runoff Area = 0.354 ac Runoff Volume = 0.017 af Average Runoff Depth = 0.57"
25.06% Pervious = 0.089 ac 74.94% Impervious = 0.265 ac

Summary for Subcatchment 1S: 1S

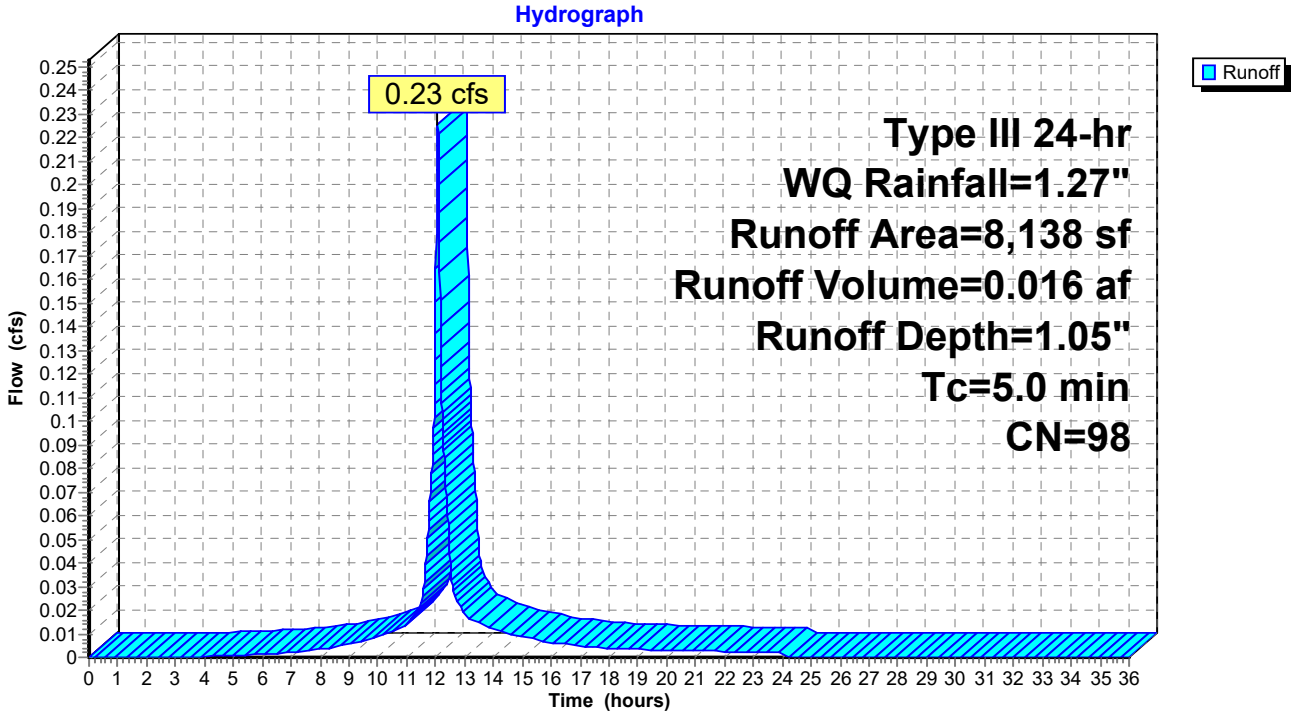
Runoff = 0.23 cfs @ 12.07 hrs, Volume= 0.016 af, Depth= 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.27"

	Area (sf)	CN	Description
*	8,138	98	Roof
	8,138		100.00% Impervious Area

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

Subcatchment 1S: 1S



Summary for Subcatchment 2S: 2S

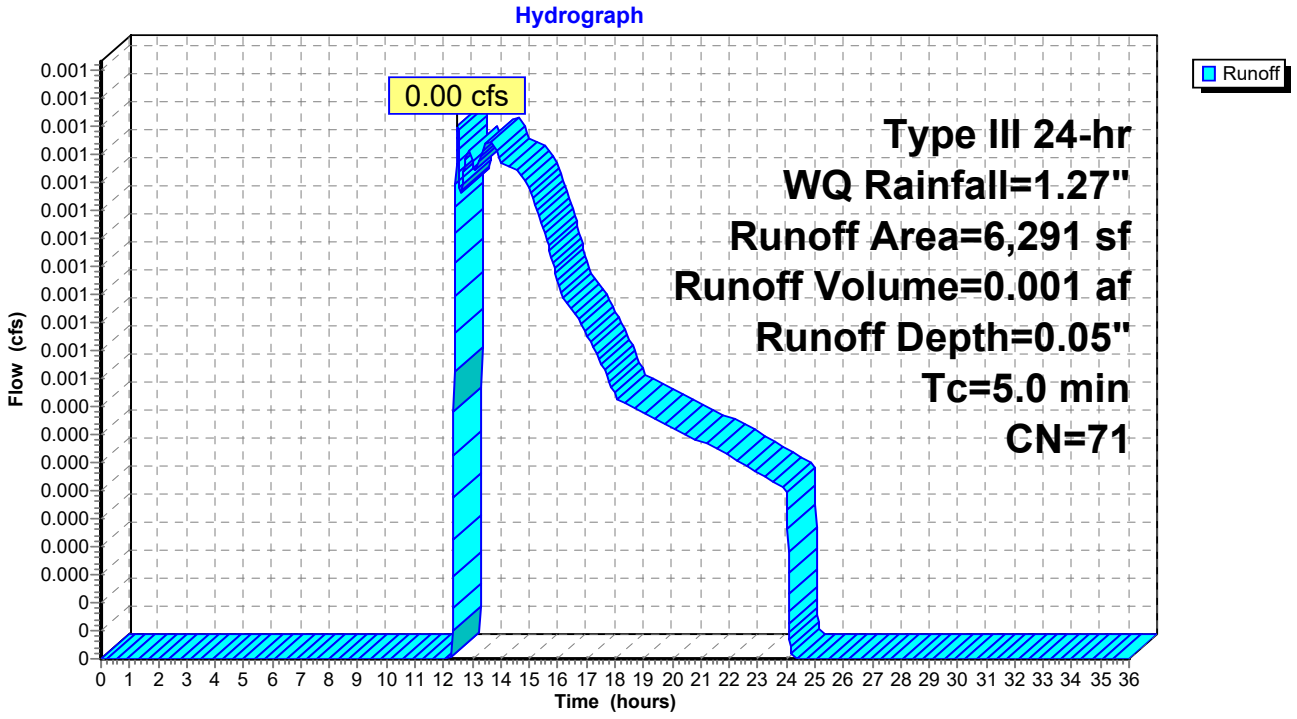
Runoff = 0.00 cfs @ 12.49 hrs, Volume= 0.001 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.27"

	Area (sf)	CN	Description
*	3,384	98	Drive, wall, walks, decks above, misc. roof
	2,907	39	>75% Grass cover, Good, HSG A
	6,291	71	Weighted Average
	2,907		46.21% Pervious Area
	3,384		53.79% Impervious Area

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

Subcatchment 2S: 2S



Summary for Subcatchment 3S: 3S (Misc. Runoff)

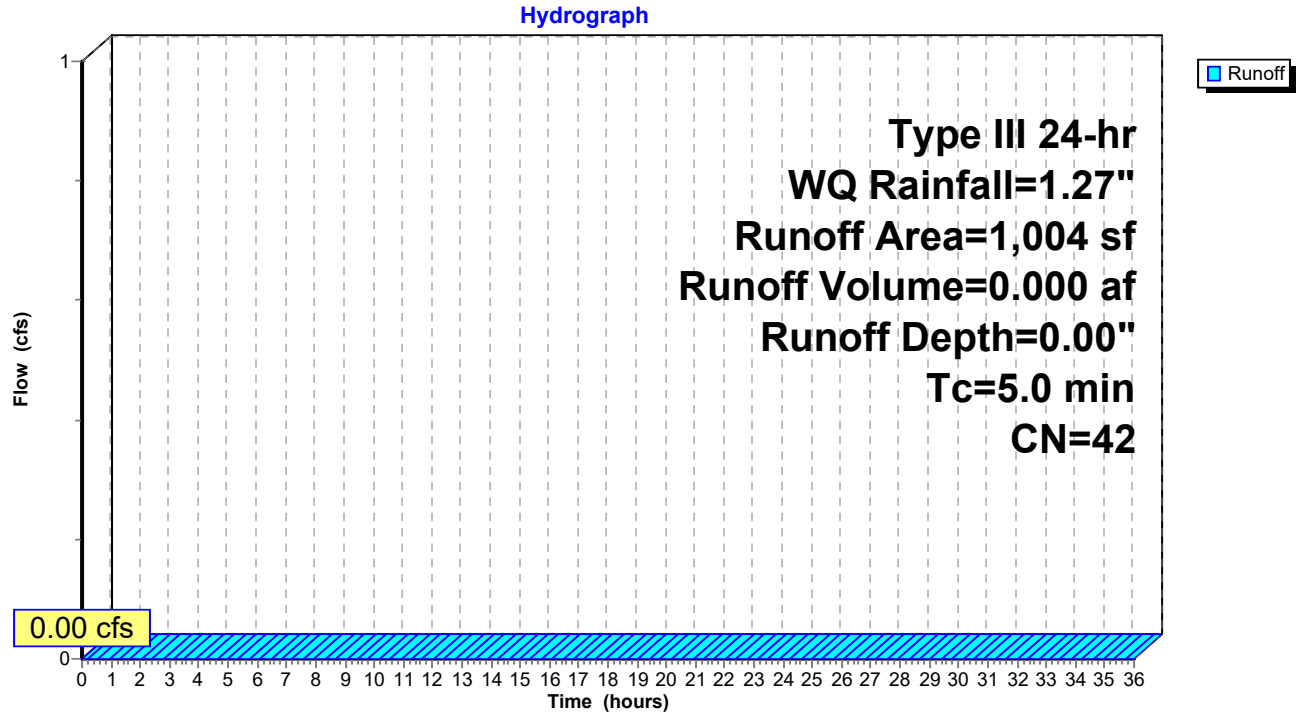
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.27"

	Area (sf)	CN	Description
	961	39	>75% Grass cover, Good, HSG A
*	43	98	Front entrance walk/sculptures
	1,004	42	Weighted Average
	961		95.72% Pervious Area
	43		4.28% Impervious Area

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

Subcatchment 3S: 3S (Misc. Runoff)

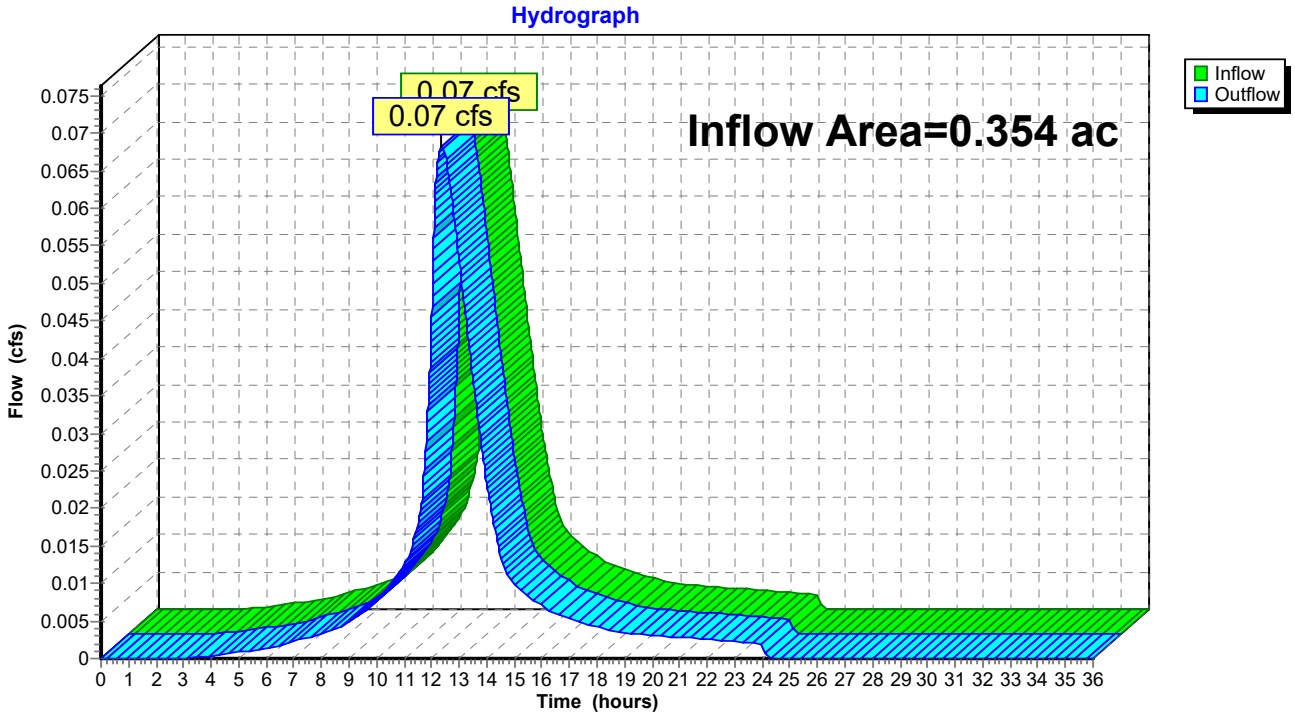


Summary for Reach 1R: POI #1 - Anderson St.

Inflow Area = 0.354 ac, 74.94% Impervious, Inflow Depth = 0.56" for WQ event
Inflow = 0.07 cfs @ 12.37 hrs, Volume= 0.016 af
Outflow = 0.07 cfs @ 12.37 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - Anderson St.



Summary for Pond 1P: USSF-740

Inflow Area = 0.187 ac,100.00% Impervious, Inflow Depth = 1.05" for WQ event
Inflow = 0.23 cfs @ 12.07 hrs, Volume= 0.016 af
Outflow = 0.07 cfs @ 12.37 hrs, Volume= 0.016 af, Atten= 70%, Lag= 18.2 min
Primary = 0.07 cfs @ 12.37 hrs, Volume= 0.016 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 28.84' @ 12.37 hrs Surf.Area= 410 sf Storage= 175 cf

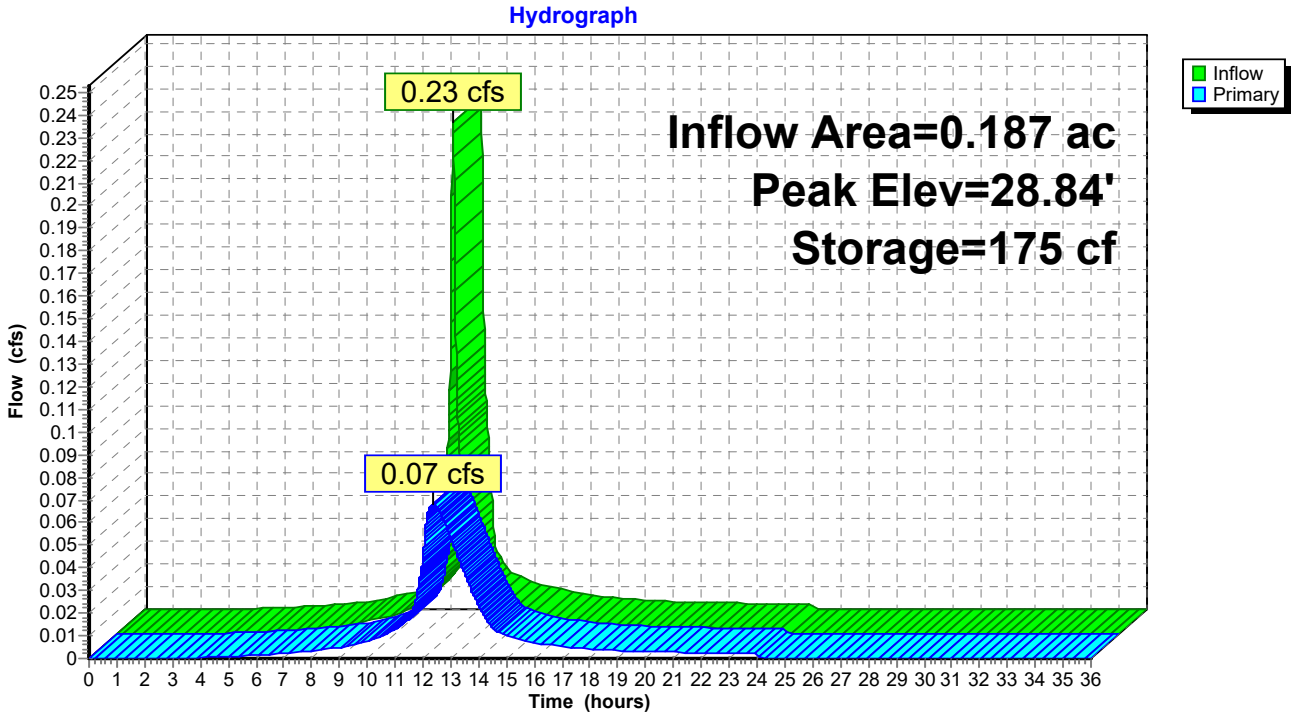
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 21.3 min (800.6 - 779.3)

Volume	Invert	Avail.Storage	Storage Description
#1	30.50'	450 cf	**25.25'W x 16.25'L x 3.75'H Crushed Stone** 1,539 cf Overall - 413 cf Embedded = 1,125 cf x 40.0% Voids
#2	31.00'	413 cf	**ADS_StormTech SC-740** x 9 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
#3	29.00'	31 cf	**16.25'W x 25.25'L x 1.50'H Sand** 615 cf Overall x 5.0% Voids
#4	27.80'	195 cf	**16.25'W x 25.25'L x 1.20'H Crushed Stone Underdrain** 492 cf Overall - 5 cf Embedded = 487 cf x 40.0% Voids
#5	28.33'	5 cf	**4.0" Round Underdrains** Inside #4 L= 61.0' S= 0.0050 '/'
		1,094 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	27.65'	**8.0" Round 8" Outlet** L= 130.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.65' / 27.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	27.75'	**1.6" Vert. Quality Outlet** C= 0.600
#3	Device 1	32.10'	**5.7" Vert. Quantity Outlet** C= 0.600
#4	Device 1	32.90'	**6.0' long x 0.7' breadth Overflow Wier** 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=0.07 cfs @ 12.37 hrs HW=28.84' TW=0.00' (Dynamic Tailwater)
└─**1=8" Outlet** (Passes 0.07 cfs of 1.02 cfs potential flow)
  ├─**2=Quality Outlet** (Orifice Controls 0.07 cfs @ 4.88 fps)
  ├─**3=Quantity Outlet** (Controls 0.00 cfs)
  └─**4=Overflow Wier** (Controls 0.00 cfs)

Pond 1P: USSF-740



Summary for Pond 2P: Infiltration Trench

Inflow Area = 0.144 ac, 53.79% Impervious, Inflow Depth = 0.05" for WQ event
Inflow = 0.00 cfs @ 12.49 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 12.51 hrs, Volume= 0.001 af, Atten= 1%, Lag= 1.2 min
Discarded = 0.00 cfs @ 12.51 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 19.50' @ 12.51 hrs Surf.Area= 205 sf Storage= 0 cf

Plug-Flow detention time= 1.2 min calculated for 0.001 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (1,020.7 - 1,019.6)

Volume	Invert	Avail.Storage	Storage Description
#1	19.50'	164 cf	**3/4" Stone Detention (Prismatic)** Listed below (Recalc) 410 cf Overall x 40.0% Voids
#2	21.50'	558 cf	**Detention above Stone (Prismatic)** Listed below (Recalc)
		722 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
19.50	205	0	0
21.50	205	410	410

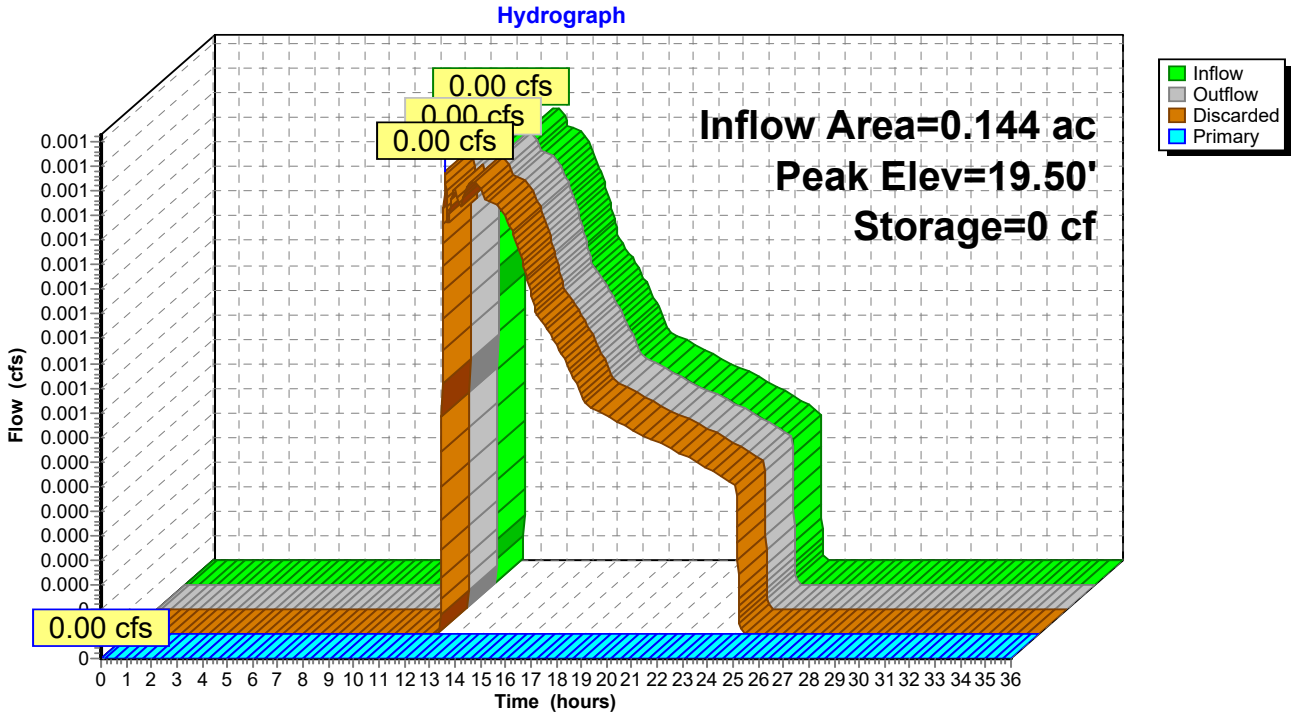
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
21.50	217	0	0
22.75	675	558	558

Device	Routing	Invert	Outlet Devices
#1	Discarded	19.50'	**2.410 in/hr Infiltration over Surface area** Phase-In= 0.01'
#2	Primary	22.60'	**1.0' long x 1.0' breadth Emergency Outlet** 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.00 cfs @ 12.51 hrs HW=19.50' (Free Discharge)
1=Infiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=19.50' TW=0.00' (Dynamic Tailwater)
2=Emergency Outlet (Controls 0.00 cfs)

Pond 2P: Infiltration Trench



Map Scale: 1:463 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 15, Sep 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HID	Hinckley loamy sand, 15 to 25 percent slopes	0.9	100.0%
Totals for Area of Interest		**0.9**	**100.0%**

Cumberland County and Part of Oxford County, Maine

HID—Hinckley loamy sand, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2svmc
Elevation: 0 to 1,460 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash plains, eskers, moraines, outwash terraces, outwash deltas, kame terraces, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear, convex, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Hydric soil rating: No

Data Source Information

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 15, Sep 6, 2018

ACORN ENGINEERING, INC.

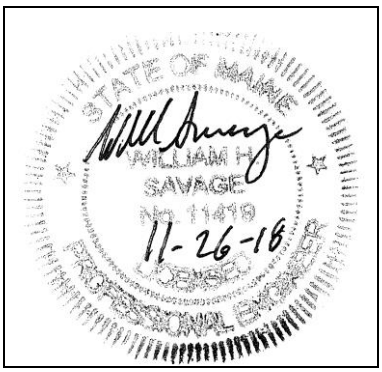
K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

The Preserve at South Ridge, LLC
94 South Street
Yarmouth, ME 04096

Prepared By:

Acorn Engineering, Inc.
65 Hanover Street
Portland, Maine 04101



November 2018

INTRODUCTION

Acorn Engineering, Inc. has been retained by The Preserve at South Ridge, LLC to provide civil engineering services for the proposed redevelopment of 6 Hammond Street. The proposed project includes a three-story, 16-unit residential multi-family building with subsurface parking.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended August 12, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The proposed project site is located at the corner of Hammond Street and Fox Street. A boundary plan has been prepared by R.W. Eaton Associates of Westbrook, Maine dated March 28, 2017.

Abutting Uses:

- North R-6 Zone — Multi Family Residential
- East R-6 Zone — Single Family Residential
- South R-6 Zone — Single Family Residential
- West B-5 Zone — Governmental - PHA

A large portion of the site is occupied by the existing structures. The site is also comprised of a paved driveway and landscaping. The grades are relatively flat. Approximately 26% of the site is impervious.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

Given the soils information, listed above, no onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

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

Table 1 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	0.17	0.17

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

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

Critical areas that would require special attention during construction include, but are not limited to, the existing structures, the drainage system within Hammond Street and slope stabilization located within the vicinity during earthwork and foundation construction.

1.4 Protected Natural Resource

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

1.5 Previous Construction Activity (5 years)

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

1.6 Timber Harvesting

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

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

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

2.1 Temporary Erosion Control Measures

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

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.

2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.

2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 Hammond Street and Fox Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

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

2.2 Permanent Erosion Control Measures

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

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

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

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

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Erosion and Sedimentation Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

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

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

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

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed

down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion

control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

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

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

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

6.4 Dust Control

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

6.5 Stormwater Appurtenances

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

6.6 Erosion and Sedimentation Control Inspections:

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

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

Qualifications:

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

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

7.0 IMPLEMENTATION SCHEDULE

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

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Commence installation of drainage infrastructure.
4. Install all other erosion control devices as necessary throughout the remainder of this schedule.
5. Commence earthwork operations, associated with the roadway construction.
6. Commence installation of utilities.
7. Continue earthwork and grading to subgrade as necessary for construction.
8. Complete installation of drainage infrastructure, as well as other utility work.
9. Complete remaining earthwork operations.
10. Install sub-base and base gravels in paved areas.
11. Install paving, curbing and brickwork.
12. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
13. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete, remove all temporary erosion control measures.
14. Touch up areas without a vigorous catch of grass with loam and seed.
15. Complete site signage and striping.
16. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

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

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

8.0 CONCLUSION

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

9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

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

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

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

Seeding

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

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

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

Conclusion

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

PERMANENT SEEDING PLAN

Site Preparation

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

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

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

Seeding

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

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

Mulching

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

Recommendations

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

Conclusion

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

ACORN ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

November 26, 2018

Subject: 10 Hammond Street – Fire Department Checklist
Section L of Application

On behalf of The Preserve at South Ridge, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   The Preserve at South Ridge, LLC
   94 South Street
   Yarmouth, ME 04096
   (207) 773-2345

2. Name address, telephone number of architect

   Ryan Senatore Architecture
   500 Congress Street Floor 2
   Portland, Maine 04101
   207-650-6414

3. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartments / IBC: R-2

4. Square footage of all structures, including decks [total and per story]

Existing Building		
Total	Approx. 4,000	**sf**

Proposed Building		
Garage	8,115	sf
1st Floor	8,023	sf
2nd Floor	8,052	sf
3rd Floor	8,052	sf
Total	32,242	**sf**

5. Elevation of all structures

   Based upon the average grade plane defined by the IBC, the proposed building height is just under 40'. This height is below the allowable 45 feet within the R-6 zone. Please refer to the building elevations provided by the Architect for additional information.

6. Proposed fire protection of all structures

   The building will have a sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire designer which will be performed prior the request for a building permit.

7. Hydrant locations

   An existing hydrant is located on the same side of the street as the site on the south-easterly corner of the property. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

   The redevelopment will be serviced by a new 6" sprinkler line and domestic water main within Hammond Street. A 4" or 6" fire service line will extend from the domestic water main to the building fire suppression system. The building is expected to have internal sprinkler risers and a Fire Department pump connection on the street side of the building.

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

   Access to the structure is provided directly on Hammond Street. Additionally, the site is accessible by a fire truck through Fox Street and the 18-foot driveway.

10. The Architect has provided a code summary (attached).

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project site is located in a heavily developed area and is fronted by a public street. The following pavement street width is currently available:

- Hammond Street: 32 feet

Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 feet of at least one exterior door. Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety
3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).
Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: As depicted on the site plan, the proposed building layout provides a minimum of two paved access points to the structure: from Hammond Street directly and one from Fox Street.

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

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

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along the public street for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The building will be provided with exterior doors that will be within 50' of a Fire Department access route, namely Hammond Street.

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

Response: The proposed site maintains the required clearance height of nine feet in all cases except for the subsurface parking area.

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

Response: The elevators will be sized to accommodate an 80 x 24 stretcher, per the Architect's designs.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant will work with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

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

Code Review

Nov 21, 2018

Hammond House Residences

	IBC 2015		NFPA 101 2009	
3 floors above grade pln.	504.1			
Story above grade pln.	Ch 2	First floor is (5'-9-3/4") less than 6'-0" above grade plane (avg. grade)		
		Thus the basement is NOT a story and this is a 3 Story building		
Sprinklers		NFPA 13		NFPA 13
Fire Alarm		Monitored Fire Alarm Required		Monitored Fire Alarm Required
Smoke and CO Detectors		Smoke and CO detectors required		Smoke and CO detectors required
Occupant Load	T 1004.1.1		7.3.1.2	
		Floor 1 = 7,381 sf Parking (200 gsf/oc) = 37		Floor 1 = 7,381 sf Parking (200 gsf/oc) = 37
		Floor 1 = 900 sf Residential (200 gsf/oc) = 5		Floor 1 = 900 sf Residential (200 gsf/oc) = 5
		Floor 2 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 2 = 8,019 sf Residential (200 gsf/oc) = 41
		Floor 3 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 3 = 8,019 sf Residential (200 gsf/oc) = 41
		Floor 4 = 8,019 sf Residential (200 gsf/oc) = 41		Floor 4 = 8,019 sf Residential (200 gsf/oc) = 41
		Roof decks 1,468 sf (divided into 4 separate decks (200) = 8 occ.		Roof decks 1,468 sf (200) = 8 occ.
		Total Building Occupant Load = 173		**Total Building Occupant Load = 173**
Use Group(s)	311.3	Floor 1 - Parking (S2)	6.1.13.1	Storage (Vehicles)
	310.1	Floors 2, 3,4 - Apartments (R2)	6.1.8.1.5	Apartment Building
Const. Type	T 503	5B - combustible Unprotected		V (000) combustible unprotected
Building Height	T 504.3	60' with NFPA 13 sprinkler		
	T504.4	3 stories with NFPA 13 sprinkler		
Building Area	T 506.2	21,000 sf floor plate with NFPA 13 sprinkler		

Building Elements	T 601	0 hr Structural Frame	30.1.6	No Minimum Construction requirements
	T 602	0 hr Bearing Walls Exterior		
	T 602	1 hr Bearing Walls Exterior (sep. dist <10')		
	T 601	0 hr Bearing Walls Interior		
	T 601	0 hr Non-Bearing Walls Interior		
	T 602	0 hr Non-Bearing Walls Exterior		
	T 602	1 hr Non-Bearing Walls Exterior (sep. dist <10')		
	705.5	Exterior Wall with >10' sep. needs rating only from inside		
	T 601	1 hr Floor Construction (1hr between units)		
	T 601	0 hr Roof Construction		
Separations				
	508.4	S2 and R2 = 1 hr	6.1.14.4.1	Storage (ord.) and Apartment = 1hr with sprink.
	708.4	2 hr Elevator Shaft >= 4 stories	8.6.5	1 hr < 4 stories
	708	1 hr Mechanical Shaft < 4 stories		2hr >= 4 stories
	1022.1	1 hr Stair Shaft < 4 stories		
		2hr >= 4 stories		
	709.1	1 hr Between Dwelling Units		
	1018.1	1/2 hr Corridor	30.3.6.1.2	1/2 hr corridor
	508.2.5	1 hr Boiler Room	30.3.2.1.1	1 hr Boiler Room
	508.2.5	1 hr Trash Room	30.3.2.1.1	1 hr Trash Room
	508.2.5	1 hr Storage Room	30.3.2.1.1	1 hr Storage Room
	508.2.5	1 hr Laundry Room	30.3.2.1.1	1 hr Laundry Room
	3006.4	1 hr Elevator Machine Room		
	715.4	90 minute Stairwell Doors (2hr shaft)		
	715.4	20 minute Apartment Entry Doors (1/2 hr corridor wall)	30.3.6.2.1	20 minute Apartment Entry Doors
Distances and Exits	1021.1	2 Exits required	7.4.1.1	2 Means of Egress required
	1017.2	250' Travel Distance to exits with Sprinklers	30.2.6.3.2	200' Travel distance from apt. door to exit
	1006.2.1	125' Common Path of Travel	30.2.5.3.2	50' Common Path of Travel
	1020.4	50' Dead End	30.2.5.4.2	50' Dead End
			30.2.6.2	125' Travel Distance within Dwelling to Corridor

Unprotected Openings	T 705.8	15% when exterior wall sep. dist. is 3'>5'		
	T 705.8	25% when exterior wall sep. dist. is 5'>10'		
	T 705.8	45% when exterior wall sep. dist. is 10'>15'		
	T 705.8	75% when exterior wall sep. dist. is 15'>20'		
	T 705.8	Unlimited when exterior wall sep. dist. is 25'>30'		
	T 705.8	Unlimited when exterior wall sep. dist. is >30'		
Elevator Lobby	3006.2 ex.1	Not required as building is sprinkled		
Elevator as MoE	1009.2.1	Not req. as bldg. is not 4 stories above the level of exit discharge		
Egress Windows	1029.1.1	Not Required as Sprinkled with NFPA13		
Egress Stairs	1009.1	Occ. Load >50 = 44" min width	24.2.5.4	36" min. stair width
	1009.1	Occ. Load <=50 = 36" min width	7.2.2.2.1.2(B)	44" min. over 50 occ.
	1003.3	Handrails can protrude into stair 4.5" max	7.2.2.2.1.2	Handrails can protrude into stair 4.5" max
	1005.2	Door Swings may not reduce egress width by > 1/2		
	1009.2	80" min headroom	7.2.2.2.1.1(a)	6'-8" min. headroom
	1009.3	7" max. riser	7.2.2.2.1.1(a)	7" max. riser
	1009.3	11" min Tread depth	7.2.2.2.1.1(a)	11" min. tread
	1009.6	12' max. total rise between floors or landings	7.2.2.2.1.1(a)	12' max. height between landings
Ramps	1010.2	1:12 (8%) Max slope	7.2.5.2(a)	1:12 max. slope
	1010.6	60" long landings at top and bottom		
	1010.6	2% max slope of landings	7.2.5.2(a)	1:48 max. cross slope
	1010.8	>6" rise must have handrails on both sides of ramp		
Egress Corridors	1018.2	44" min. when Occ. > 50		
	1018.2	36" min. when Occ. <= 50		
	1018.2	24" min. at service corridors to mechanical equipment		
Sound	1207.2	STC > 50 at walls and floors/ceilings		
	1207.3	IIC > 50 at walls and floors/ceilings		

Energy IECC 2009	T 402.1.1	0.35 Fenestration U-Factor			
Zone 6		R-49 Ceiling			
Residential		R-20 or 13+5c Framed wall			
		R-30 Floor			
		R-19 or 15c Basement wall			
		R-10 to 4ft Slab			
Accessibility	Fair Housing Act Applies				
	Maine Human Rights Act Applies				

M. Calculation of Wastewater Flowrate for 10 Hammond Street Redevelopment

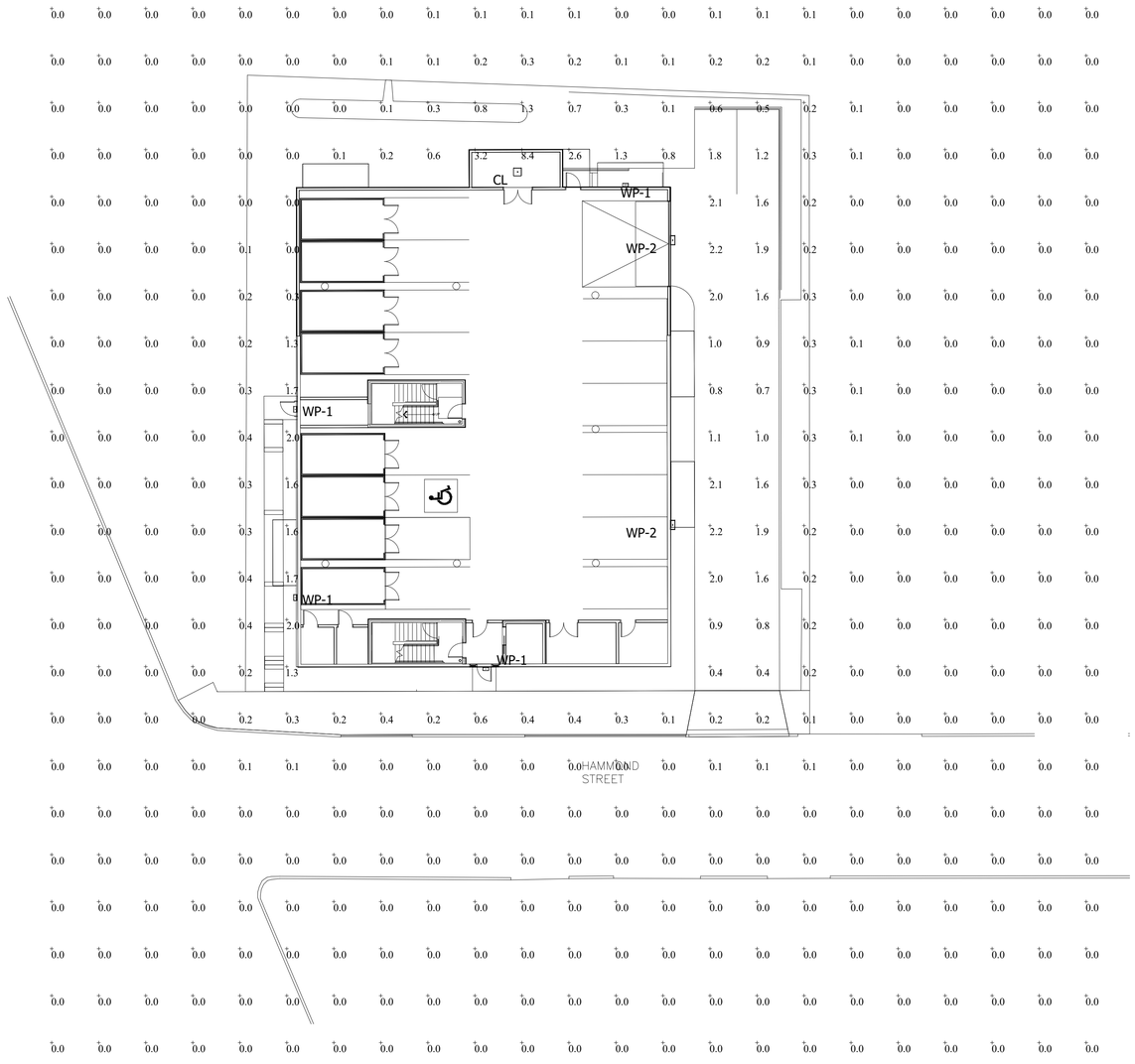
The proposed project will include the development of three stories with 16 residential units and on-site parking. Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Anticipated Daily Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Single Family Dwelling	3-Bedroom	2	270	540
Total Gallons per Day (Existing)				540
Proposed Flow				
Residential Units	1-Bedroom	6	180	1,080
Residential Units	2-Bedroom	7	180	1,260
Residential Units	3-Bedroom	3	270	810
Total Gallons per Day (Proposed)				3,150
Net Change				**+2,610 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition				

ACORN ENGINEERING, INC.

N. Lighting

Please find attached the photometric plan and cut sheets. Lighting finishes will be grey.



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	1	CL	11' - 0" AFG	0.900	4610	38	LSQ1-40-4K7-UNV-X
	4	WP-1	8' - 0" AFG	0.900	1052	13	LNC-5LU-4K-2
	2	WP-2	12' - 0" AFG	0.900	3094	28	LNC3-24L4K-035-3

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.19	8.4	0.0	N.A.	N.A.
Parking Area	Illuminance	Fc	1.41	2.2	0.4	3.53	5.50

GRAPHIC SCALE

16 0 8 16 32 64

(IN FEET)

1 inch = 16 - FT.

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

HAMMOND HOUSE DEVELOPMENT
YARMOUTH, ME
SITE LIGHTING PLAN

REVISED FROM DRAWING NUMBER(S):	
R1: 11/29/18	
R2: 12/03/18	
R3: 12/06/18	

HUBBELL®
Hubbell Lighting, Inc.
701 MILLENNIUM BLVD.
GREENVILLE, SC 29607

DN BY:	DATE:	CHK BY:
DHK	11/28/18	N/A
REV. BY:	DATE:	SCALE:
DHK	12/06/18	AS NOTED
QUOTE:	DRAWING / DESIGN NO.:	
N/A	1823155R3	

LSQ SERIES Lumasquare

Cat.#

Job

Type

HUBBELL Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:
The sleek Lumasquare luminaire represents the culmination of function and form with low profile housing design and lens featuring low luminance soft glow lens. This unique lens features high efficiency and ultimate visual comfort. Available in two housing sizes and four lumen outputs for a variety of applications including building perimeter/security lighting, entrances, stairways, loading docks or canopies for schools, apartments or commercial buildings.

Construction:
Rugged die-cast aluminum housing with corrosion resistant powder coat finish both protects and provides architectural appearance. Heat dissipating fins provide superior thermal performance extending the life of the electronic components.

Electrical:
- 120-277V, 50/60Hz electronic drivers
- 347V and 480V available in larger LSQ2 housing
- 10KA surge protection included

LED(s) Optics, CCT:
- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Impact resistant acylic diffuser
- low luminance soft glow lens provides blended non pixilated light for unprecedented visual comfort

Options/Controls
- Button photocontrol for dusk to dawn energy savings. Stock versions include 120V-277V PC with a cover which provides a choice to engage photocontrol or not. PC is installed in top hub.
- Occupancy sensor available for on/off and dimming control in larger LSQ1 and LSQ2 housing
- SiteSync™ wireless lighting control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution See ordering information or visit www.hubbelllighting.com/sitesync for more details.
- Battery backup options available in larger LSQ2 housing rated for either 0˚ C or -30˚ C. Performance exceeds NEC requirement providing 1 fc minimum over 10'x10' at 11' mounting height
- Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging. EH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C

Installation:
- Mounts to 4" junction box and includes a gasket to seal electrical connections
- Mounting plate and hook on fixture allow easy 4 step installation and wiring
- Four ½" threaded conduit hubs for surface conduit provided

Listings
- Listed to UL1598 for use in wet location, listed for -40C to 40C applications
- IDA approved with zero uplight for 3000K and warmer CCTs
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- IP65

Warranty:
Five year limited warranty (for more information visit: http://www.hubbelllighting.com/resources/warranty/

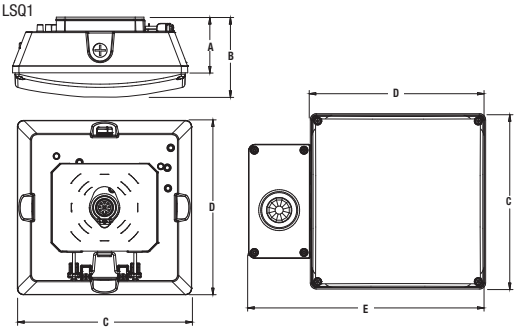
PRODUCT IMAGE(S)

LSQ1

LSQ2

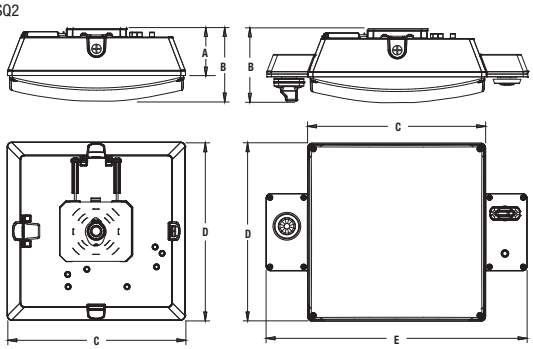
DIMENSIONS

LSQ1



A	B	C	D	E	Weight
3.0"	4.0"	10.0"	10.0"	13.5"	10 lbs.
76.2 mm	101.6 mm	254 mm	254 mm	343 mm	4.5 kg

LSQ2



A	B	C	D	E	Weight
4.0"	6.0"	14.8"	14.8"	21.9"	15.5 lbs.
101.6 mm	152.4 mm	375 mm	375 mm	556 mm	7.0 kg

CERTIFICATIONS/LISTINGS

C SP US

*3000K and warmer CCTs only

SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LSQ1	10lbs (4.5 kg)	9.5 (24)	8.25 (21)	5.25 (13.32)	6
LSQ2	15.5lbs (7 kg)	14 (35.5)	11.5 (29.2)	8 (20.3)	2

HUBBELL Outdoor Lighting

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

© 2018 HUBBELL OUTDOOR LIGHTING, All Rights Reserved • For more information visit our website: **www.hubbelloutdoor.com** • Printed in USA **LSQ-SPEC AUGUST 7, 2018 10:13 AM**

ORDERING INFORMATION - *Stock Versions*

Catalog Number	Description
LSQ1-40-4K-PCU	40 watt, 4600 Lumen, 4000K, 70 CRI, 120-277V, Dark Bronze Textured, Photocell
LSQ1-40-4K-GYS-PCU	40 watt, 4600 Lumen, 4000K, 70 CRI, 120-277V, Gray Smooth, Photocell
LSQ2-70-4K-PCU	75 watt, 9300 Lumen, 4000K, 70 CRI, 120-277V, Dark Bronze Textured, Photocell
LSQ2-70-4K-GYS-PCU	75 watt, 9300 Lumen, 4000K, 70 CRI, 120-277V, Gray Smooth, Photocell

ORDERING INFORMATION – ORDERING EXAMPLE: LSQ1-25-4K7-UNV-DB-PCU

[ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

FAMILY

- **LSQ1-25** Size 1, 25w / 3,000lm
- **LSQ1-40** Size 1, 40w / 4,500lm
- **LSQ2-55** Size 2, 55w / 7,000lm
- **LSQ2-70** Size 2, 75w / 9,000lm

CCT/CRI

- **3K7** 3000K, 70CRI
- **4K7** 4000K, 70CRI
- **5K7** 5000K, 70CRI

VOLTAGE

- **UNV** 120V-277V
- **120** 120V
- **208** 208V
- **240** 240V
- **277** 277V
- **UHV** 347/480

COLOR/FINISH

- **DB** Dark Bronze Textured
- **BL** Black Textured
- **WH** White Textured
- **GYS** Gray Smooth
- **PS** Plat. Silver Smooth
- **GT** Graphite Textured
- **CC** Custom Color

* Specify Finish

CONTROL OPTIONS

- **PCU** Button Photocontrol (120-277V)
- **SCO**[2] Sensor Control (On/Off)
- **SCP**[2,3] Sensor Control, Programmable (Dim)
- **SWP**[1,2] SiteSync, Pre-Commission
- **SWPM**[1,2] SiteSync, Pre-Commission w/Motion Sensor
- **SWF**[1,2] SiteSync, Field Commission
- **SWFM**[1,2] SiteSync, Field Commission w/Motion Sensor

Specify MTG HT for SCO/SCP & SWPM

- **8F** Up to 8ft mounting height
- **20F** Up to 20ft mounting height

OPTIONS

- **E**[1] Battery Backup Unit (0°C)
- **EH**[1] Battery Backup Unit (-30°C)
- **F*** Fusing (voltage specific)
- **2DR**[1] Dual Drivers
- **2PF**[1,4] Dual Power Feed
- **SPC** Polycarbonate Vandal Shield

[1] Available in LSQ2-55 and LSQ2-70 only
[2] Available in 120V-277V only
[3] Must order minimum of one remote control (SCP-REMOTE) to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different tiem delay settings (120-277V only)
[4] Comes with Dual Driver (2DR) option

ACCESSORIES

- **SCP-REMOTE** Remote control for SCP option. Order a minimum of one per project to program and control fixtures
- **SCP-PC** Polybarbonate Vandal Shield

PERFORMANCE DATA

Catalog number	# of LEDs	Drive Current	System Watts	Distribution	5K (5000K nominal, 70 CRI) Lumens	LPW[1]	B	U	G	4K (4000K nominal, 70 CRI) Lumens	LPW[1]	B	U	G	3K (3000K nominal, 80 CRI) Lumens	LPW[1]	B	U	G
LSQ1	176	43mA	24.3	V	3181	131	2	3	2	3170	131	2	3	2	3055	126	2	3	2
		65mA	38.1	V	4626	121	2	3	2	4610	121	2	3	2	4443	117	2	3	2
LSQ2	352	43mA	54.6	V	7246	133	2	3	2	7221	132	2	3	2	6959	127	2	3	2
		65mA	73.5	V	9431	128	2	3	2	9398	128	2	3	2	9057	123	2	3	2

1. Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

ELECTRICAL DATA

Catalog number	# of Drivers	Input Voltage	Current (Amps)	System Power
LSQ1-25	1	120	0.21	25.7
		277	0.09	
LSQ1-40		120	0.31	37.0
		277	0.13	
LSQ2-55	1	120	0.43	51.3
		277	0.19	
LSQ2-70		120	0.60	71.8
		277	0.26	

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS 0	25,000	TM-21-11[1] 36,000	50,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.95	0.93	0.91	0.83	>185,000
40°C / 104°F	0.97	0.92	0.90	0.88	0.80	>170,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs) Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.03
10° C	50° F	1.02
20° C	68° F	1.01
25° C	77° F	1.00
30° C	86° F	0.99
40° C	104° F	0.97
50° C	122° F	0.96

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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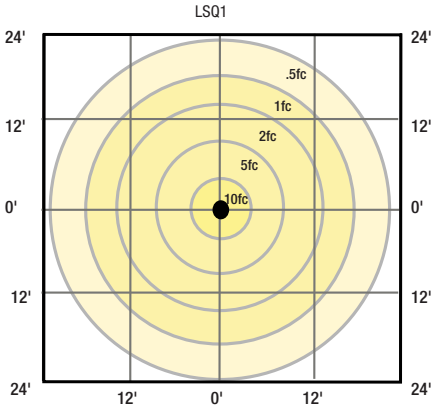
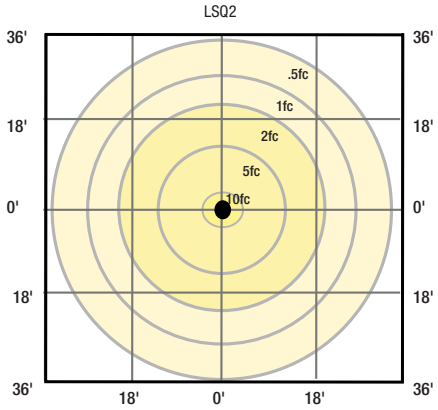
PERFORMANCE



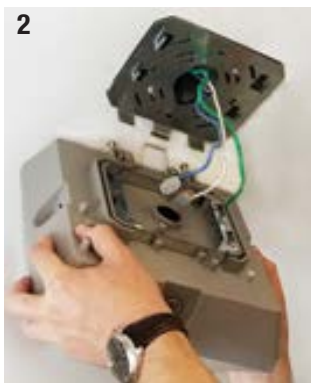
Mounting Height 12ft



Mounting Height 18ft

INSTALLATION

Mount plate to junction box.



Hang fixture on mounting plate with provided integral hook.

Complete wiring connections.

Two mounting screws close and secure fixture to the mounting bracket.

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Submitted by Swaney Lighting			
	Job Name: HAMMOND ST. DEVELOPMENT - SITE	**Catalog Number:** LSQ-1-40-4K7-UNV-** Notes: SPECIFY FINISH	**Type:** **CL** SLA18-40388

LNC SERIES

Cat.#

Job

Type

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 enterances 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/

CERTIFICATIONS/LISTINGS

*3000K and warmer CCTs only

PRODUCT IMAGE(S)

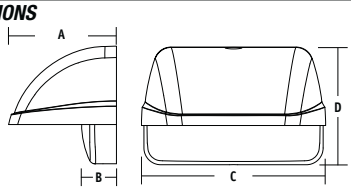
LNC-5L

LNC-7L

LNC-9L

With diffuser

DIMENSIONS



A	B	C	D
4.81" (122 mm)	1.55" (39 mm)	8.22" (209 mm)	5.25" (133 mm)

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

ORDERING INFORMATION

ORDERING EXAMPLE: LNC-9LU-5K-3-1-PCU

LNC - [ ] [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES	NUMBER OF LEDS	VOLTAGE	CCT	IES DISTRIBUTION	FINISH	OPTIONS
LNC LNC zero uplight	**5L** 5 LEDs	**U** 120V-277V	**3K** 3000K nominal, 70 CRI	**2** Type II	**1** Bronze	**PCU** Universal Button Photocell
	7L 7 LEDs	**1** 120V	**4K** 4000K nominal, 70 CRI	**3** Type III	**2** Black	
	9L 9 LEDs	**2** 208V	**5K** 5000K nominal	**4** Type IV	**3** Gray	
		3 240V	**AM**[1] Amber (590 µm available for "Turtle Friendly"/ observatory applications, 350 mA (consult factory)		**4** White	
		4 277V			**5** Platinum	
					* Specify Finish	

1 Amber LEDs only available on 7LU and 9LU configurations, 350 mA only

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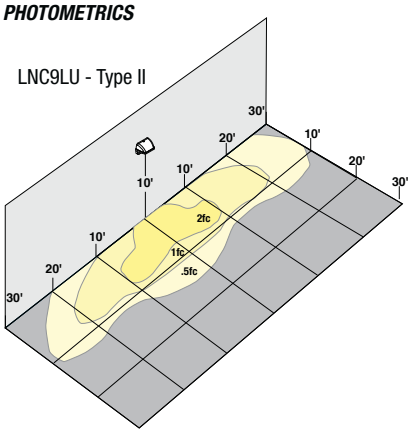
REPLACEMENT PART

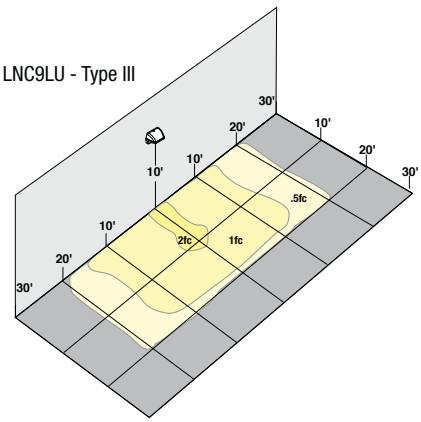
CATALOG NUMBER	DESCRIPTION
93039574	Frosted comfort shield, improved uniformity with only 5% reduction

PHOTOMETRICS

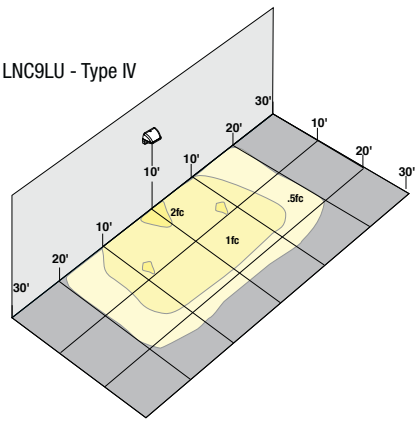
LNC9LU - Type II



LNC9LU - Type III



LNC9LU - Type IV



PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)		4K (4000K nominal, 70 CRI)		3K (3000K nominal, 80 CRI)		AM (<580 nm wave-length)		
# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	LUMENS	LPW[1]	LUMENS	LPW[1]	LUMENS	LPW[1]	LUMENS	SYSTEM WATTS	LPW[1]
5	STD. (700mA) AM (350mA)	13W	2	1,150	88.5	1,052	81	883	68			
			3	1,132	87	1,077	83	833	64			
			4	1,146	88	1,053	81	849	65			
7		17W	2	1,515	89	1,369	80.5	1,272	75			
			3	1,500	88	1,539	90.5	1,392	82	268	6.6	59
			4	1,557	91.5	1,535	90	1,425	84			
9		22W	2	2,069	94	2,033	92	1,588	72			
			3	2,024	92	1,989	90	1,623	74			
			4	2,095	95	2,059	93.5	1,680	76	382	8.3	46

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application. Please consult IES files for BUG ratings.

PROJECTED LUMEN MAINTENANCE

	OPERATING HOURS					
Ambient Temp.	0	25,000	50,000	TM-21-11[1] L96 60,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)
Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99
50° C	122° F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
5	1	STD. (700mA)	120	0.11	13
			277	0.05	13
7	1	STD. (700mA)	120	0.14	17
			277	0.07	17
9	1	STD. (700mA)	120	0.17	22
			277	0.09	22

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Submitted by Swaney Lighting

Job Name:
HAMMOND ST. DEVELOPMENT - SITE

Catalog Number:
LNC3-24L4K-035-3-U-**

Notes: SPECIFY FINISH

Type:
WP-2

SLA18-40388

LITEPAK SERIES
LNC3

Cat.#

Job

Type

HUBBELL Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:
The midsized LNC3 is designed for perimeter illumination for safety, security and identity. No uplight and lower glare lens option offer neighbor friendly lighting at typical mounting heights of 8-20'. Units have protective polyester finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide 70%+ energy savings with little to no maintenance when compared to traditional light sources.

Construction:
Die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments. Four 1/2" conduit entries (top, bottom, and sides) provided for surface conduit.

Electrical:
- 120-277, 347 and 480 voltage, 50/60Hz, 0-10V dimming drivers
- Electronic driver
- 10kA surge protection

LED(s) CCT:
- Ambient operating temperature -40°C to 40°C
- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Available in 2 or 24 LED configuration, see page 2 for electrical and photometric data

Lenses:
- Zero uplight distributions using individual acrylic LED optics provide IES type II, III and IV distributions
- CS - Frosted acrylic diffuser option for reduced glare
- CSU - Frosted acrylic diffuser for inverted "up" mounting applications (lens required)

Lumen Maintenance:
L89 at 60,000 hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:
Quick-mount adapter with gasket seal provides easy installation to wall or to recessed junction box (4" square junction box). Fixture attaches by two Allen-head hidden fasteners for tamper resistance.
Designed for direct j-box mount or conduit feed on all four sides in single SKU.

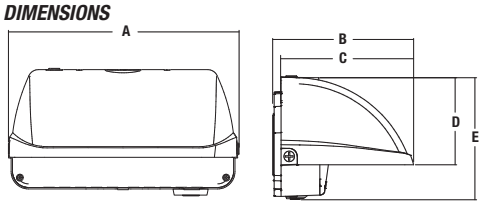
Options/Controls:
- Button photocontrol for dusk to dawn energy savings
- 7-pin photo-receptacle available for twist lock photocell and controls by others
- Occupancy sensor options available for complete on/off and dimming control
- SiteSync pre-commisioned wireless controls (with or without sensor)
- In addition, LITEPAK can be specified with SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/sitesync for more details.

Listings:
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- IP65 Assembly • IDA Approved (3000K configurations)

Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

PRODUCT IMAGE(S)

DIMENSIONS



A	B	C	D	E	Weight / BBU
13"	10.5"	9.9"	5.8"	8.3"	18 lbs.
330.2 mm	266.7 mm	251 mm	147.3 mm	210.8 mm	8.2 kg

CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

SHIPPING INFORMATION

Catalog Number	G.W(kg)/ CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC3-24L	18.0 (8.2)	15.8 (40)	11.0 (28)	13 (33)	1

ORDERING INFORMATION – ORDERING EXAMPLE: LNC3-24L-3K-105-2-1-DB-7PR-SCP

LNC3 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

FAMILY
- **LNC3** Medium Litepak Wallpack

NUMBER OF LEDS
- **24L** 24LEDs

CCT
- **3K** 3000K
- **4K** 4000K
- **5K** 5000K

DRIVE CURRENT
- **035** 350mA
- **050** 500mA
- **075** 750mA
- **105** 1050mA

IES DISTRIBUTION
- **2** Type II
- **3** Type III
- **4** Type IV

VOLTAGE
- **U** 120v-277v
- **1** 120v[1]
- **2** 208v[1]
- **3** 240v[1]
- **4** 277v[1]
- **5** 480v[1]
- **F** 347v[1]

FINISH
- **DB** Bronze
- **BL** Black
- **WH** White
- **GR** Gray
- **PS** Platinum
- **CC** Custom Color
- * Specify Finish

CONTROL OPTIONS
- **PCU** Universal Button PC
- **7PR**[6] 7pin PCR
- **SCP**[3,4] Programmable occupancy sensor
- **SWP**[7,10] SiteSync pre-commisioned
- **SWPM**[4,7,8,10] SiteSync pre-commisioned w/ occupancy sensor

OPTIONS
- **F**[1] Fusing (must specify voltage per footnote)
- **CS** Frosted acrylic diffuser
- **CSU**[2] Inverted/Up mounting frosted acrylic diffuser (required for up/inverted fixture installations, factory install only see page 3)
- **E**[1,5] Integral battery backup rated for 0°
- **EH**[1,5] Integral battery backup with heater rated for -30°C
- **2DR**[9] Dual Drivers

[1] Must specify voltage (120 or 277V only for E/EH options)
[2] Factory Install Only. Not avaliable with SCP or SWPM sensor/control options
[3] Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only.
[4] PCU option not applicable, included in sensor (8F = up to 8ft, 20F = up to 20ft)
[5] 350mA, 500mA & 750mA versions only. Not available with F, SWP or SWPM options.
[6] Accepts standard 3, 5, and 7-Pin ANSI controls (by others). Not available with PCU, SWP or SWPM control options
[7] Must specify group and zone information at time or order. See www.HubbellLighting.com/products/sitesync for future details
[8] Specify time delay; dimming level and mounting height
[9] 750mA and 1050mA versions only, not available with 347/480V
[10] 1050mA only, not available with 347V or 480V

STOCK ORDERING INFORMATION – 2L COB MODELS

CATALOG NUMBER	DESCRIPTION	DISTRIBUTION	WATTAGE	LUMENS	LPW	VOLTAGE	# OF DRIVERS @ DRIVE CURRENT	WEIGHTS LBS. (KGS)
LNC3-2L4K-075	2 LED - 60W Configuration, 4000K, Dark Bronze	Type IV	62.0	5,857	94.8	120-277	1 @ 750mA	16(7.3)
LNC3-2L4K-105	2 LED - 90W Configuration, 4000K, Dark Bronze		87.4	7,721	86.1		1 @ 1050mA	
LNC3-2L5K-105	2 LED - 90W Configuration, 5000K, Dark Bronze		87.4	7,288	82.0		1 @ 1050mA	
LNC3-2L4K-105-7PR	2 LED - 90W Configuration, 4000K, Dark Bronze, 7-Pin		87.4	7,721	86.1		1 @ 1050mA	
LNC3-2L4K-105-SCP	2 LED – 90W Configuration, 4000K, Dark Bronze, SCP		87.4	7,721	86.1		1 @ 1050mA	

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Accessories and Services (Ordered Separately)

Catalog Number	Description
LNC3-CS	Frosted acrylic diffuser reduces surface brightness and glare with a roughly 20% lumen reduction
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
\+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

SiteSync 7-Pin Module

SW7PR

- SiteSync Features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Available on all products that have a 7-Pin receptacl
- Does not interface with occupancy sensors

PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G	4K (4000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G	3K (3000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G
4	N/A	N/A	E	671	-	-	-	-	657	-	-	-	-	591	-	-	-	-
24	350mA	28	2	3,212	115	1	0	1	3,145	113	1	0	1	2,991	107	1	0	1
			3	3,160	113	1	0	1	3,094	111	1	0	1	2,944	106	1	0	1
			4	3,182	114	1	0	1	3,116	112	1	0	1	2,964	106	1	0	1
	500mA	41	2	4,143	101	1	0	2	4,057	99	1	0	2	3,858	94	1	0	2
			3	4,076	99	1	0	1	3,991	97	1	0	1	3,797	93	1	0	1
			4	4,104	100	1	0	1	4,019	98	1	0	1	3,823	93	1	0	1
	750mA	60	2	5,918	99	1	0	2	5,795	97	1	0	2	5,512	92	1	0	2
			3	5,823	97	1	0	2	5,702	95	1	0	2	5,424	90	1	0	2
			4	5,863	98	1	0	2	5,741	96	1	0	2	5,461	91	1	0	2
	1050mA	83	2	7,630	92	2	0	2	7,472	90	2	0	2	7,107	86	2	0	2
			3	7,508	90	1	0	2	7,352	89	1	0	2	6,993	84	1	0	2
			4	7,559	91	1	0	2	7,402	89	1	0	2	7,041	85	1	0	2

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
24	350mA	120	0.23	28
		277	0.10	28
		347	0.08	28
		480	0.06	28
	500mA	120	0.34	41
		277	0.15	41
		347	0.12	41
		480	0.09	41
	750mA	120	0.50	60
		277	0.22	60
		347	0.17	60
		480	0.13	60
	1050mA	120	0.69	83
		277	0.30	83
		347	0.24	83
		480	0.17	83

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS 0	25,000	50,000	TM-21-11[1] L96 60,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.97	0.94	0.93	0.89	>296,000
40°C / 104°F	1.00	0.95	0.91	0.89	0.83	>191,000

1. Projected per IESNA TM-21-11 * (Nichia 219C, 1050mA, 85°C, 10,000 hrs)
Data references the extrapolated performance projections for the LNC3-24L-105 base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

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CSU – INVERTED MOUNTING OPTION (Requires Factory Installed lens option)

Inverted mounting capabilities for uplighting applications. Specially designed frosted acrylic diffuser option softens output, improves uniformity and protects LED lenses.

7PR-7-PIN RECEPTACLE (Photocontrol and Wireless Controls by Others)

Standard NEMA 7-Pin receptacle for twist lock photocell or wireless controls (by others).

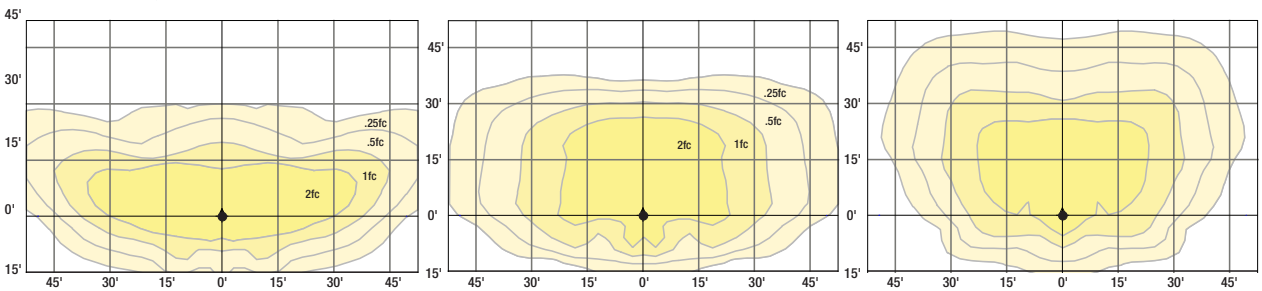
SCP - Programmable Occupancy Sensor

Sensor offers greater control and energy savings with SCP programmable sensor with adjustable delay and dimming levels (Factory default is 10%)

Visit: **http://www.hubbelllighting.com/solutions/controls/** for control application information

PHOTOMETRICS

Mounting Height 15ft

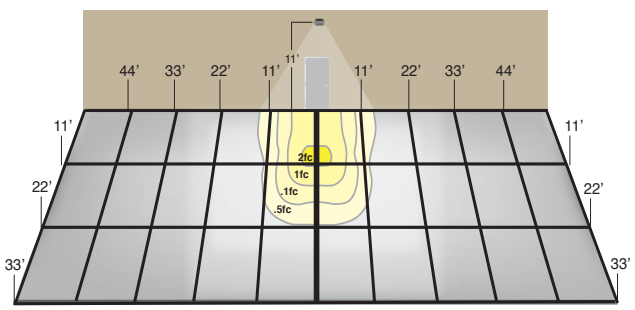


TYPE II
LNC3-24L-5K-105-2

TYPE III
LNC3-24L-5K-105-3

TYPE IV (Foward throw)
LNC3-24L-5K-105-4

PHOTOMETRICS - BATTERY BACK UP



11' Mounting Height

Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions and mounting height of 11'.

Diagrams for illustration purposes only, please consult factory for application layout.

Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging.
EH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C

E & EH EMERGENCY BATTERY BACKUP

24 High Power LEDs generate up to 6,000 lumens in Normal Mode, and use 4 LEDs for up to 700 lumens in emergency.

SWP & SWPM - SiteSync™

SiteSync Lighting Control is available from our most popular brands in a broad range of award-winning product families.

Precommissioned SiteSync Ordering Information:
When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project locations Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/proudcts/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture selection of the lens.

Examples: LNC3-24L-4K-075-3-U-BL-SWP — SiteSync only
LNC3-24L-4K-075-3-U-BL-SWPM-20F — SiteSync with Motion Control

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RYAN SENATORE **ARCHITECTURE**

November 21, 2018

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

Re: Hammond House - Design Narrative

The proposed building to be located near the corner of Hammond and Fox Streets in Portland's East bayside Neighborhood consists of 16 residential condominium units. The building is a 3 story structure along Hammond Street with a daylight basement to the rear of the property

Prior to developing the building concept we spent much time walking the streets of East Bayside, analyzing existing streetscapes, building massing, forms, materials and textures. This approach allowed us to develop a design concept that is grounded by the existing neighborhood context but reflects our contemporary time.

The neighborhood is comprised of a diverse palate of Architectural forms, scales and density. Hammond Street and the surrounding neighborhood has a variety of Architectural forms and massing from gable roof 1-1/2 and 3 story structures to 3 story flat roof structures.

We designed Hammond House using color massing and texture to scale the building as reflected a the Hammond Street elevation, to create a facade rhythm similar in proportion to the local triple decker building type. The building entry on Hammond Street is defined by the facade rhythm, a projecting mass above the door and a warm wood tone material, to create a welcoming place to enter the building. The green space in between the sidewalk and building facade will also serve as a sculpture garden, the owner will work with local artists to provide the Art for the space to create an interesting and engaging landscape along the sidewalk.

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

Building Scale is a very important in this neighborhood, we have utilized color (as described above) as well as texture and massing to scale the building to fit in with its surroundings. We have used differing siding types on the facades to help scale the facades. The use of recessed and attached porches provide massing relief(s) and create shadow lines that also help give scale to the building.

The siding materials proposed are factory finished composite lap siding, panel siding and brick, chosen for their traditional crisp appearance and long term durability. The windows proposed are dark in color to compliment the siding colors and also further reinforce the crisp simplicity of the design. The roofing proposed is an EPDM roof membrane.

The design of Hammond House is derived from the Vernacular Architecture that exists in the neighborhood, we have used color, texture, massing and rhythm as tools to scale the project and integrate it into the existing neighborhood fabric.

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

Sincerely,

Ryan Senatore, AIA LEED AP

Principal

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

P. Utilities

The proposed project will include installation of multiple utility services to the new building.

Water:

The two existing domestic service lines to each house will be retired in accordance with Portland Water District standards. A new 6" parent connection will tie into the main and will branch off to provide a sprinkler line and domestic line to the development.

Sewer:

The two existing sewer laterals to each house will be retired in accordance with the Department of Public Works. A new 6" pvc lateral will be installed to accept the wastewater from each unit, the elevator sump, and the garage sewer after draining from the oil-water separator. The garage and elevator sump will be pumped internally to meet with the wastewater lines from the living levels before being fed via gravity to the sewer main within Hammond Street.

Stormwater:

There is currently no drainage infrastructure on site. It is proposed to intercept the entirety of the roof runoff and store/treat it within an underdrained subsurface sand filter. Runoff from the driveway will be stored within an infiltration trench. These two BMP's will help maintain or lower the amount of stormwater leaving the site. Please see the Stormwater Management Report for more information.

UGE/T/C:

The existing building has aerial services off of the utility pole on the corner of Hammond and Fox Streets. These services are proposed to be rerouted underground from the new utility pole at the intersection.

Gas:

There is currently no natural gas servicing the property. It is proposed to install a gas service off of the gas main within Hammond Street as seen on the Utility Plan, Sheet C-20.

Ability to serve letters have been sent out to the respective utility companies on November 8th, 2018 in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies can be found attached to this section.

ACORN ENGINEERING, INC.

Portland Water District
Attn: MEANS Department
225 Douglass Street
Portland, Maine 04104

November 8, 2018

Subject: 10 Hammond Street Redevelopment
Re: Ability to Serve

To Whom It May Concern:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the following request for Portland Water District's (PWD) ability to serve the proposed development. The proposed project is located along 4-12 Hammond Street (Chart, Book, Lots 12-C-6,8,10,11,14), within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a three-story, 16-unit residential building with a subsurface parking garage. The two existing single-family structures will be demolished to facilitate the redevelopment.

According to the existing conditions survey, there are two water services within the project limits - one to each home. It is proposed that the existing services be retired in accordance with PWD standards. A 6" sprinkler line and 4" domestic line are proposed to service the redevelopment with a parent-child connection. Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, and assuming that the units will be comprised of 6 one-bedroom units, 7 two-bedroom units, and 3 three-bedroom units, the project anticipates the following design flows:

Estimate of Anticipated Daily Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Single Family Dwelling	3-Bedroom	2	270	540
Total Gallons per Day (Existing)				540
Proposed Flow				
Residential Units	1-Bedroom	6	180	1,080
Residential Units	2-Bedroom	7	180	1,260
Residential Units	3-Bedroom	3	270	810

Total Gallons per Day (Proposed)	3,150
Net Change	**+2,610 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition	

The proposed project is anticipated to increase the net flow by approximately 2,610 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules. Additionally, the number of bedrooms per unit may change later in the design process. We will provide any changes to the anticipated water demand.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within Hammond Street and confirmation of the location and size of the services to the existing property and the size and material of the water main within Hammond Street.
2. Alternative connection locations from the property to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. Flow data for adjacent hydrant.
5. PWD's ability to serve the project.

I have attached a fixture count, an existing conditions plan created by RW Eaton Associates, and the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

November 26, 2018

Sam Lebel
Acorn Engineering
PO Box 3372
Portland, ME 04104

Re: 10 Hammond Street, PO
Ability to Serve with PWD Water

Dear Mr. Lebel:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on November 8, 2018. Based on the information provided, 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 service and 4-inch domestic water service may be installed from the water main in Hammond Street. The service(s) should enter through the properties frontage on Hammond Street at least 10-feet from any side property lines.
- An approved backflow prevention device must be installed on the domestic service line directly after the meter prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.
- The existing services on site must be terminated by shutting the corporation valves and cutting the pipes from the water main.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site currently has existing two water services. A 3/4-inch diameter copper domestic service line provides water service to 6 Hammond Street, and a 3/4-inch diameter copper domestic service line provides water service to 10 Hammond Street. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is a 6-inch diameter cast iron water main in Hammond Street and a public fire hydrant located approximately 50 feet from the site. The most recent static pressure reading was 92 psi on June 28, 2018.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Robert A. Bartels, P.E.
Senior Project Engineer

ACORN ENGINEERING, INC.

Central Maine Power Company
Attn: Mr. Paul DuPerre
162 Canco Road
Portland, Maine 04103

November 8, 2018

Subject: 10 Hammond Street Redevelopment
Re: Ability to Serve

Dear Mr. DuPerre:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the following request for Central Maine Power's (CMP) ability to serve the proposed development. The proposed project is located along 4-12 Hammond Street (Chart, Book, Lots 12-C-6,8,10,11,14), within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a three-story, 16-unit residential building with a subsurface parking garage. The two existing single-family structures will be demolished to facilitate the redevelopment.

It is proposed that the two existing aerial lines be removed and a new underground conduit be dropped from the existing 3-phase utility pole at the corner of Hammond and Fox Streets. The conduit will cross Hammond Street to the proposed building. Given the existing and proposed loads, please let us know if you anticipate the need for a new pole-mounted transformer. As a note, there is one proposed elevator.

On behalf of the client, we are requesting the following information:

1. Any easements for overhead services currently crossing the proposed development.
2. Alternative connection locations from the development to the existing system.
3. CMP's proposed infrastructure improvements within the project vicinity.
4. CMP's ability to serve the project.
5. Access requirements to the CMP meters.

I have attached an existing conditions plan created by RW Eaton Associates as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer

CENTRAL MAINE POWER

November 20, 2018

Acorn Engineering, Inc.
C/O Mr. Sam Lebel, E.I.
PO Box 3372
Portland, Maine 04104

RE: 10 Hammond Street, Portland, Maine

Dear Mr. Lebel,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost. Transmission and Primary feeders may need to be relocated if this project moves forward.

If you have any questions please feel free to call me at 629-1487.

Sincerely,

Paul DuPerre
Energy Service Specialist

Printed on recycled paper

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com

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ACORN ENGINEERING, INC.

Unitil Service Corp.
Attn: Bridget Harmon
376 Riverside Industrial Parkway
Portland, Maine 04103

November 8, 2018

Subject: 10 Hammond Street Redevelopment
Re: Ability to Serve

Dear Ms. Harmon:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the following request for Unitil's ability to serve the proposed development. The proposed project is located along 4-12 Hammond Street (Chart, Book, Lots 12-C-6,8,10,11,14), within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a three-story, 16-unit residential building with a subsurface parking garage. The two existing single-family structures will be demolished to facilitate the redevelopment.

We are not aware of any existing gas services to the property. It is proposed to route a service from the existing gas main on the far side of Hammond Street to the proposed building.

On behalf of the client, we are requesting the following information:

1. Any additional utility mapping such as gas lines within Hammond Street.
2. A confirmation of an existing gas main within Hammond Street Street, as well as the size of any gas lines and services in the vicinity.
3. Unitil's proposed infrastructure improvements within the project vicinity.
4. Unitil's ability to serve the project.

I have attached an existing conditions plan created by RW Eaton Associates as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

November 13, 2018

Sam Lebel
Acorn Engineering
PO Box 3372
Portland, ME 04104

Re: 10 Hammond Street, Portland

Dear Mr. Lebel:

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 either the 4" or 6" intermediate main on Hammond Street or Fox Street, depending on the final chosen location for the natural gas service to 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, meter requirements, requested pressures and timelines for the evaluation to be completed.

If you have any further questions or require additional information, please do not hesitate to contact me directly.

Sincerely,

Bridget Lauren Harmon
Business Development Representative
Unitil Corporation
harmon@unitil.com
(O) 207-541-2505 (F) 207-541-2565

ACORN ENGINEERING, INC.

Consolidated Communications
Attn: Mr. Patrick Morrison
5 Davis Farm Road
Portland, Maine 04103

November 8, 2018

Subject: 10 Hammond Street Redevelopment
Re: Ability to Serve

Mr. Morrison:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the following request for Consolidated's ability to serve the proposed development. The proposed project is located along 4-12 Hammond Street (Chart, Book, Lots 12-C-6,8,10,11,14), within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a three-story, 16-unit residential building with a subsurface parking garage. The two existing single-family structures will be demolished to facilitate the redevelopment.

It is proposed that the aerial lines currently serving the existing homes be removed and new underground conduits be dropped from the existing utility pole at the intersection of Fox and Hammond to the proposed building.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within Hammond Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the property to the existing communication system.
4. Consolidated's proposed infrastructure improvements within the project vicinity.
5. Consolidated's ability to serve the project.

I have attached an existing conditions plan created by RW Eaton Associates as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

Sam Lebel

From: Morrison, Patrick <Patrick.Morrison@consolidated.com>
Sent: Thursday, November 8, 2018 3:02 PM
To: Sam Lebel
Cc: William Savage
Subject: RE: 10 Hammond Street Redevelopment

Hi Sam,

I have reviewed your letter and site layout. CCI has copper abilities on Hammond St to serve the new apartment development on Hammond St in Portland.

If you have any questions, comments, or concerns feel free to contact me at any time.

Thanks,

Patrick Morrison | Outside Plant Engineer
D: 207.535.4271 | C: 207.745.9363
Patrick.Morrison@consolidated.com
consolidated.com | NASDAQ: CNSL

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From: Sam Lebel [mailto:slebel@acorn-engineering.com]
Sent: Thursday, November 08, 2018 12:40 PM
To: Morrison, Patrick
Cc: William Savage
Subject: 10 Hammond Street Redevelopment

Hi Pat,

We have a proposed 16-unit residential redevelopment project along 4-12 Hammond Street in Portland. Attached is an ability to serve letter as well as an existing conditions plan and preliminary Utility Plan for your review.

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

Thanks,

Sam Lebel, E.I.
Project Engineer

Licensed in Maine

Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Charter Communications
Attn: Mr. Mark Pelletier
118 Johnson Road
Portland, Maine 04102

November 8, 2018

Subject: 10 Hammond Street Redevelopment
Re: Ability to Serve

Dear Mr. Pelletier:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the following request for Charter's ability to serve the proposed development. The proposed project is located along 4-12 Hammond Street (Chart, Book, Lots 12-C-6,8,10,11,14), within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a three-story, 16-unit residential building with a subsurface parking garage. The two existing single-family structures will be demolished to facilitate the redevelopment.

It is proposed that the aerial lines currently serving the existing homes be removed and new underground conduits be dropped from the existing utility pole at the intersection of Fox and Hammond to the proposed building.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within Hammond Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the property to the existing communication system.
4. Charter's proposed infrastructure improvements within the project vicinity.
5. Charter's ability to serve the project.

I have attached an existing conditions plan created by RW Eaton Associates as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

Q. Construction Management Plan

Project Address: 4-12 Hammond Street

Project Description:

The proposed project includes the development of a 3-story building with 16 units of residential housing and on-site subsurface parking.

Project Team Summary:

Owner:	Hammond House, LLC
General Contractor:	TBD
Civil Engineer:	Acorn Engineering, Inc.
Architect:	Ryan Senatore Architecture
Structural Engineer:	Structural Integrity Consulting Engineers, Inc.

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

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

Guarantees and fees will be paid at the time of the respective application. Sections 14-530 and 13-532 will be complied with all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

   Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

   Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

   Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor contact information shall be posted on a sign on the construction fence along the Hammond Street frontage. Additional signage necessary for communication shall be provided, but will be temporary and removed upon completion of the project. The contract information for the project personnel is:

Kevin O'Rourke, Owner
The Preserve at South Ridge, LLC
(207) 838-3410

GC and Subcontractor information will be posted along the Hammond Street frontage once contracted.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18 of the Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will

be subject to approval by the Public Works Authority.

Due to the limited space within the project parcel, deliveries will need to be stored in an alternate location or deliveries must be small enough to fit within the property. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

Project Start Date:	Summer 2019
Project End Date:	Spring 2020

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

    Construction activity in the public right-of-way shall be compliant with Chapter 25

Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

   Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. This will apply to the new connections within Hammond Street.

3. Traffic Control Plans

   Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

   The MOT will address the work required for utility connections in Hammond Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

   The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of Hammond Street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic.
   - Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
   - Flaggers will be utilized when necessary.

   All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

   - Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready

for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces on Hammond Street shall not be permissible. The blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately and its removal shall comply with all local, state, and federal regulations.

2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.

3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.

4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.

5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.

6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:

    a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone
    d. Sand or salt as needed
    e. Clear all basin or drainage to help snow melt
    f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the

City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. Due to the existing sparse landscaping on site, no protection during construction will be necessary.

3. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided along Hammond Street or arrangements for off-street parking at an off-site location shall be provided.

2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:

    - Gravel & Stone – 5,000 CF. Earthwork subcontractor(s) pit to project site.
    - Hot Mix Asphalt – 10 tons. Paving subcontractor(s) pit to project site.

L. Special Measures as Necessary

No special measures are necessary for the proposed reconstruction.

R. Solid Waste Disposal

The property management company or Owner shall be responsible for locating the solid waste and recyclable material to the space allocated for solid waste storage as noted on the Site Plan (C-10) and within the architectural plans.

The solid waste containers will be fully enclosed and screened from the public view.

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed Hammond House Redevelopment project shown on the Subdivision Plat recorded in the Cumberland County Registry of Deeds in Plan Book ___, Page ___ (the "Plan") and associated Grading & Drainage Plan (Sheet C-30), dated 11/26/2018 prepared by Acorn Engineering, Inc. of P.O. Box 3372, Portland, ME 04104 dated and pursuant to a condition thereof, The Preserve at South Ridge, LLC, a Maine limited liability company with a principal place of business in Yarmouth, Maine, and having a mailing address of 94 South Street, Yarmouth, Maine 04096, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the underdrained subsurface sand filter (USSF), infiltration trench, catch basin, and storm drain pipes (hereinafter collectively referred to as the "stormwater system") as shown on Grading & Drainage Plan (Sheet C-30) attached hereto as **Exhibit B** and in strict compliance with the approved Stormwater Inspection & Maintenance Plan and Stormwater Maintenance and Inspection Log, dated November 2018, copies attached as **Exhibit A and C** respectively and Chapter 32 of the Portland City Code.

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

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

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

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

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

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

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

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

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

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

Dated at Portland, Maine this _____ day of _____, 2017.

The Preserve at South Ridge, LLC
A Maine limited liability company

_____
Kevin O'Rourke, Manager

STATE OF MAINE
CUMBERLAND, ss. Date: _____

Personally appeared the above-named Kevin O'Rourke, Manager of The Preserve at South Ridge, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

_____
Notary Public/Attorney at Law

Print name: _____

Exhibit A: Stormwater Inspection & Maintenance Plan

Exhibit B: Grading & Drainage Plan

Exhibit C: Stormwater Maintenance and Inspection Log

ACORN
ENGINEERING, INC.

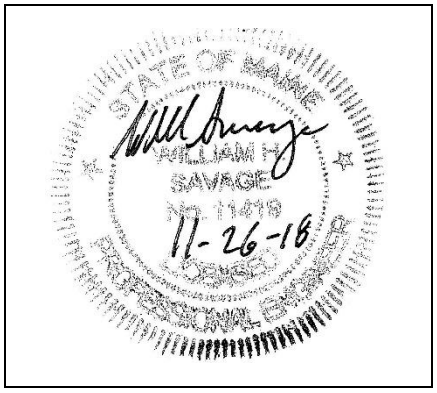
POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN

Prepared For:

The Preserve at South Ridge, LLC
94 South Street
Yarmouth, Maine 04096

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104



November 2018

ACORN ENGINEERING, INC.

RESPONSIBLE PARTY

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

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

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

Phone: (207) 775-2655

Qualifications:

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

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

PURPOSE

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

OPERATION AND MAINTENANCE ACTIVITY

Underdrained Subsurface Sand Filter (USSF):

The maintenance of the underdrained subsurface sand filter shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 7.3 Underdrained Subsurface Sand Filter.

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

Underdrained Infiltration Trench:

The maintenance of the underdrained infiltration trench shall be in accordance with the following activities identified below:

- The stone reservoir layer shall be inspected after every major storm within the first year to ensure the trench is free draining.
- Any debris, sediments, or organic matter must be removed from the reservoir course at any time. Weeding of any growth shall be completed as necessary to keep the stone layer clear.

Sweeping:

Annual sweeping of the driveway and parking areas following the snow melt for accumulated winter sand, if necessary. Appropriately dispose of all collected material. This activity will largely function as preventative maintenance for the infiltration trench. Collecting debris on the driveway surface before it reached the grassed swale and infiltration trench and will be significantly more time and cost effective than removing sediment and debris downstream within the crushed stone.

Storm Drains:

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

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

Catch Basins:

The Catch basin shall be inspected to confirm the structure is operating properly.

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

Landscaped, Vegetated and Areas Adjacent to Retaining Walls:

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

If signs of rill erosion or scour are present within areas tributary to the retaining walls, or stormwater flow is observed flowing over the wall, Acorn Engineering should be immediately contacted to perform an inspection and/or to contact the appropriate professional. Should concerns arise from the downhill abutters related to groundwater flow from the retaining wall, Acorn Engineering should be contacted to perform a site inspection and to meet with the concerned abutter.

INSPECTION AND MAINTENANCE TABLE

Inspection and Maintenance Frequency	Spring or Yearly	Summer	Fall	As Necessary
Underdrained Subsurface Sand Filter	X		X	X
Sweeping	X			X
Storm Drains		X		X
Catch Basins		X		X
Infiltration Trench	X	X		X
Landscaped / Wall Areas	X			X

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

UNDERDRAINED SUBSURFACE SAND FILTER BMP:	
Location: 4 - 12 Hammond St, Portland, Maine 04101	**Latitude:** 43.66715° N **Longitude:** -70.25471° W
Description of Located Point: Adjacent to north corner of building within driveway	**Inspector:** **Date of Inspection:** **Weather Conditions:**

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Underdrained Ditch, Vegetated Underdrain Soil Filter, Bio-retention Cell, etc.							
Sand filter retains the design volume for a drain down time greater than 24-hours and less than 36-hours	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
The outlet control structure is in good working condition.	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
Inlet and pre-treatment measures are free of sediment and floatables accumulation.	☑	☐	☐	☐ Yes ☐ No ☐ N/A			
Maintain in accordance with manufacturer's recommendations	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Treatment device is working properly and is free of debris and sediment	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Sediment is less than 3 inches within the isolator row	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Catch basin is working properly and is free of debris and sediment	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Basin outlet hood is working properly.	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
The site is clean and swept	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Inter-basin storm drain is functioning properly and free of sediment and debris.	☑	☑	☐	☐ Yes ☐ No ☐ N/A			

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
General							
Access to facility is adequate	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☐	☑	☐				Photographs are attached.
Additional Comments:							

STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

INFILTRATION TRENCH:							
Location: 4 - 12 Hammond St, Portland, Maine 04101				Latitude: 43.66715° N Longitude: -70.25471° W			
Description of Located Point: Towards the rear of the site.				Inspector: Date of Inspection: Weather Conditions:			
Days since last precipitation:				MEDEP Permit #: N/A			
Quantity of last precipitation (in):				Design Drawings:			
Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
Infiltration Trench:							
Reservoir stone is free draining and clean of sand, sediment, organic matter, or any other debris	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Permeability is between 2.4 and 4 in/hr	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
Reservoir layer is free from growth	☐	☐	☑	☐ Yes ☐ No ☐ N/A			
Plunge pool and inslopes are free of erosion	☐	☑	☐	☐ Yes ☐ No ☐ N/A			
General							
Access to facility is adequate	☑	☑	☐	☐ Yes ☐ No ☐ N/A			
Photographs of most recent site inspection are included	☑	☑	☐				Photographs are attached.
Additional Comments:							

ACORN ENGINEERING, INC.

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

January 16, 2019

Subject: Hammond House Neighborhood Meeting

I, Will Savage, hereby certify that a neighborhood meeting was held on January 15, 2019 at the Root Cellar at 5:30 pm.

I also certify that on January 4, 2019, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Sincerely,

Date: 1/16/19

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

Included with this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

ACORN ENGINEERING, INC.

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

February 12, 2019

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

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

Matthew Grooms, Planning

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

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

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

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

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

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

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

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

Tom Errico, Traffic

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

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

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

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

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

Response – We agree with your assessment.

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

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

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

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

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

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

Woodard & Curran, Civil Engineering

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

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

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

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

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

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

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

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

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

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

Robert Thompson, Fire Department

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

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

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

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

Jeff Tarling, Landscaping

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

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

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

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

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

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

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

Sincerely,

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

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

RYAN SENATORE **ARCHITECTURE**

January 28, 2019

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

Re: Hammond House - R-6 Design Review Responses

Dear Caitlin,

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

1.) See additional rendering from Fox Street

2.) A-1 and A-2, we have simplified the roof form at the entry and flanking elevator and stair to a more clean simple form

3.) We have kept the roof deck access doghouses set back from the street facade 20 plus feet to minimize visual impact from he neighborhood, please see the attached renderings as to how they relate will be seen from the neighborhood

4.) B-1, we have simplified the roof forms to address this item

5.) F-5 and F-6, we revised the entry and bay to scale it down and give it a residential feel by reducing its height, removing the spandrel glass and removing the vertical signage.

6.) G-1, we minimized the panel material at the balconies and used more lap siding

7.) G-2, we reduced the amount of brick to one story adjacent to the entry and have utilized a fibercement panel with an 18” reveal pattern to scale the facade to a residential scale.

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

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

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

Sincerely,

Ryan Senatore, AIA LEED AP

Principal

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

Sign In Sheet

1/15/2019
The Root Cellar - 94 Washington Ave
Hammond House Redevelopment

Members of the Public in Attendance:

NAME	E-MAIL
1. Carolyn Treat Hammond St.	ctreat5@yahoo.com
2. Chip FLANAGAN	aljones0812@gmail.com
3. Mary OBRION	
4. BRIAN RAPP	Remo.Olivi.@yahoo.com
5. Remo Olivi	mperejca@legacysir.com
6. Michele Pereira	sethbrayton@gmail.com
7. Seth Brayton	
8. JASON Wentworth	jwent@gwi.net
9. STEVEN OLDFORD	STEVEN.OLDFORD1@gmail.com
10. Catharine Clay	kate.clay88@gmail.com
11. NICHOLAS SICHTERMAN	Nicholas.Sichterman@gmail.com
12. Wendy Harman	wendyharman@kw.com
13. Donna Gartland	dondagartland@gmail.com
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15. Elise Loschiavo	elise@vitalivs.com
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17. Chris Bronz	cbronz@maine.rr.com
18. Martie Voland	martievoland@hotmail.com
19. Cynthia Cochran	ccochran@eastbayside.org
20. Lindsay Matranga	lmatranga@eastbayside.org
21. MARIKA CLARK	MARIKA@LEGACYSIR.COM
22. KIM CHESTERFIELD	Kchesterfield40@gmail.com
23. Kate Pinkerton	pinkaloe@hotmail.com
24. TOBY RZEPKA	tobyrzepka@gmail.com
25. Evan Carroll	ecarroll963@gmail.com

Developer and Consultant Team in Attendance:

NAME	E-MAIL
1. SAM LEBEL	SLEBEL@ACORN-ENGINEERING.COM
2. Ryan Senton	
3. Will Savage - Acorn	
4. Reid Tozier - RSA	
5. Kevin O'ROURKE	
6.	

ACORN ENGINEERING, INC.

January 4, 2019

Dear Neighbor:

On behalf of The Preserve at South Ridge, LLC, we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed project at 10 Hammond Street within the R-6 zoning district. The project includes the redevelopment of the site into a 3-story residential building. Although the zoning ordinance allows for up to 20 units, the Developer has elected to include only 16. A side vehicle entrance into a subsurface parking garage will be implemented allowing for one parking space per unit with additional storage space for bicycle parking. Overall, the site's street frontage along Hammond will be improved by closing one of the two existing curb cuts, rebuilding the sidewalk to City standards, and planting two street trees.

Meeting Location: The Root Cellar – 94 Washington Ave., Portland, ME 04101

Meeting Date: Tuesday, January 15, 2019

Meeting Time: 5:30 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 775–2655. We look forward to seeing you at the meeting.

Sincerely,

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

ACORN ENGINEERING, INC.

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

Neighborhood Meeting Minutes

January 15, 2019 / 5:30 pm
The Root Cellar

Project Team Attendees:

Kevin O'Rourke (KO):	Developer/Presenter – (The Preserve at South Ridge, LLC)
Will Savage (WS):	Civil Engineer/Presenter (Acorn Engineering)
Sam Lebel (SL):	Civil Engineer/Note Taker (Acorn Engineering)
Ryan Senatore (RS):	Architect/Presenter (Ryan Senatore Architecture)
Reid Tozier (RT):	Architect/Presenter (Ryan Senatore Architecture)

Meeting started at approximately 5:35 pm.

Presentation:

Kevin O'Rourke:

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

Will Savage:

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

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

Ryan Senatore:

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

Reid Tozier:

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

  - Brick veneer along the bottom and center to help with the scale of the building
  - Blue fibercement panels and lap siding for the dwelling units.
  - Black trim to break up the massing

- The rear and sides of the building feature a transition from the brick veneer to fiber cement with paneling to create a rhythm.
- The bandline serves to delineate the basement from the living area
- Rooftop appurtenances will be hidden toward the middle
- Contextual renderings shown – one viewed on Hammond St. looking south towards the site and one viewed on Winthrop St. looking north towards the site.

Comments, Questions & Answers:

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting. Q or C denotes Question or Comment from the Public.

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

WS: 20.5 feet

Q: What is the plan for snow removal?

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

Q: How tall are the stories?

RS: 11' from floor to floor.

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

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

C: That is good to hear.

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

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

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

WS: Yes.

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

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

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

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

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

Q: What's the height in the garage?

RS: 8.5' of clearance

Q: Where are the other entrances?

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

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

Q: What is the plan for HVAC?

RS: Mostly on the roof.

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

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

Q: So not on top of the deck stairwells?

KO: Correct.

Q: Do you need another fire hydrant?

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

Q: What is your best guess on the timeframe?

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

Q: Will there be any blasting?

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

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

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

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

Q: What's the price range?

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

Q: Do you create the condo docs?

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

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

Q: Could these be Air BnB's?

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

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

Q: Is anyone from the City here?

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

C: Site Plan looks big for this area.

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

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

Q: What is the bedroom mix?

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

Q: What is the address?

A: 10 Hammond Street.

Q: How will we get to know the neighbors?

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

C: The bulletin board is a good idea.

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

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

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

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

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

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

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

Q: Will there be a traffic study?

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

Q: Will there be a landscape design?

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

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

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

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

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

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

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

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

Q: Could there be access from Anderson Street?

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

Q: Will there be other meetings?

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

Q: What is the design of the driveway like?

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

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

WS: Approximately 5-6' and 29'.

Q: Where can I see these plans?

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

Meeting concluded at approximately 7:00 pm.

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

Recorded by,

Sam Lebel

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

Re plan number PL-000418-2018

jwent@gwi.net <jwent@gwi.net> Jan 3, 2019 3:45 PM
Posted in group: **Planning Board**

Dear Planning Staff,

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

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

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

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

Sincerely,

Jason Wentworth

42 Hammond Street

Portland

Google Groups

Hammond St House condominium project

jonathan gartland <jonathan.gartland@gmail.com> Jan 4, 2019 4:04 PM
Posted in group: **Planning Board**

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

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

Regards,
Jonathan Gartland
18 Fox St.

PL-000418-2018

JESSICA LOCKHART <jlockha1@maine.rr.com> Jan 5, 2019 2:33 PM
Posted in group: **Planning Board**

Hello Planning Board-

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

Come on this isn't right!

Thanks,
Jessica Lockhart
29 Hammond St.

Google Groups

10 Hammond St Development

Carolyn Treat <ctreat5@yahoo.com> Feb 26, 2019 11:21 AM
Posted in group: **Planning Board**

To the Planning Board,

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

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

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

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

10 Hammond Street

Kate Clay <kateclay88@gmail.com> Feb 26, 2019 2:54 PM
Posted in group: **Planning Board**

Dear all:
I am writing in advance of this afternoon's workshop about the Hammond Street project. What I have to say will not be new, but you are hearing it from the viewpoint of a property owner who shares a property line and view of the project from my kitchen window at 37 Fox St.
2 reactions to the architect's drawings: 1) this thing is huge. Way too big for the surrounding neighborhood. It looks ridiculous among the homes and apartment buildings on Fox and Hammond. I know we are a profit-driven society but this feels like a really in-your-face replacement of two single family homes. 2) It is ugly, an industrial looking box in the same style and colors as much of the new construction in Portland. Such a missed opportunity to be innovative, and to embrace sustainable resources such as solar panels.
We love this neighborhood and worry that this structure will set an unfortunate precedent. If you have the power to mitigate the size and style of this building, we will be grateful.
Regards,
Catharine Clay

Google Groups

10 Hammond Street project

Gartland, Donna <dgartland@healthdialog.com> Feb 26, 2019 3:25 PM

Posted in group: **Planning Board**

Hello,

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

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

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

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

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

Thank you,

Donna Gartland

207 809-9745

donnagartland@gmail.com

healthdialog

Donna Gartland, RN MSN
Quality and Accreditation Manager

P: 207.822.3707 • C: 603.325.2150
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HAMMOND HOUSE

THE PRESERVE AT SOUTH RIDGE, LLC
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADD'L INFO

PROPOSED

EXISTING		PROPOSED
	UNDERDRAIN	
	UTILITY PAVEMENT CUTS	
	STRIPING	
	SEDIMENTATION BARRIER	
	EDGE OF EX. PAVEMENT	
	CURB	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	WATER VALVE	
	FIRE HYDRANT	
	SEWER MANHOLE	
	CATCH BASIN	
	SOLID DRAIN COVER	
UE UE	UNDERGROUND ELECTRIC LINE	UGE
W W	UNDERGROUND WATER LINE	1"W 1"W
64	MINOR CONTOURS (1 FT)	64
65	MAJOR CONTOURS (5 FT)	65
GAS	GAS LINE	GAS
	STORM DRAIN LINE	
	SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
OHE/T/C	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	OHE/T/C
	PROPERTY LINE	
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1-888-344-7233

PERMIT LEVEL
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UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: KEITH GRAY, P.E.
(207) 874-8834

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: PAUL DUPERRE
(207) 828-2882

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45 FOREST AVENUE
PORTLAND, MAINE 04101
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(207) 745-9363

CABLE:

SPECTRUM CABLE
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PORTLAND, MAINE, 04102
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(207) 541-2536

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(207) 838-3410

ARCHITECT:

RYAN SENATORE ARCHITECTURE
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R.W. EATON ASSOCIATES
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(207) 854-2402

STRUCTURAL ENGINEER:

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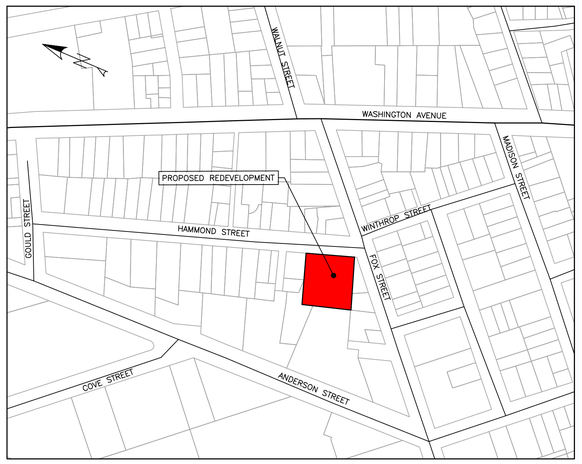
(207) 774-4614



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: HAMMOND HOUSE
CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
65 HANOVER ROAD, SUITE 300 PORTLAND, MAINE 04101
(207) 775-2615

THIS PLAN SHALL NOT BE MODIFIED WITHOUT PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN WITHOUT THE WRITTEN PERMISSION OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1112_CIVIL
JN:	1112
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
11419
11-26-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN AUTOCAD FORMAT AND PAPER, STAMPED ''AS–BUILT''. IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS SURVEY BY RW EATON ASSOCIATES DATED MARCH 28, 2017.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
9. CONSTRUCTION MANAGEMENT PLAN BY ACORN ENGINEERING SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
11. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT–OF–WAY.
12. THE CONTRACTOR SHALL CONDUCT A PRE–CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR ADJACENT STRUCTURES. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
13. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN ENGINEERING, IF ANY.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON–STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTIONAL CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. CONCRETE SHALL ALSO BE CURED FOR 28 DAYS PRIOR TO BACKFILLING.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS–RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT ENGINEER.
2. NORMAL REVIEWS WILL BE CONDUCTED BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINED ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE I.B.C. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR SHALL ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT–OF–WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS SHALL BE MADE.
6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR–16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C–44.
7. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.
8. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
9. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
10. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
12. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
13. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY STILL REMAIN AFTER THE SITE DEMOLITION OCCURRED. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED:

   ROCK AND CONCRETE FOUNDATIONS

   CONCRETE SLABS

   BITUMINOUS ASPHALT PAVEMENT

   CONCRETE PADS AND BLOCKS

   FENCE POST AND FENCING

   UNDERGROUND UTILITY LINES

   ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS

   STORM DRAIN PIPES AND APPURTENANCE STRUCTURES

   OTHER TRASH & MISCELLANEOUS SOLID WASTES

2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
3. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN ENGINEERING COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18

DRAWING NAME: GENERAL NOTES
PROJECT NAME: HAMMOND HOUSE
CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN, WHETHER INTENTIONAL OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ROAD, SUITE 310 FLORENCE, MAINE 04101
(207) 775–2655

FILE:	1112_CIVIL
JN:	1112
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11409 — REGISTERED PROFESSIONAL ENGINEER — 11-26-18

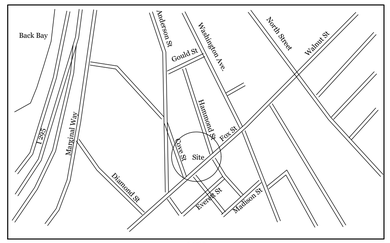
DRAWING NO.
C-02

CERTIFICATION

STATE OF MAINE · RICHARD W. EATON · 2075 · PROFESSIONAL LAND SURVEYOR

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

Location



NTS

General Notes:

1) Area of Maloney Parcel 7,768 Square Feet Or 0.18 Acres
Area Of Didonato Parcel 7,665 Square Feet Or 0.18 Acres

2) Basis of Bearing, Maine State Plane NAD 1983 1802 West Zone Base Point, Granite Monument With DH at Fox Street and Anderson Street T102-77-2, N303502.3570 E2929187.9000 Azimuth Point, Monument With Bolt on Anderson St. T102-77-2, N303502.3570, E2929187.9000 Azimuth S41-34-29E 455.86' Feet

3) Vertical Datum is NGVD 1929 City Datum Benchmark is PK Nail on CMP Pole #8 South Side Fox St Elevation = 11.04' Provided By City of Portland Public Works Engineering

4) Subject Tax Map 012 Block C Lot 6,8,10,11, & 14

5) Flood Zone C Areas Of Mininmal Flooding Panel 230051 0013 Sheet 13 of 17 Dated July 17, 1986

6) Bench Mark Nail In Pole CMP 6 17.36' Feet

7) Waterline & Gas Lines Are from Dig Safe Marking And Street Valves

PLAN REFERENCE

1) Street Line Of Anderson, Fox, Gould, Plowman & Hammond St. By City of Portland Engineering Dep. Survey By Camille Alden On File At Engineering Vault

2) Peninsula Community LP 510 Cumberland Ave. Anderson Street Subdivision Plan By Pinkham & Greer Dated June 18, 2002 And Recorded In Plan Book 203 Page 313

3) Standard Boundary Survey On Cove Street For Portland Housing Authority By Owen Haskell dated May 8th, 1997

4) Plan Of Property Made For Patrick Lee By R.P. Titcomb Associates Dated November 3rd 1987 And Recorded In Book 167 Page 13

5) City of Portland Maine Parks & Public Works Dept. Fox Street Reconstruction Dated 1990 Project No 90330-30-60-12 Sheet 2 of 20

6) Right Of Way Sheets Of Hammond & Fox Street

7) Standard Boundary Survey On Cove St For Portland Housing Authority By Owen Haskell, Dated May 8, 1997

LEGEND

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

Space & Bulk Standards:

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

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

N.F. Peninsula Community LP
20561/263

Garage

1st Floor Elev. 39.1'

Porch

Deck

Paved Driveway

O'Rourke
34146/121

O'Rourke
34146/119

Shed

1st Floor Elev. 39.8'

Deck

Paved Driveway

O'Rourke
34234/16
Parcel 1

O'Rourke
34234/16
Parcel 2

O'Rourke
34234/16
Parcel 3

N 303950.501
E 2929376.980
5/8" Rebar Found
With Cap 8" AG

To Monument T102-77-2

N16°17'28"W 59.51'

N71°35'35"E 126.60'

S18°28'49"E 60.00'

S71°35'35"W 128.90'

S21°52'32"W 396.40'

Hammond Street
Accepted Sept. 23, 1852
Book 1 Page 105 50' Wide

Waterline From Dig Safe Marks

Gas line From Dig Safe Marks

Sewer 10" VIt Pipe

Concrete Sidewalk

Rim 37.8'
Invert 29.3'

Rim 40.02'
Invert 31.13'

N 303876.665
E 2929535.144

S03°34'44"W 716.73'

To Monument T102-77-1

Fox Street
Accepted November 20 1851 Book 1 Page 95
Bounds per Plan Ref #3

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

Paved
Parking Lot

N.F. Amy Lippmann
31784/227

5/8" Rebar Found
With Cap 6" AG
2.55' South From
Corner

Heat Pumps

propane tank

S71°49'36"W 131.17'

N71°30'00"E 74.07'

N.F. Fox Hole LLC
30563/163

N.F. Steven Oldford et al
34575/58

N72°28'11"E 20.00'

N48°42'11"E 145.05'

63.00'

East 1/2 of Cove S
See Note #6

Garage

State Plane Grid

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

Boundary Survey & Topographical Map
With Existing Conditions

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

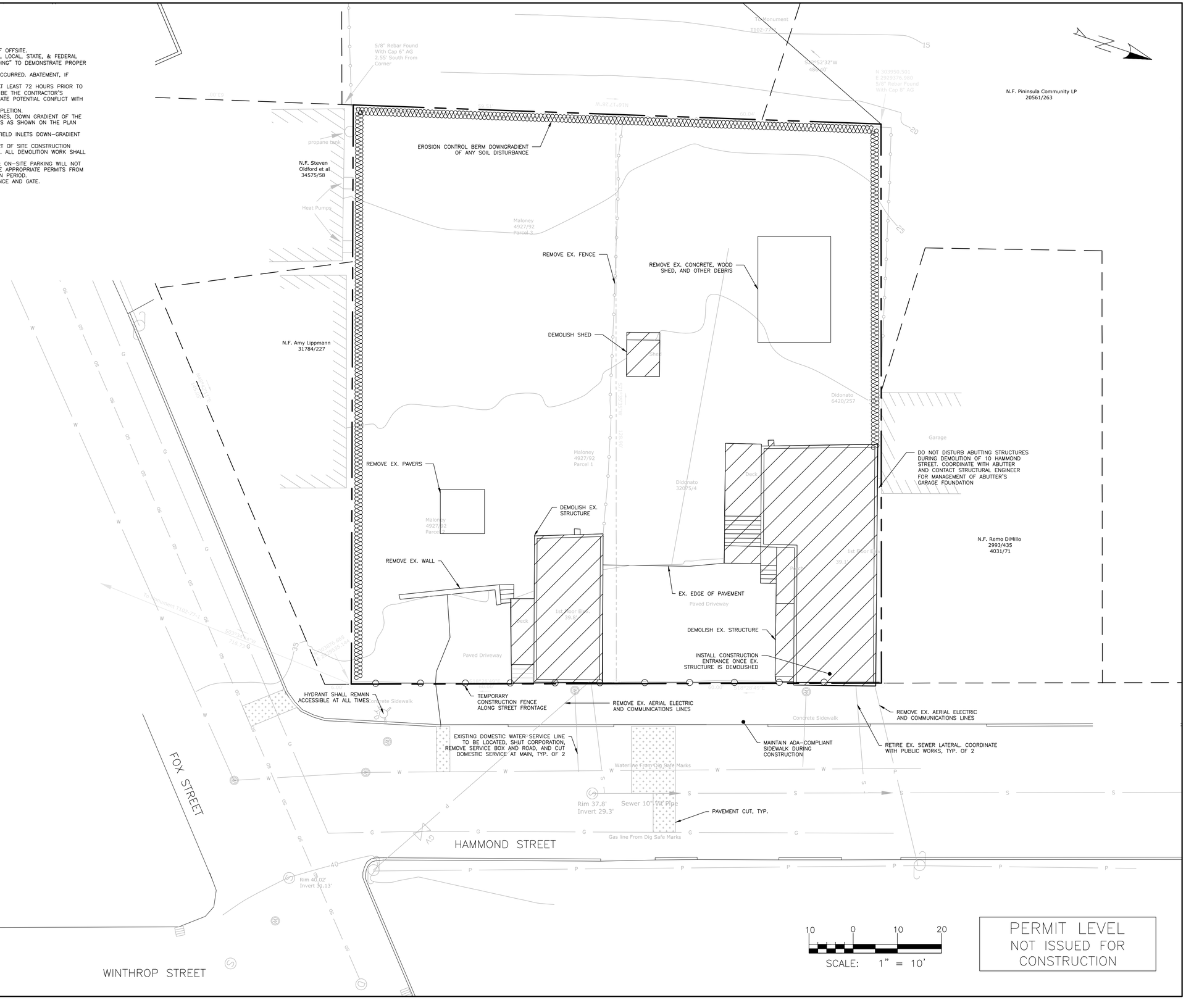
SCALE:	1:10
DRAWN BY:	R.W.E.
CHECKED BY:	R. W. E.
CAD FILE:	638 DWG
PROJ #:	638
ORIG DATE:	03-28-17
0 REV DATE:	00-00-00
1 REV DATE:	00-00-00
2 REV DATE:	00-00-00
3 REV DATE:	00-00-00

R. W. EATON ASSOCIATES
LAND SURVEYING & REAL ESTATE
58 PLEASANT STREET, WESTBROOK, MAINE 04092
PHONE: 207-854-2402 FAX: 856-7167 E-MAIL: RWEATON@MAINE.RR.COM

September 4th 2018

GENERAL NOTES:

1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: **DEMOLITION, CONSTRUCTION MANAGEMENT, AND EROSION CONTROL PLAN**

PROJECT NAME: **HAMMOND HOUSE REDEVELOPMENT**

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN WITHOUT THE WRITTEN PERMISSION OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

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

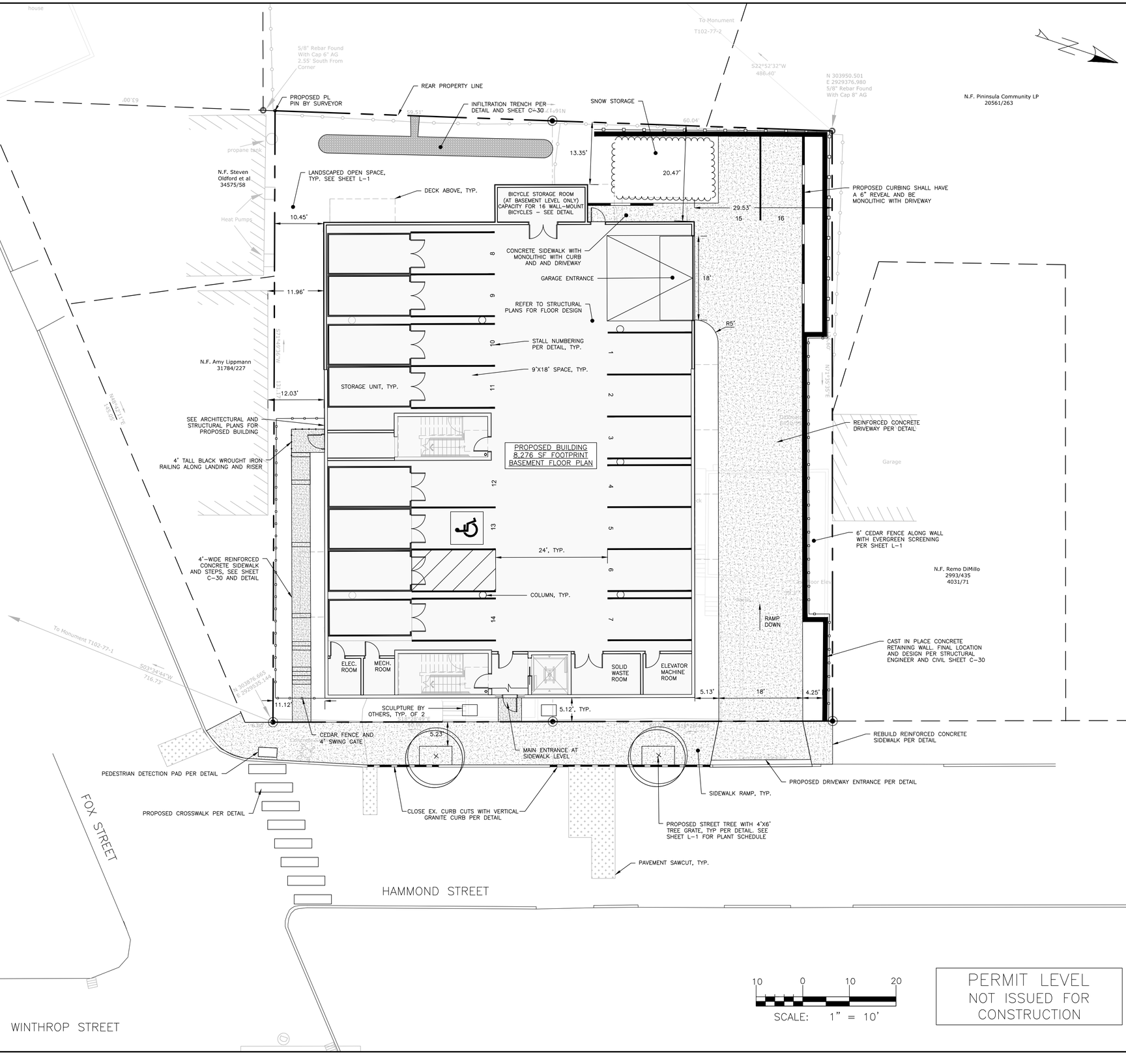
STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — REGISTERED PROFESSIONAL ENGINEER — 11-26-18

DRAWING NO.
C-03

GENERAL NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING ON A CONCRETE MATERIAL SHALL BE YELLOW UNLESS OTHERWISE NOTED.
2. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
3. PUBLIC CURBING SHALL BE GRANITE AND PRIVATE CURBING SHALL BE CONCRETE CURB MONOLITHIC WITH THE DRIVEWAY AND WALKWAY.

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



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: SITE PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

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

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
11-26-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-10

GENERAL NOTES:

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

PLANT SCHEDULE

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
TREES				
PA	PRUNUS 'ACCOLADE'	ACCOLADE CHERRY	2	3" CA. BB
JC	JUNIPERUS COMMONIS 'PENCIL POINT'	PENCIL POINT JUNIPER	43	5'
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	10	5'
SHRUBS				
CB	CORNUS BAILEYI SERICEA 'FARROW'	ARCTIC FIRE REDTWG DOGWOOD	14	3 GAL.
R	RHODODENDRON	RHODODENDRON 'HENRY'S RED'	2	5 GAL.
PG	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	2	3-4'
PERENNIALS				
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	18	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	7	1 GAL.
L	LIRIOPE	LILY TURF	47	1 GAL.
A	ASTRANTIA	GREAT MASTERWORT MAJOR 'STAR OF FIRE'	68	1 GAL.
LT	LILIUM TIGRINUM	TIGER LILY	6	1 GAL.

5/8" Rebar Found With Cap 6' AG 2.55' South From Corner

N 3039376.980
E 2929376.980
5/8" Rebar Found With Cap 8" AG

N.F. Pininsula Community LP
20561/263

JV (5)

JV (5)

R (1)

R (1)

EROSION CONTROL BLANKET ON SLOPES OF 3:1 OR STEEPER. SEE DETAIL FOR INSTALLATION

LT (6)

N.F. Steven Oldford et al
34575/58

propane tank

Heat Pumps

N.F. Amy Lippmann
31784/227

ALTERNATE PLANTINGS WITH GRASSES AGAINST BLDG:
RH (13)
L (13)

L (33)

JC (6)

PROPOSED BUILDING
8,276 SF FOOTPRINT
BASEMENT FLOOR PLAN

MAIN ENTRANCE AT 1ST FLOOR/SIDEWALK LEVEL

ELEC. ROOM

MECH. ROOM

SOLID WASTE ROOM

ELEVATOR MACHINE ROOM

CEDAR FENCE WITH GATE

ALTERNATE PLANTINGS WITH GRASSES AGAINST FENCE:
A (12)
L (12)

CB (1)

CB (7)

PG (2)

SCULPTURE BY OTHERS, TYP. OF 2

CB (6)

PA (1)

PA (1)

ALTERNATE PLANTINGS
SS (7)
RH (6)

A (56)

JC (37)

RETAINING WALL WITH CEDAR FENCE

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

Didonato
6420/25

Concrete Sidewalk

FOX STREET

HAMMOND STREET

WINTHROP STREET

10 0 10 20

SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18
COMMENT RESPONSE	WHS	2/12/19

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: HAMMOND HOUSE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ENGINEERING, INC.
65 HANOVER STREET, MAINE 04101
(207) 775-2855

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SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

DRAWING NO.
L-1

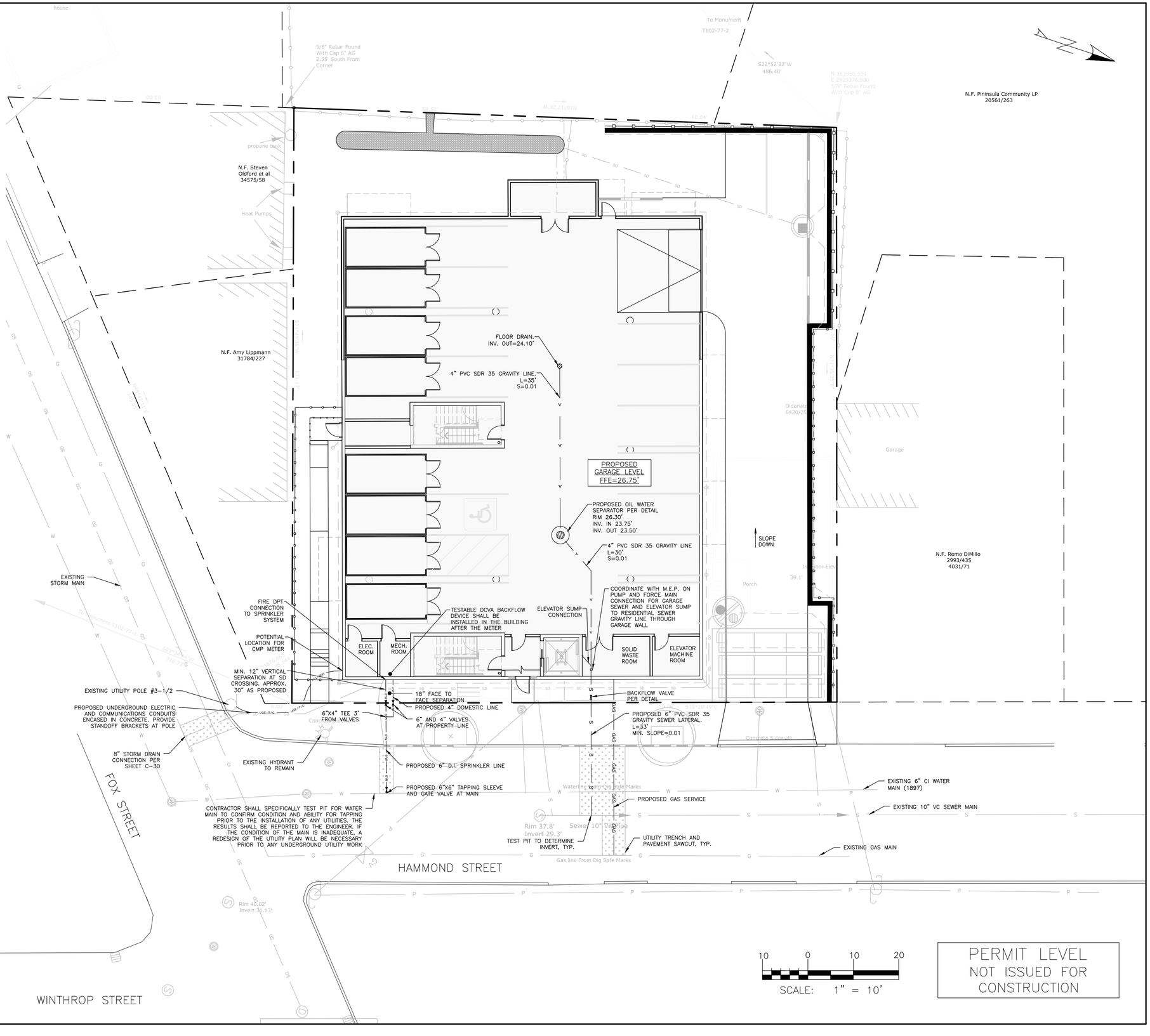
GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY MECHANICAL, ELECTRICAL, PLUMBING DESIGNER (M.E.P.) UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. PUMP AND FORCE MAIN SIZING PER M.E.P. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

MINIMUM HORIZONTAL UTILITY SEPARATION

UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: UTILITY PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2615

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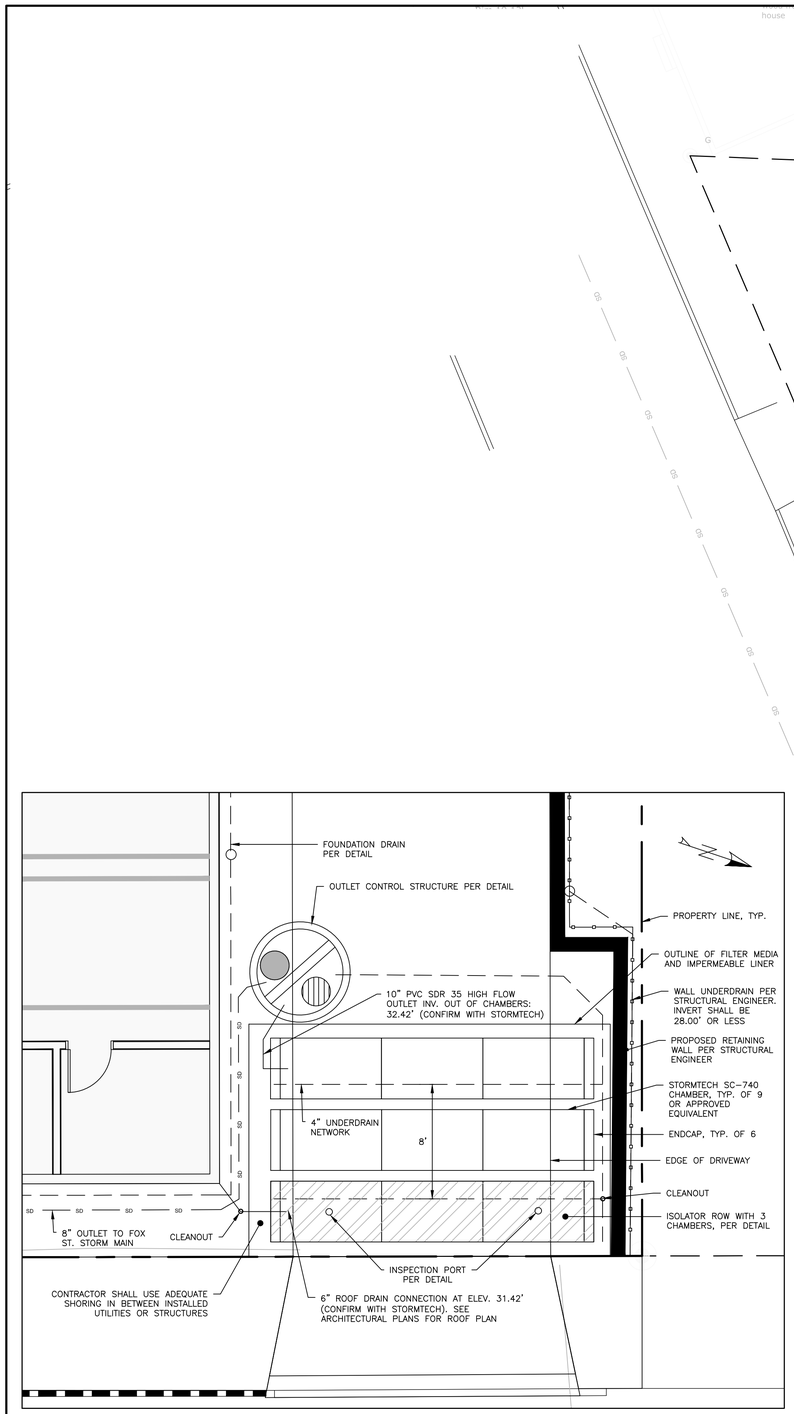
FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11479 — REGISTERED PROFESSIONAL ENGINEER — 11-26-18

DRAWING NO.
C-20



UNDERDRAINED SUBSURFACE SAND FILTER
SCALE: 1"=5'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
65 HANOVER STREET, MAINE 04101
(207) 775-2655

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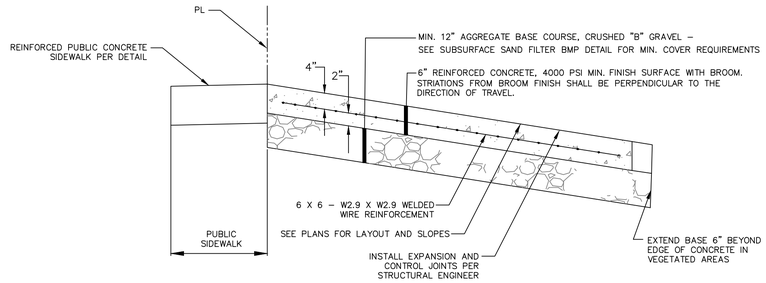
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — SHELLEY J. LYNE — SAVAGE — 11419 — REGISTERED PROFESSIONAL ENGINEER — 11-26-18

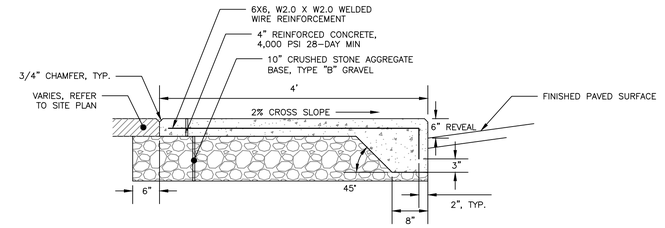
DRAWING NO.
C-30

NOTE:

AT A MINIMUM, SLUMP TESTS SHOULD OCCUR (ASTM C 143) IN THE FIELD PRIOR TO PLACEMENT OF CONCRETE. ENGINEER RESERVES THE RIGHT TO REQUIRE ADDITIONAL TESTING.



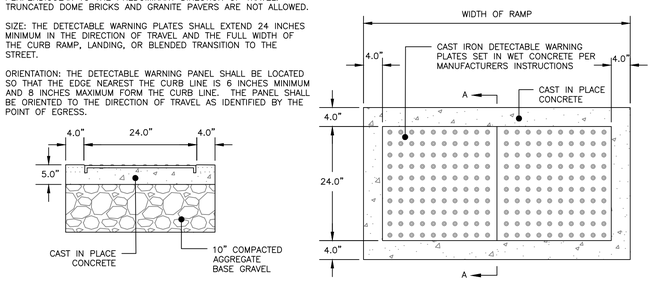
REINFORCED CONCRETE DRIVEWAY APRON
NOT TO SCALE



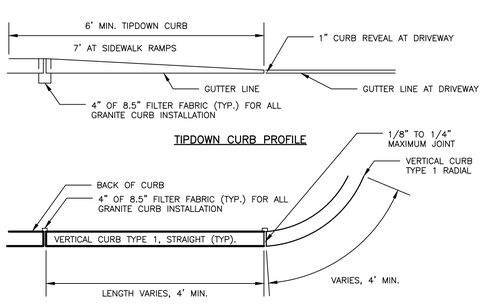
MONOLITHIC CONCRETE CURB AND SIDEWALK
NOT TO SCALE

NOTES:

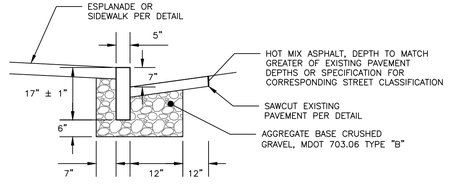
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FORM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE



VERTICAL GRANITE CURB PLAN VIEW

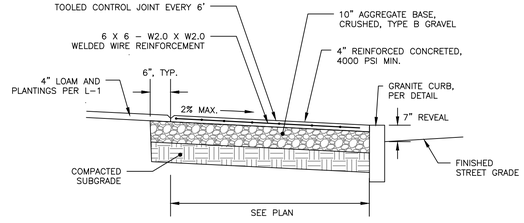


VERTICAL GRANITE CURB CROSS SECTION

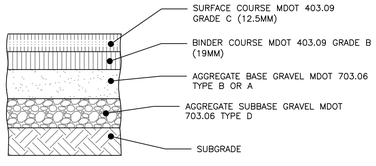
NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL
NOT TO SCALE



REINFORCED CONCRETE SIDEWALK
NOT TO SCALE



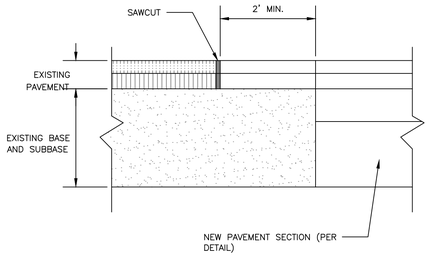
NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

	THICKNESS OF LAYERS
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

BITUMINOUS PAVEMENT PROFILE:
HAMMOND & FOX STREETS
NOT TO SCALE

NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18

SITE DETAILS – 1
DRAWING NAME

HAMMOND HOUSE
PROJECT NAME

THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096
CLIENT

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED MODIFICATIONS OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST, PORTLAND, MAINE 04101
(207) 775-2655

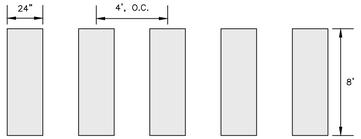
FILE:	1112_CIVIL
JN:	1112
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAWYER
No. 11459
11-26-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-40

NOTE:

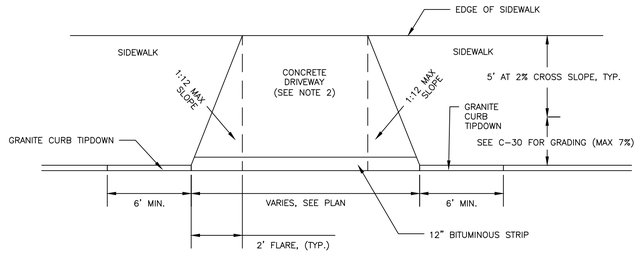
1. CROSSWALKS TO BE BUILT IN CONFORMANCE WITH MUTCD STANDARDS, LATEST EDITION.
2. CROSSWALKS ARE TO BE PAINTED WHITE MEETING MAINE DOT SPECIFICATIONS.
3. BLOCKS TO BE PARALLEL TO THE DIRECTION OF CAR TRAFFIC.



BLOCK CROSSWALK
NOT TO SCALE

NOTES:

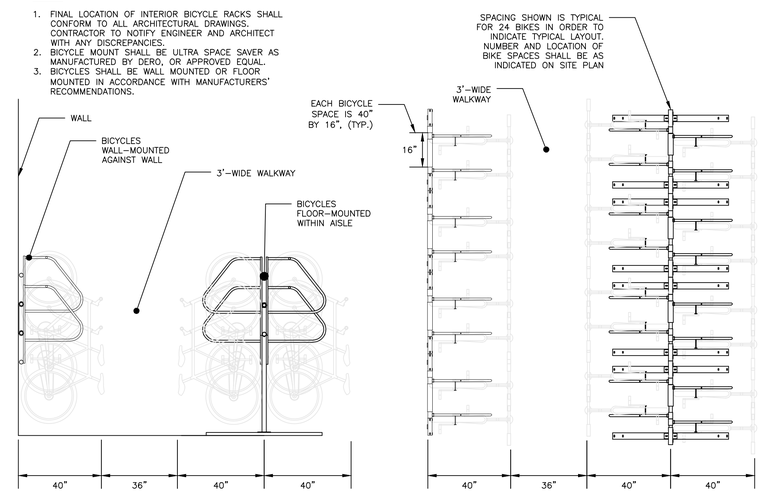
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO REINFORCED CONCRETE DETAIL
3. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO IMPLEMENTATION



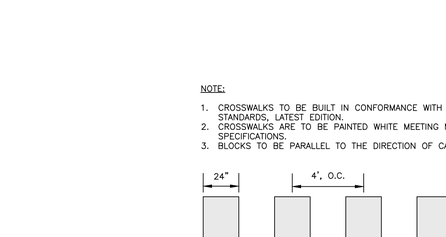
DRIVEWAY APRON LAYOUT DETAIL
NOT TO SCALE

NOTES:

1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.



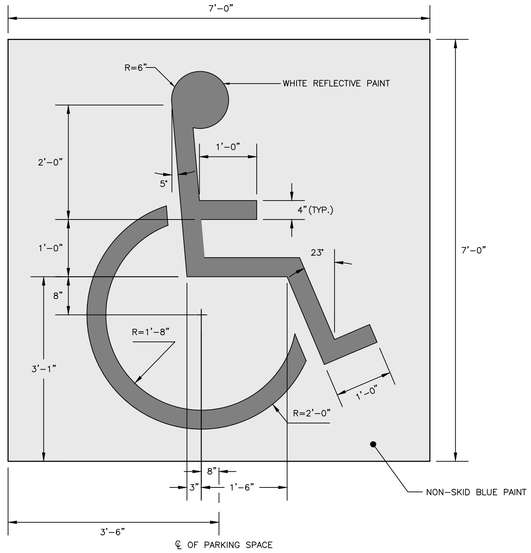
BICYCLE RACK INTERIOR
NOT TO SCALE



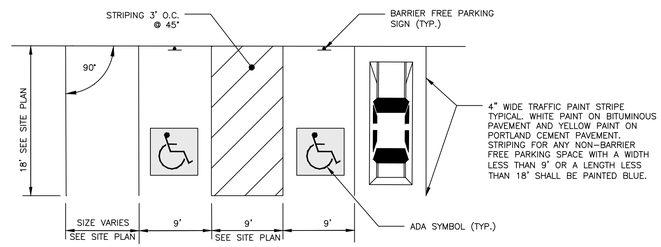
NOTES:

1. NUMBERS TO BE PAINTED AS THE SAME COLOR AS THE CORRESPONDING PARKING SPACE.
2. BOTTOM OF NUMBER TO BE FLUSH WITH THE FRONT OF THE PARKING SPACE.

PARKING STALL NUMBER DETAIL
NOT TO SCALE



INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



PARKING SPACE DIMENSIONS
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

SITE DETAILS - 2

DRAWING NAME

HAMMOND HOUSE

PROJECT NAME

THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

CLIENT

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2455

FILE:	1112_CIVIL
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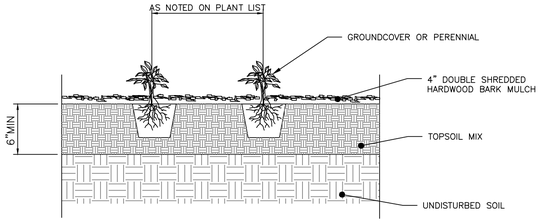
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAWYER
9-11419
REGISTERED PROFESSIONAL ENGINEER
11-26-18

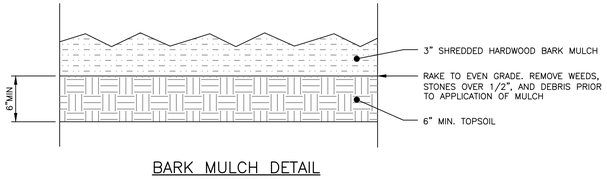
DRAWING NO.
C-41

PLANTING NOTES:

1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDED AS SHOWN. THE SEED MIX SPECIFICATIONS ARE AS FOLLOWS: LESCO FINE FESCUE LINKS BLEND OF 35% HARD FESCUE, 35% CREEPING RED FESCUE, 20% CHEWINGS FESCUE AND 10% SHEEP FESCUE. ADD 5% LITTLE BLUESTEM AND 5% NORTHEAST WILDFLOWER SEED MIXTURE BY WEIGHT TO THE LINKS BLEND.
6. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
7. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.
8. NEW TREES TO BE INSTALLED WITH A SLOW RELEASE WATERING BAG.
9. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS FOR AT LEAST 30 DAYS FOLLOWING INSTALLATION. FOLLOWING THIS PERIOD, THE LANDOWNER OR PROPERTY MANAGEMENT SHALL BE RESPONSIBLE FOR CONTINUED WATERING AND MAINTENANCE. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING FINAL INSTALLATION.
10. ALL PROPOSED PLANTS SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTRACTOR TO NOTIFY ENGINEER WHEN PLANTINGS HAVE BEEN MOBILIZED ON SITE. ENGINEER TO INSPECT AND ACCEPT OR REJECT ANY SPECIMENS ON THE BASIS OF APPARENT HEALTH, HARDINESS, AND CONFORMANCE WITH THE PLANTING SCHEDULE. REJECTED SPECIMENS ARE TO BE REPLACED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER. ACCEPTANCE DOES NOT WAIVE THE REQUIRED ONE YEAR PLANTING WARRANTY.



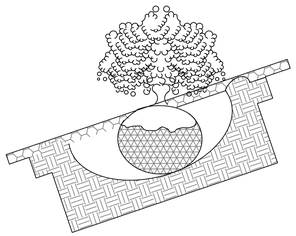
PERENNIAL PLANTING DETAIL
NOT TO SCALE



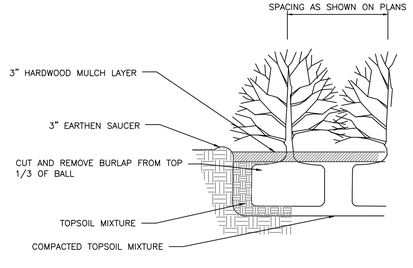
BARK MULCH DETAIL
NOT TO SCALE

NOTES:

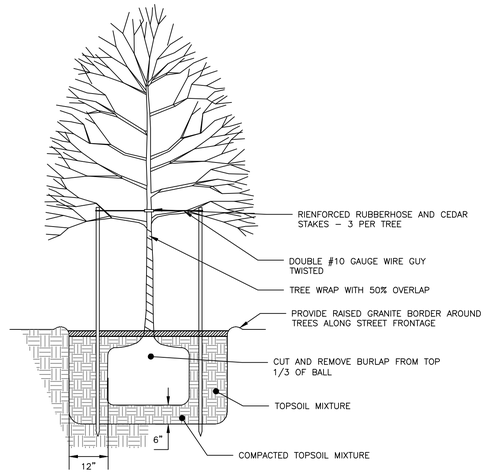
1. DIG HOLE AT LEAST 2 TIMES THE DIAMETER OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT DOWNHILL EDGE OF THE HOLE.
2. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN NOT LESS THAN 6% NOR MORE THAN 20% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.
3. CONTAINER GROWN STOCK – REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.
4. BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE TOPSOIL. REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF THE BALLED PLANTS. BACKFILL TO FINISH GRADE AND CREATE AN EARTHEN SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY-FOUR HOURS OF PLANTING.



TYPICAL PLANTING
NOT TO SCALE



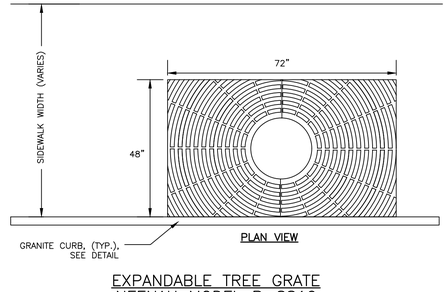
SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

NOTES:

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



EXPANDABLE TREE GRATE
NEENAH MODEL R–8810
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/28/16

DRAWING NAME: LANDSCAPING DETAILS
PROJECT NAME: HAMMOND HOUSE
CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.

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65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

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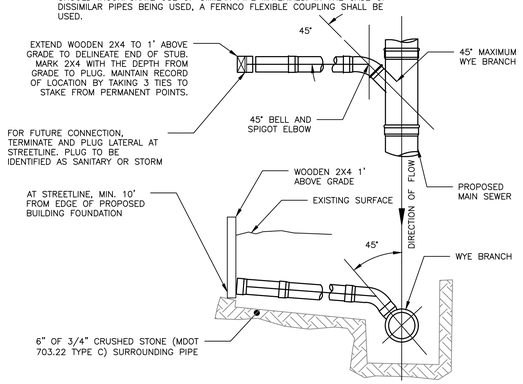
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

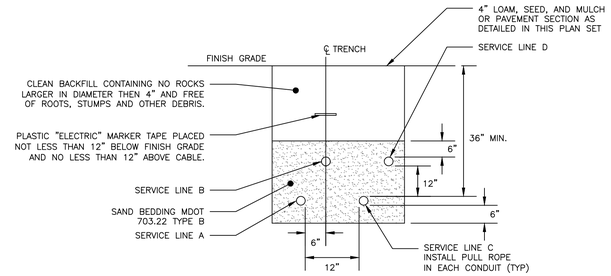
STATE OF MAINE
WILLIAM SAVAGE
11959
REGISTERED PROFESSIONAL ENGINEER
11-28-16

DRAWING NO.
C-42

NOTES:
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

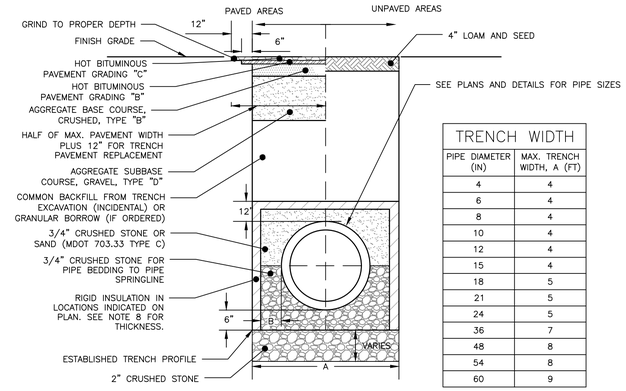


CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND–OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE CITY RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.

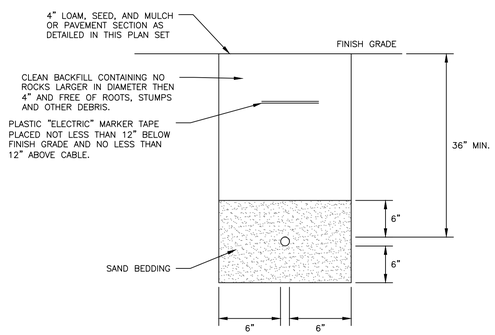
UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE
NOT TO SCALE

DESIGN NOTES:
1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II–2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS–46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
8. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
9. DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
10. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
11. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.

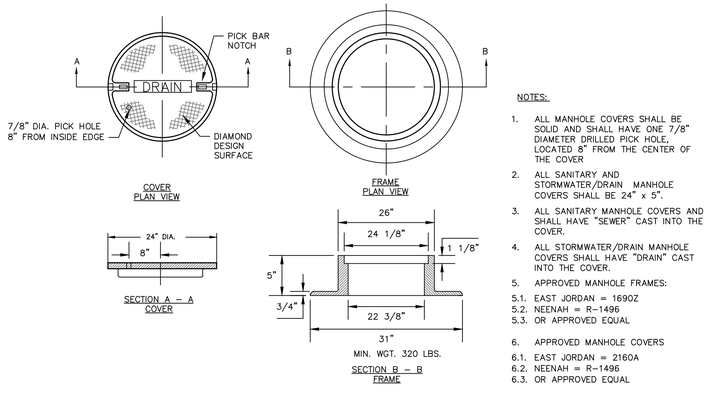


TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	4
15	4
18	5
21	5
24	5
36	7
48	8
54	8
60	9

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE

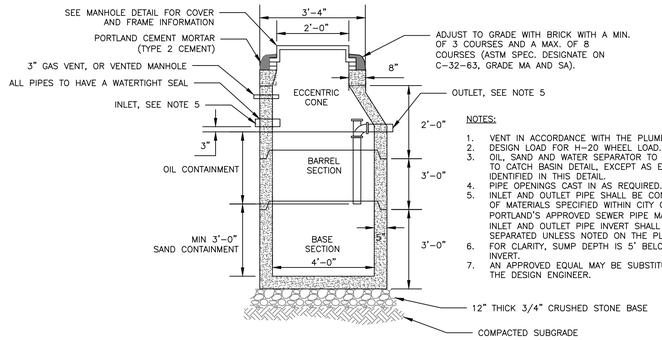


SECONDARY ELECTRICAL TRENCH
NOT TO SCALE



NOTES:
1. ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER
2. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
3. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
4. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
5. APPROVED MANHOLE FRAMES:
5.1. EAST JORDAN = 1690Z
5.2. NEENAH = R–1496
5.3. OR APPROVED EQUAL
6. APPROVED MANHOLE COVERS
6.1. EAST JORDAN = 2160A
6.2. NEENAH = R–1496
6.3. OR APPROVED EQUAL

CAST IRON MANHOLE COVER AND FRAME
NOT TO SCALE



NOTES:
1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H–20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 5' BELOW OUTLET INVERT.
7. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

4'–0" DIAMETER PRECAST OIL AND WATER SEPARATOR
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18

DRAWING NAME: UTILITY DETAILS – 1
PROJECT NAME: HAMMOND HOUSE
CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775–2655

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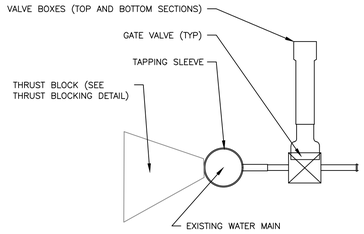
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 11-26-18 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-43



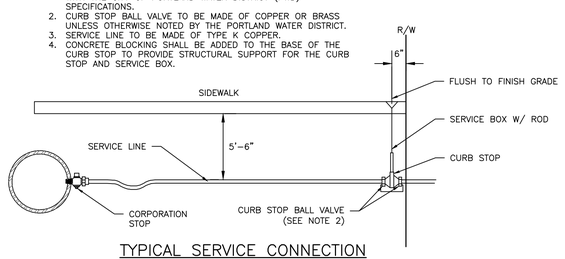
SIDE VIEW

TAPPING SLEEVE AND VALVE

NOT TO SCALE

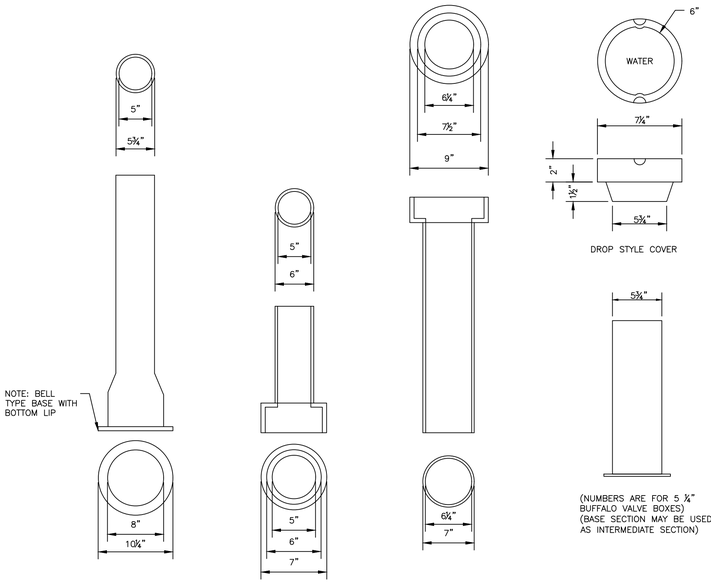
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



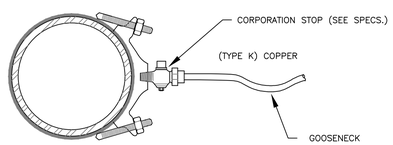
TYPICAL SERVICE CONNECTION

NOT TO SCALE



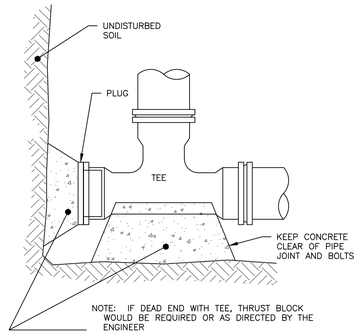
VALVE BOX & COVER

NOT TO SCALE

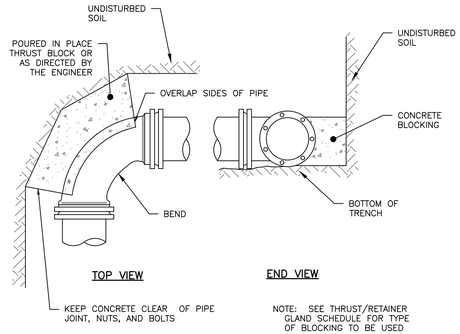


SERVICE SADDLE: 1–1/2" AND 2" C.C. THREAD

NOT TO SCALE



END SECTION



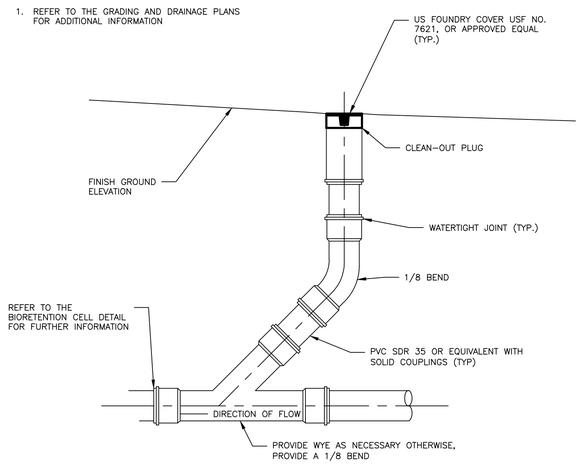
REGULAR BEND

THRUST BLOCKING

NOT TO SCALE

NOTES:

1. REFER TO THE GRADING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION



CLEANOUT DETAIL

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18

DRAWING NAME: UTILITY DETAILS – 2

PROJECT NAME: HAMMOND HOUSE

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN, WHETHER OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST, PORTLAND, MAINE 04101
(207) 775–2655

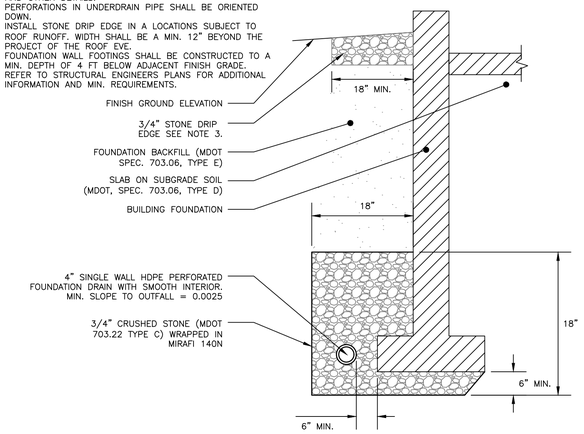
FILE:	1112_CIVIL
JN:	1112
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE · WILLIAM H. SAVAGE · No. 11419 · REGISTERED PROFESSIONAL ENGINEER · 11-26-18

DRAWING NO.
C-44

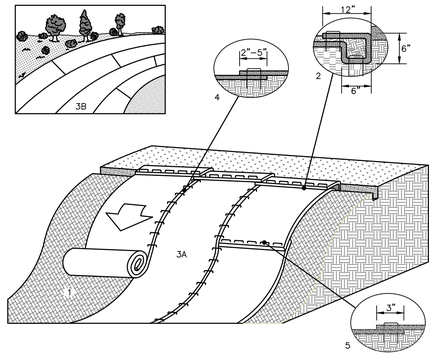
NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECT OF THE ROOF EVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN DETAIL

NOT TO SCALE



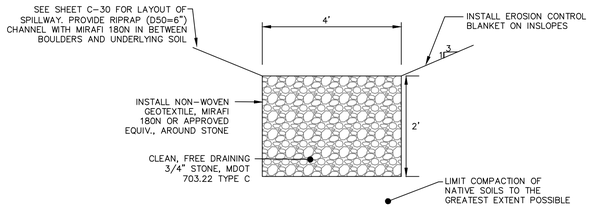
SLOPE
INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL BLANKET (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.
3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.
5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

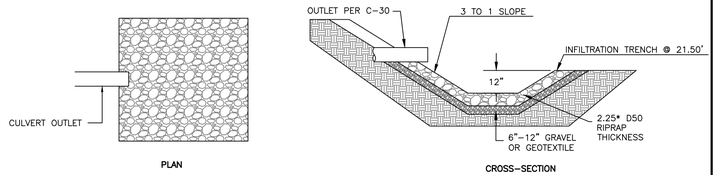
EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



INFILTRATION TRENCH

NOT TO SCALE



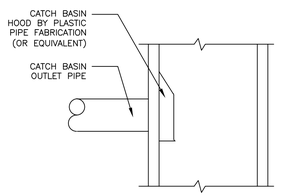
NOTE: RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26 EXCEPT SIZE SHALL BE AS SHOWN.

OUTLET PLUNGE POOL DETAIL

NOT TO SCALE

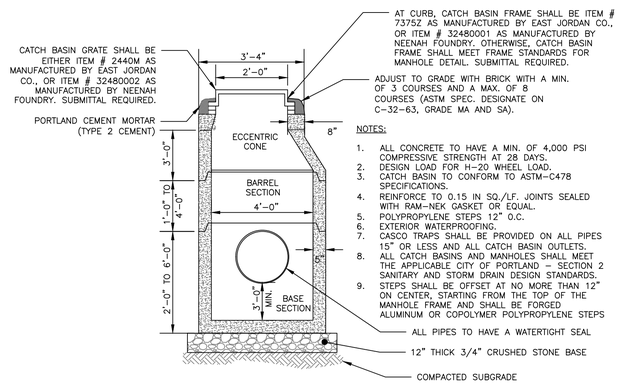
NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS WITH A 12" OR 15" OUTLET PIPE.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS



CATCH BASIN HOOD DETAIL

NOT TO SCALE



NOTES:

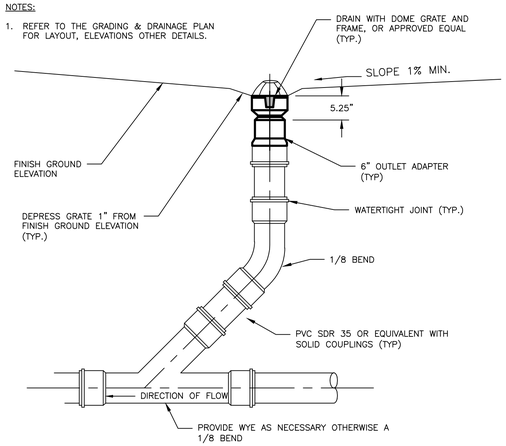
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS AND ALL CATCH BASIN OUTLETS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND – SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'–0" DIAMETER PRECAST CATCH BASIN/MANHOLE

NOT TO SCALE

NOTES:

1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL WITH DOME

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP.	WHS 11/26/18

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: HAMMOND HOUSE

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
ENGINEERING, INC.
ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

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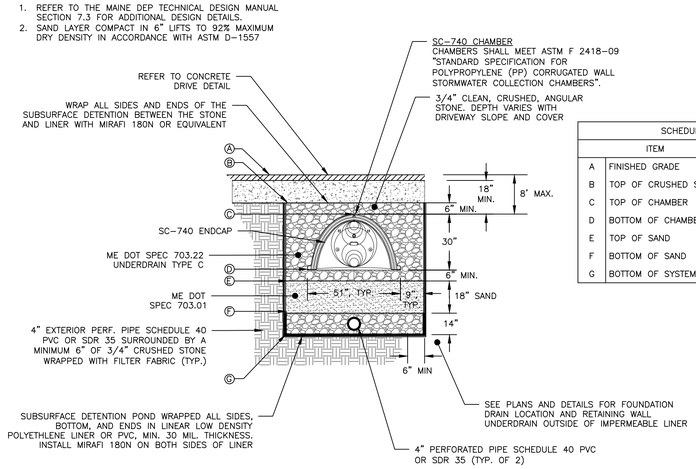
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
10419
11-26-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-45

NOTES:

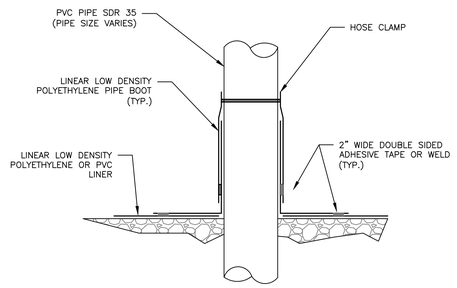
1. REFER TO THE MAINE DEP TECHNICAL DESIGN MANUAL SECTION 7.3 FOR ADDITIONAL DESIGN DETAILS.
2. SAND LAYER COMPACT IN 6" LIFTS TO 92% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557



SCHEDULE		
ITEM		ELEVATION
A	FINISHED GRADE	PER C-30
B	TOP OF CRUSHED STONE	VARIES
C	TOP OF CHAMBER	33.50'
D	BOTTOM OF CHAMBER	31.00'
E	TOP OF SAND	30.50'
F	BOTTOM OF SAND	29.00'
G	BOTTOM OF SYSTEM	27.83'

UNDERDRAINED SUB-SURFACE SAND FILTER TYPICAL CROSS SECTION

NOT TO SCALE



TYPICAL PIPE PENETRATION DETAIL

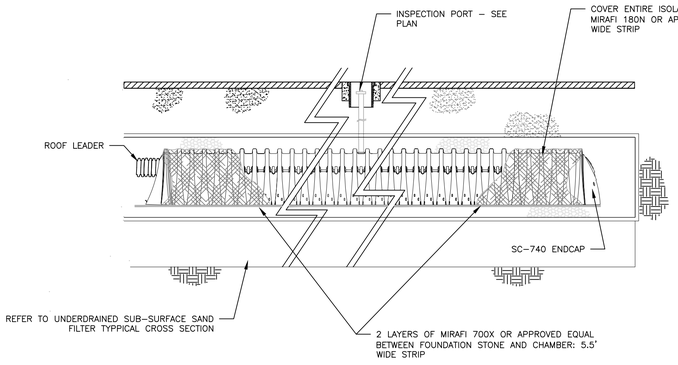
NOT TO SCALE

MANUFACTURER'S NOTES:

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL.
2. THE INSTALLATION OF STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL 1-888-892-2694 OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

ENGINEER'S NOTES:

1. THE LAYOUT AND DIMENSION OF THE SUBSURFACE DETENTION MAY BE MODIFIED WITH AN ENGINEER APPROVED EQUIVALENT WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT.
2. THE SUBSURFACE DETENTION SHALL BE INSPECTED BY THE DESIGN ENGINEER AT THE FOLLOWING INTERVALS:
   - AFTER PRELIMINARY CONSTRUCTION OF THE SUBSURFACE DETENTION GRADES
   - ONE SITE VISIT DURING THE INSTALLATION OF THE IMPERVIOUS LINER
   - ONE SITE VISIT AFTER THE UNDERDRAINS ARE INSTALLED BUT BEFORE THEY ARE BACKFILLED
   - DURING THE CONSTRUCTION OF THE SAND FILTER LAYER
   - DURING THE INSTALLATION OF THE STORMTECH ISOLATOR ROW
   - BEFORE BACKFILLING THE STORMTECH UNITS
3. THE FIRST YEAR OF MAINTENANCE SHALL BE PERFORMED BY THE MANUFACTURER TO ENSURE THAT THE SYSTEM IS OPERATING ACCORDING TO THE ESTABLISHED SPECIFICATIONS.
4. REFERENCE THE MANUFACTURER'S GUIDE FOR THE OPERATION AND MAINTENANCE PLAN.

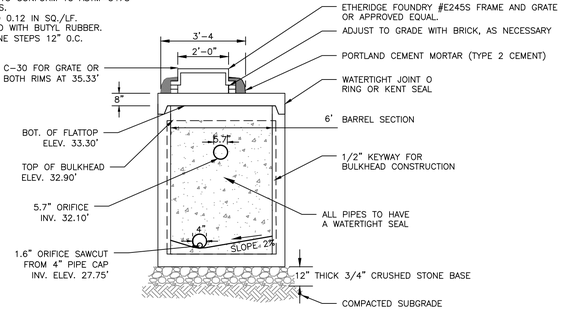


ISOLATOR ROW - PROFILE VIEW

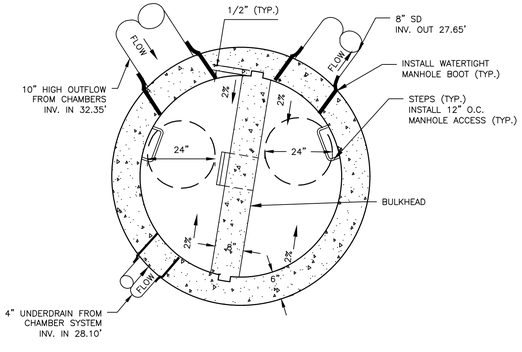
NOT TO SCALE

DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.
5. JOINTS SEALED WITH BUTYL RUBBER.
6. POLYPROPYLENE STEPS 12" O.C.



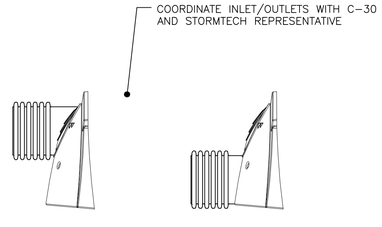
SIDE PROFILE



PLAN VIEW

OUTLET CONTROL STRUCTURE

NOT TO SCALE



STORMTECH-CONNECTION

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/28/18

DRAWING NAMED: **UNDERDRAINED SUBSURFACE SAND FILTER DETAILS**

PROJECT NAMED: **HAMMOND HOUSE**

CLIENT'D: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

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ACORN ENGINEERING, INC.
ENGINEERING
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1112_CIVIL
JN:	1112
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	EKK
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 12612
REGISTERED PROFESSIONAL ENGINEER
11-26-18

DRAWING NO.
C-46

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 HAMMOND STREET AND FOX STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.
1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.
1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN FOX STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

NOTES:

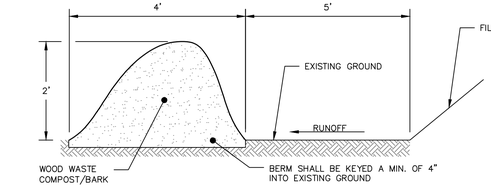
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):

1.1. pH BETWEEN 5.0 – 8.0
1.2. PARTICLE SIZE (BY WEIGHT):
1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
1.2.2. 75 TO 85% PASSING A 19 MM (0.75 IN) SCREEN
1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS

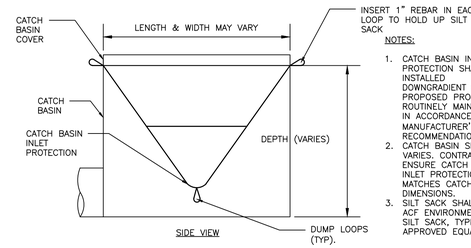
2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.

3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.



EROSION CONTROL MIX BERM DETAIL
NOT TO SCALE



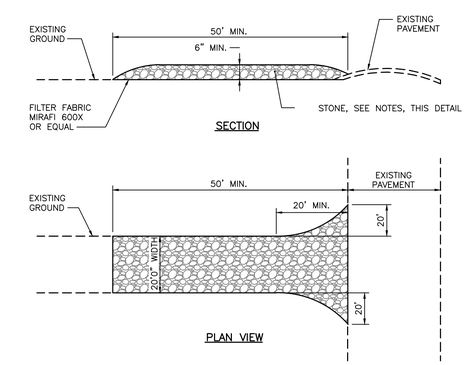
NOTES:

1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION
NOT TO SCALE

NOTES:

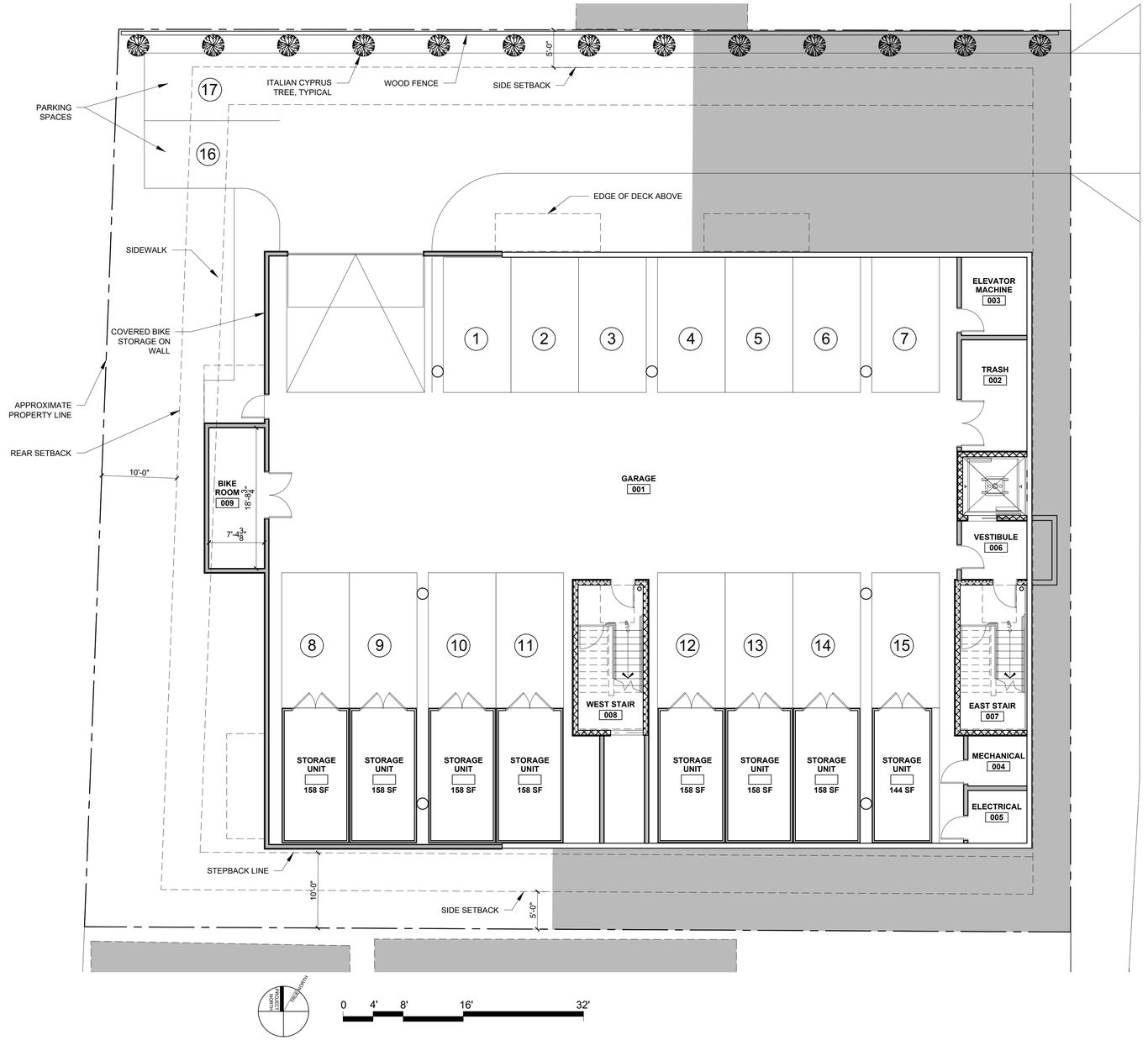
1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY


EXISTING GROUND
50' MIN.
6" MIN.
EXISTING PAVEMENT
FILTER FABRIC MIRAFI 600X OR EQUAL
STONE, SEE NOTES, THIS DET

SQUARE FOOTAGE NOTE:

1.) ALL SQUARE FOOTAGE IS MEASURED FROM THE CENTER LINE OF SHARED WALLS AND TO THE OUTSIDE FACE OF EXTERIOR WALLS

OVERALL SQUARE FOOTAGE FOOTPRINT PER FLOOR:
BASEMENT= 8,115 SF
FIRST FLOOR = 8,023 SF
SECOND FLOOR = 8,052 SF
THIRD FLOOR = 8,052 SF



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

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FEBRUARY 5, 2019

DATE:

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DRAWN BY:	RRT, RJS
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
BASEMENT FLOOR PLAN

A1-0

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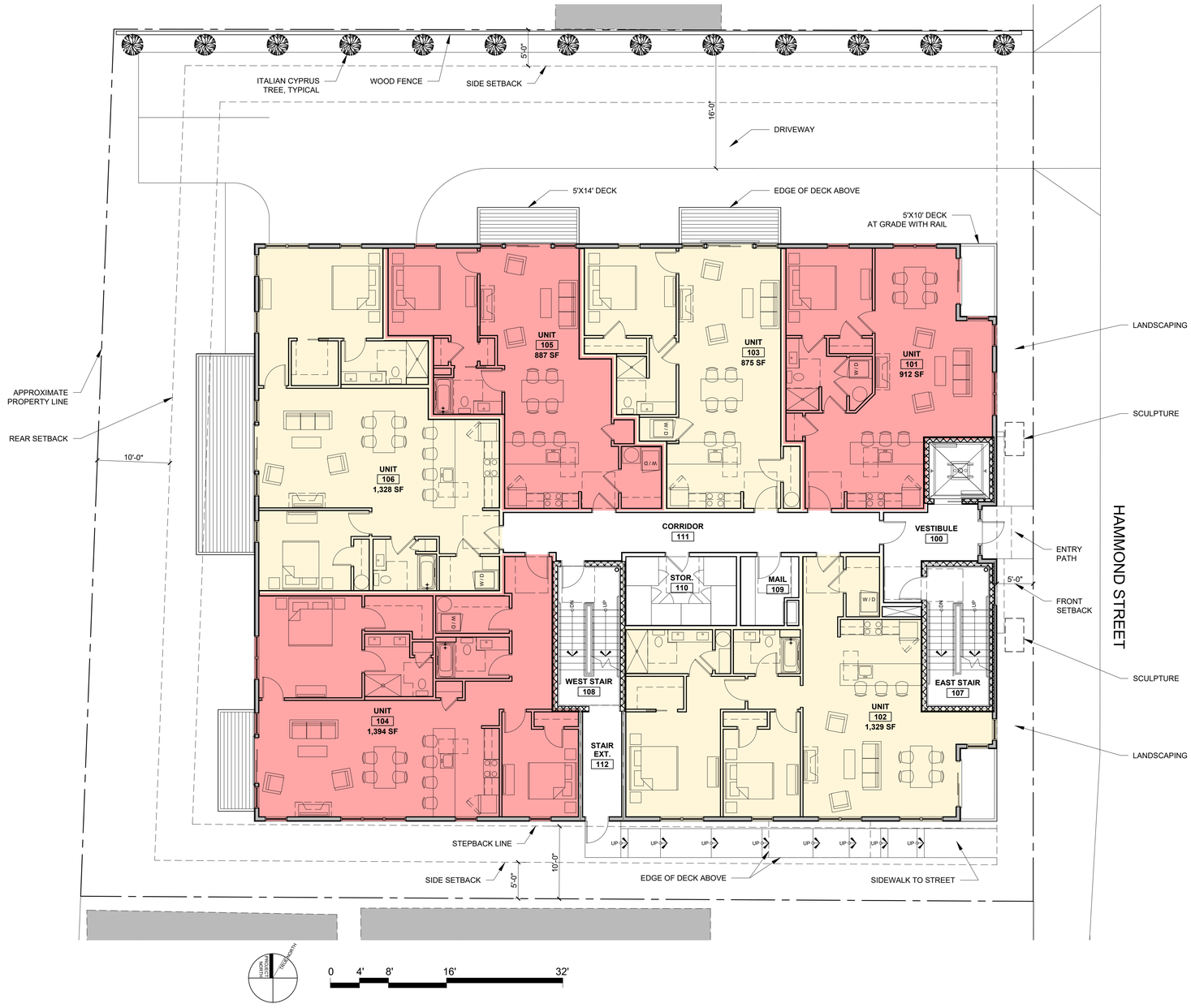

1 FIRST FLOOR PLAN
1/8" = 1'-0"

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FIRST FLOOR PLAN

A1-1

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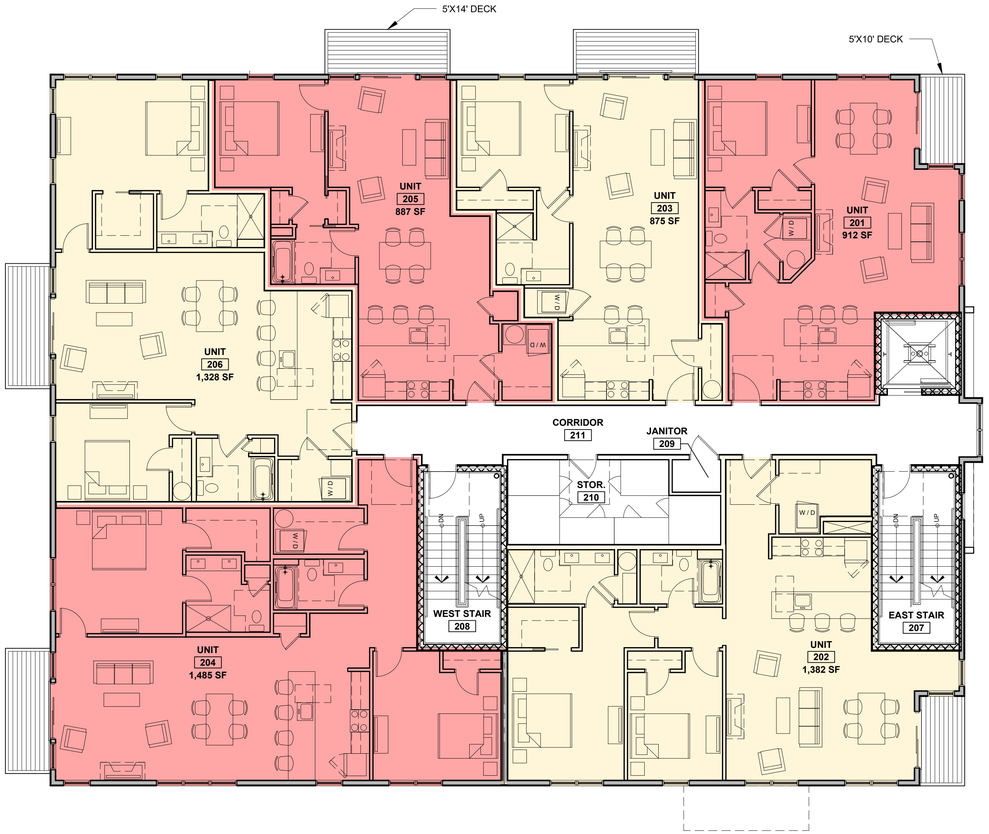
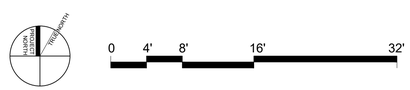
SECOND FLOOR = 8,052 SF
THIRD FLOOR = 8,052 SF





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

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HAMMOND HOUSE
10 HAMMOND STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:
STRUCTURAL:
Structural Integrity
46 Forest Avenue
Portland, ME 04101
207-774-4614

REVISIONS:
PROGRESS PRINT ONLY
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FEBRUARY 5, 2019

DATE:

PROJECT No.	1846
DRAWN BY:	RRT, RJS
CHECKED BY:	RJS
SCALE:	AS NOTED

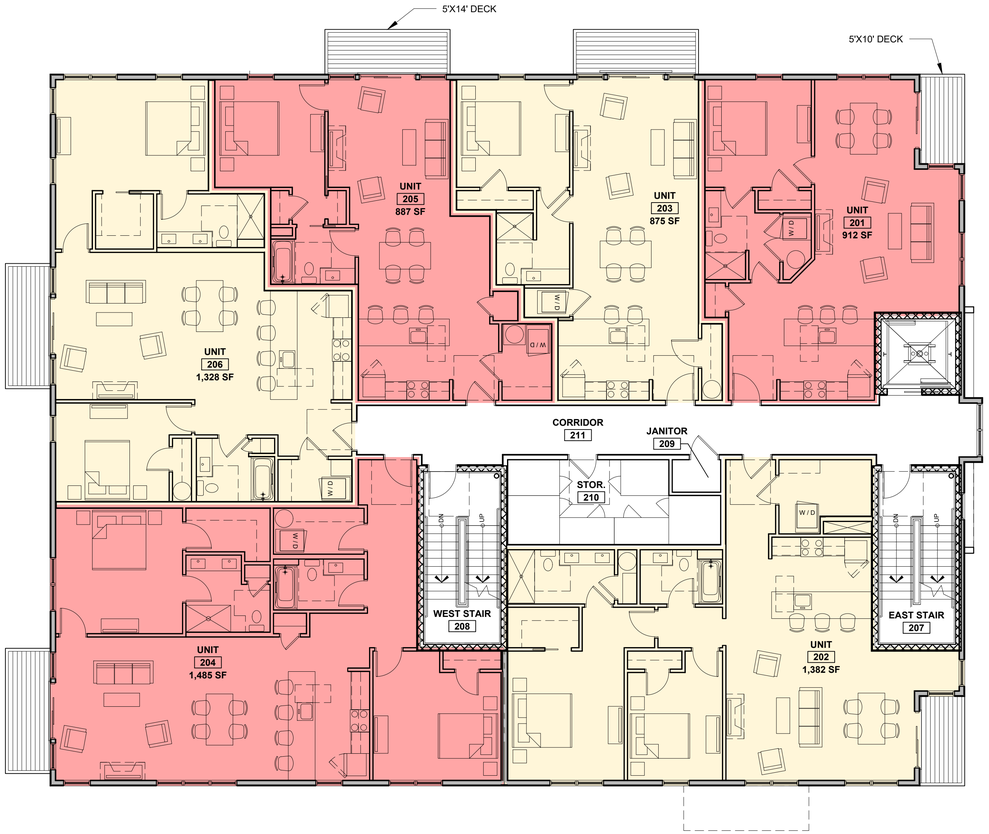
SHEET TITLE:
SECOND FLOOR PLAN

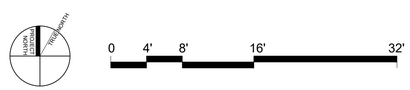
A1-2

SQUARE FOOTAGE NOTE:

1.) ALL SQUARE FOOTAGE IS MEASURED FROM THE CENTER LINE OF SHARED WALLS AND TO THE OUTSIDE FACE OF EXTERIOR WALLS

OVERALL SQUARE FOOTAGE FOOTPRINT PER FLOOR:
BASEMENT= 8,115 SF
FIRST FLOOR = 8,023 SF
SECOND FLOOR = 8,052 SF
THIRD FLOOR = 8,052 SF





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1/8" = 1'-0"

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SHEET TITLE:
SECOND FLOOR PLAN

A1-2

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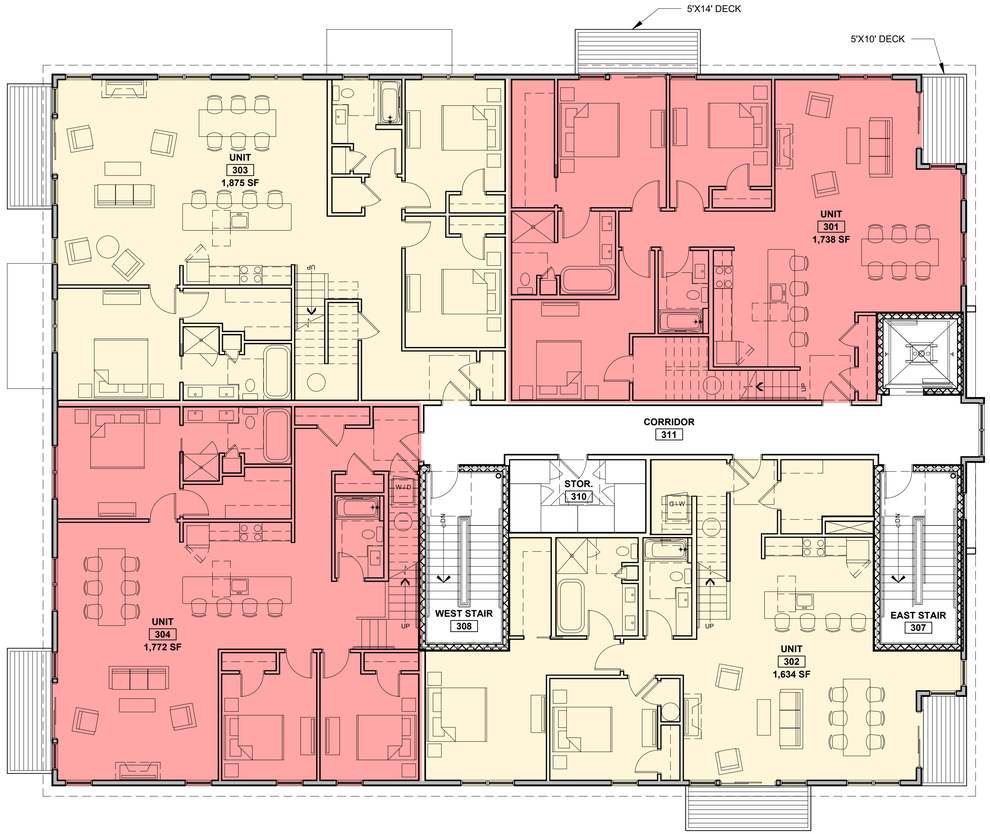

1 THIRD FLOOR PLAN
1/8" = 1'-0"

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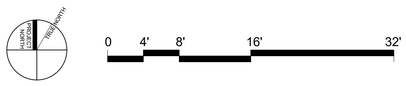
SCALE: AS NOTED

SHEET TITLE:
THIRD FLOOR PLAN

A1-3



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

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SCALE:	AS NOTED

SHEET TITLE:
ROOF PLAN

A1-4

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

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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST ELEVATION

A2-0

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

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SCALE:	AS NOTED

SHEET TITLE:
WEST ELEVATION

A2-1

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

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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION

A2-3

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

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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
NORTH ELEVATION

A2-2

1 VIEW LOOKING SOUTH FROM HAMMOND STREET
NTS

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DATE:

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SCALE:	AS NOTED

SHEET TITLE:
SITE CONTEXT
IMAGE 2

A2-6

1 VIEW LOOKING NORTH FROM WINTHROP STREET
NTS

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DATE:

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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SITE CONTEXT IMAGE 1

A2-5

1 CONCEPT ELEVATION
NTS

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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
CONCEPT ELEVATION

A2-4

GENERAL NOTES:

1. FOR INFORMATION REGARDING THE GARAGE LEVEL, REFER TO THE SITE PLAN, C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY RYAN SENATORE ARCHITECTURE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.354 ACRES (15,433 S.F.). R.O.W. WIDTH FOR HAMMOND STREET IS 50 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY R.W. EATON ASSOCIATES DATED SEPTEMBER 4TH, 2018.
6. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY R.W. EATON ASSOCIATES.
7. AS OF 11/26/2018, SITE IS BOUNDED BY THE R-6 ZONE ON EAST, SOUTH, AND NORTH SIDES OF THE PROPERTY AND BY THE B-5 ZONE ON THE WEST SIDE PER CITY OF PORTLAND GIS WEBSITE.
8. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK C, LOTS 6, 8, 10, 11, 14.
9. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300510013B, INDEX DATED 7/17/1986.
10. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
11. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SIXTEEN (16) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
12. THE CONDOMINIUM DOCUMENTS ARE TO OUTLINE THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, RETAINING WALLS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, AND SNOW REMOVAL AS THE RESPONSIBILITY OF THE OWNER.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
14. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
15. THE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR AN EQUAL SHARE OF MAINTENANCE ON GUILFORD COURT, INCLUDING SNOW REMOVAL.
16. THE CONDOMINIUM ASSOCIATION MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:

16.1. CONDOMINIUM DOCUMENTS: BOOK _____ PAGE _____

16.2. POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT: BOOK _____ PAGE _____

WAIVERS & CONDITIONS OF APPROVAL:

TBD

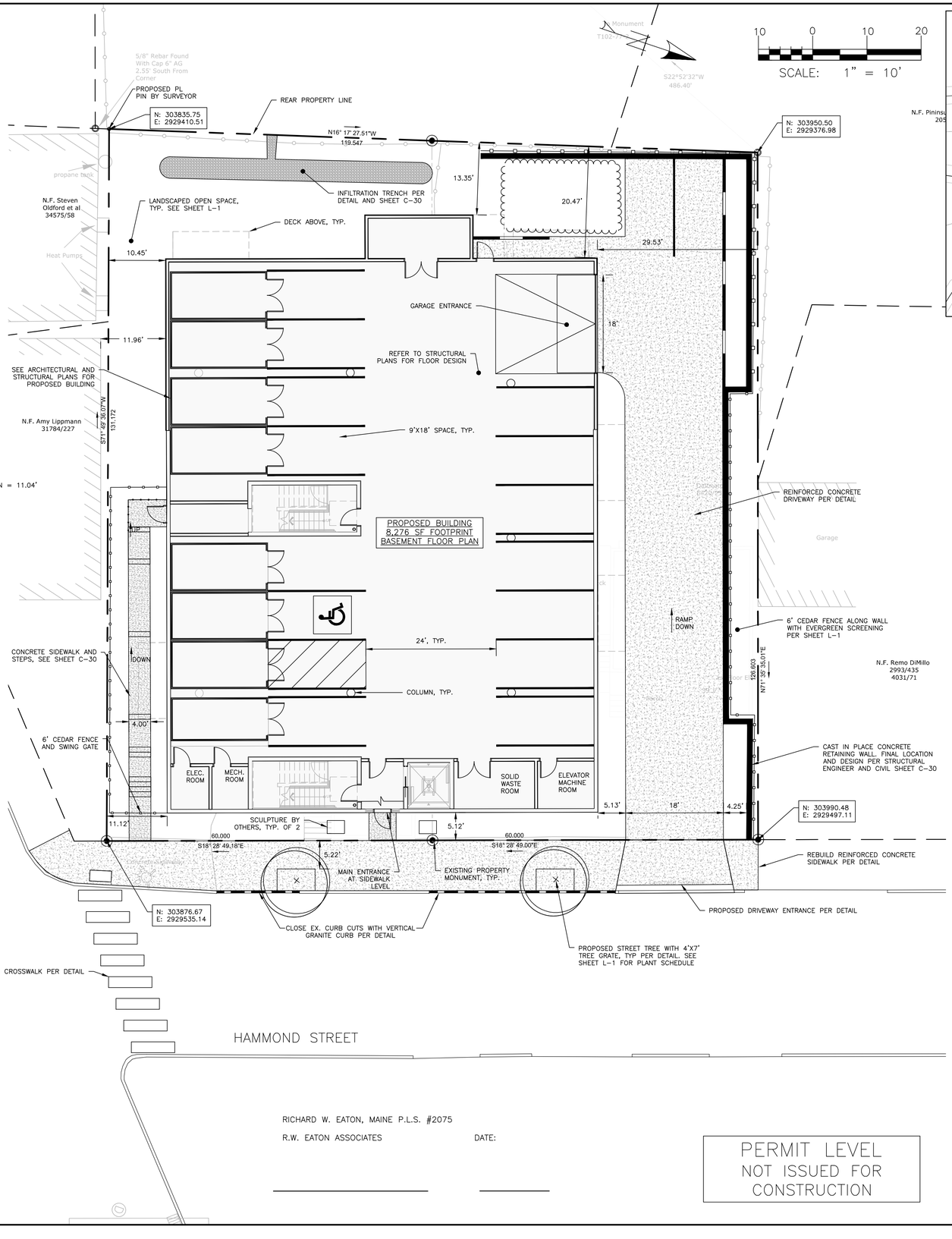
EASEMENTS:

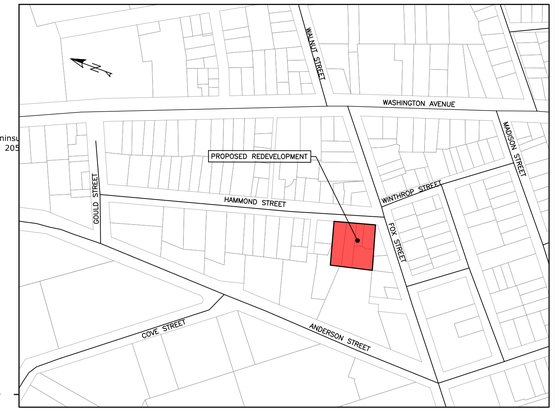
THERE ARE NO EXISTING OR PROPOSED EASEMENTS.

SURVEY NOTES:

1. AREA OF MALONEY PARCEL 7,768 SQUARE FEET OR 0.18 ACRES
   AREA OF DIDONATO PARCEL 7,665 SQUARE FEET OR 0.18 ACRES
2. BASIS OF BEARING, MAINE STATE PLANE NAD 1983 1802 WEST ZONE BASE POINT, GRANITE MONUMENT WITH DH AT FOX STREET AND ANDERSON STREET T102-77-2, N303502.3570 E2929187.9000
   AZIMUTH POINT, MONUMENT WITH BOLT ON ANDERSON ST. T102-77-2, N303502.3570, E2929187.9000
   AZIMUTH S41-34-29E 455.86' FEET
3. VERTICAL DATUM IS NGVD 1929 CITY DATUM BENCHMARK IS PK NAIL ON CMP POLE #8 SOUTH SIDE FOX ST ELEVATION = 11.04'
   PROVIDED BY CITY OF PORTLAND PUBLIC WORKS ENGINEERING
4. SUBJECT TAX MAP 012 BLOCK C LOT 6,8,10,11, & 14
5. FLOOD ZONE C AREAS OF MININMAL FLOODING PANEL 230051 0013 SHEET 13 OF 17 DATED JULY 17, 1986
6. BENCH MARK NAIL IN POLE CMP 6 17.36' FEET
7. WATERLINE & GAS LINES ARE FROM DIG SAFE MARKING AND STREET VALVES

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



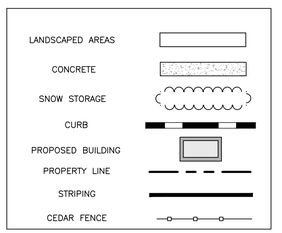


VICINITY MAP
NOT TO SCALE

PARKING SUMMARY	
PARKING AREA	# PARKING SPACES
INTERNAL GARAGE LEVEL	14
EXTERNAL REAR	2
TOTAL SPACES	16

UNIT TABULATION	
UNIT NUMBER	SIZE (SF)*
101/201	912
102	1,329
103/203	875
104	1,394
105/205	887
106/206	1,328
202	1,382
204	1,485
301	1,738
302	1,634
303	1,875
304	1,772

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS



APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____ REGISTRAR

CIVIL/SITE ENGINEER:

THE PRESERVE AT SOUTH RIDGE, LLC
YARMOUTH, MAINE
CONTACT: KEVIN O'ROURKE

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.

SURVEYOR

R.W. EATON ASSOCIATES
WESTBROOK, MAINE
CONTACT: RICHARD EATON, P.L.S.

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

R.W. EATON ASSOCIATES DATE:

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP.	WHS	11/26/18

DRAWING NAME: SUBDIVISION PLAT

PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT

CLIENT: THE PRESERVE AT SOUTH RIDGE, LLC
94 SOUTH STREET, YARMOUTH, ME 04096

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN BY ANY PARTY OTHER THAN ACORN ENGINEERING, INC. OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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

STATE OF MAINE — WILLIAM J. SAVAGE — No. 11429 — LICENSED PROFESSIONAL ENGINEER — 11-26-18

DRAWING NO.
PLAT

1 VIEW LOOKING NORTH FROM FOX STREET
NTS

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SHEET TITLE:
SITE CONTEXT
IMAGE 3

A2-7

1 VIEW LOOKING NORTH FROM FOX STREET
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SHEET TITLE:
SITE CONTEXT
IMAGE 4

A2-8

PLANNING BOARD REPORT - Revised
PORTLAND, MAINE

Verdante: Amendment to previous approval
56 Hampshire Street
Amendments to Level III Site Plan/Subdivision; IOZ Conditional Use
#2017-294; Amendment PL000488-2019
NewHeight Group, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: February 26, 2019	Prepared by: Caitlin Cameron, Urban Designer Date: February 8, 2019, Revised Feb 22, 2019

I. INTRODUCTION

NewHeight Group LLC received approval for the project at 56 Hampshire Street on September 11, 2018 subject to conditions of approval. The applicant has since submitted amendments to Level III Site Plan and Subdivision, and Inclusionary Conditional Use approvals. The proposal is for a three to six story single building of 31 market-rate condominiums (previously approved for 30 units), a retail space, and structured and surface parking. The parking is not proposed to change and includes spaces for 60 vehicles – 17 for the neighboring apartment building and the remaining 43 for the residential use. The Inclusionary Zoning requirements are implicated in this amendment – one of the affordable units will be provided off-site with the remainder accounted for by fee-in-lieu. The project is located in the IS-FBC zone (UN and UT subdistricts) and within 100 feet of the India Street Historic District.

This Hearing was noticed to 160 neighbors and interested parties and the public notice appeared in the *Portland Press-Herald* on February 1st and February 2nd 2019.The Planning Division received six public comments regarding these amendments and this project. The comments include concern about the scale of the project, the increased traffic and parking related to the project and making sure there is adequate parking given the increase in units and requesting more street trees be required as part of the project. PC6 comments on the siding material and agrees with staff review that warm tones are more appropriate and further comments that the building lacks pedestrian friendliness. Some comments are not directly relevant to the amendment and pertain to the recent work to underground the utilities for this project which resulted in the loss of two street trees on Hampshire Street in front of 62 Hampshire Street. This unintended consequence was not indicated in the Site Plan application and City staff are working with the applicant and affected residents to resolve the impacts to the public right-of-way.

Applicant: NewHeight Group LLC (represented by Chip Newell, Erin Cooperider)
Agent and Engineer: Terradyn Consultants, LLC (Michael Tadema-Wielandt, P.E.)
Architect: Archetype, P.A. (David Lloyd)

Required reviews for the Amendments:

Applicant's Proposal	Applicable Standards
New structure of 31 units (increase of 1 unit)	Level III Subdivision Review
Change to the Elevations (material, windows, rooftop appurtenances)	Level III Site Plan Review/IS-FBC Building Design Standards
Change to Sidewalk/Street tree design	Level III Site Plan Review
Multi-family Residential >10 units	Inclusionary Zoning Conditional Use

II. PROJECT DATA (changes highlighted)

SUBJECT	*DATA*
Total area of the site	19,366 sq ft
Total Disturbed Area	19,366 sq ft
Existing Zoning	ISFBC (UT, UN)
Existing Use	Commercial building, surface parking
Proposed Use	31 Residential units, retail, parking
Impervious Surface Area --Existing --Proposed --Net Change	 16,555 sq ft 9,683 sq ft 6,872 sq ft
Building Footprint --Existing --Proposed --Net Change	 5,118 sq ft 13,817 sq ft 8,699 sq ft
Building Floor Area --Existing --Proposed -Net Change	 5,118 sq ft 64,377 sq ft 59,259 sq ft
Proposed Room Mix -One-bedroom -Two-bedroom -Three-bedroom	 11 (formerly 9) 9 11 (formerly 12)
Parking Spaces	60 (43 residential; 17 neighbor spaces)
Bicycle parking Spaces	12 (none existing)
Estimated Cost of the project:	$12,950,000

III. PROPOSED AMENDMENTS

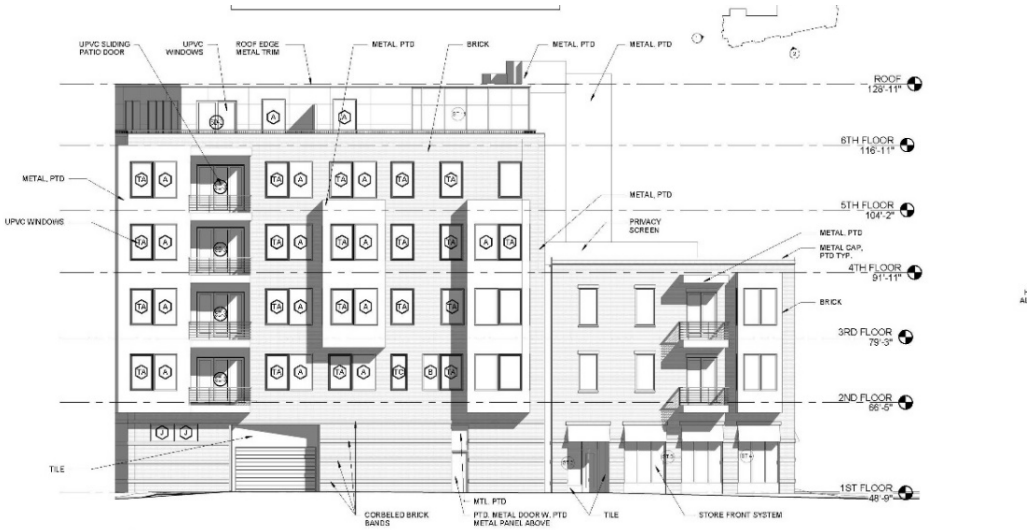
The amendment application includes the following revisions to the approved project:

- Increase in the unit count to 31 market-rate condominiums (30 du approved)
- Modification to the Inclusionary Zoning obligation - 3 workforce housing units or a fractional fee-in-lieu payment are required– one (1) unit provided off-site, remaining obligation of 10% units covered by fee-in-lieu
- Architectural changes to the bay materials, window type and pattern on Hampshire and Federal Streets
- Introduction of additional rooftop appurtenances
- Change location and detail of the street tree on Federal Street

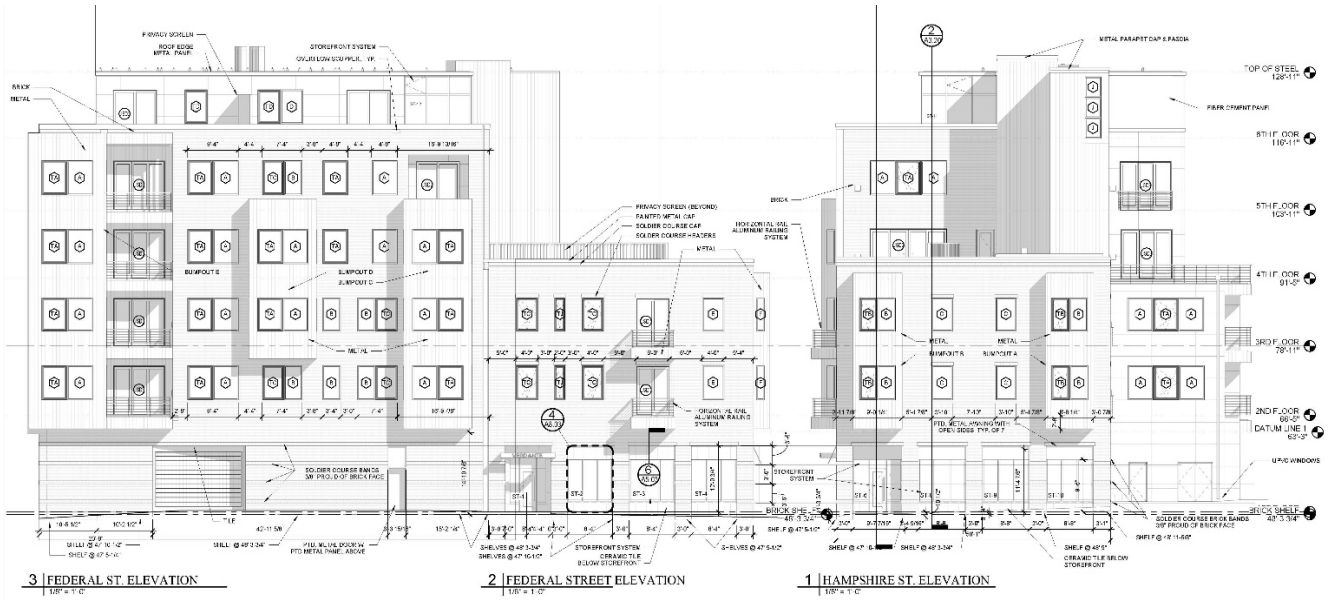
Applicable Conditions of Approval:

- If the **siding material on the bays** is not copper, then the Applicant shall come before the Planning Board for review and approval of an alternative material.
- The mechanical equipment should be located to the interior of the site, away from abutting residential properties and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof. **No additional rooftop appurtenances shall be allowed beyond what is shown in the elevations and renderings and reviewed in this Site Plan application. Revisions to the roof forms or roof top appurtenances can be submitted for review either as a de minimis change or a Site Plan amendment for review and approval by the Planning Authority.**

The elevation below faces Federal Street and shows the approved windows pattern and proportion compared with the proposed windows (Plan P15).



3 FEDERAL ST. ELEVATION
3/32" = 1'-0"



STAFF REVIEW

A. ZONING ASSESSMENT

The proposed amendments do not impact the dimensional requirements of the zoning – the building footprint, envelope, or height are not proposed to change.

There are design implications to the proposed exterior elevation revisions and the IS:FBC Building Design Standards – this is reviewed in Section F: Design Review.

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.

1. Water, Air Pollution - One additional dwelling unit is not anticipated to result in undue air or water pollution.

2 & 3. Adequacy of Water Supply - The applicant provided evidence of capacity from the Portland Water District (Attachment B).

4. Soil Erosion – No change – standard met.

5. Impacts on Existing or Proposed Highways and Public Roads - Tom Errico, the city's consulting traffic engineer, has made the following comments on impacts to the future Franklin Street design:

- *Based upon trip generation estimates provided by the Applicant, the Applicant shall contribute $14,300 towards implementation of improvements to the Franklin Street transportation influence area.*
- *No adjustment is required for adding one unit given negligible changes in traffic generation and traffic volume changes to the Franklin Street influence area.*

6. Sanitary Sewer/Stormwater Disposal – The Department of Public Works confirmed the increase in unit count will not impact the wastewater capacity to serve (Attachment 2).

7. Solid Waste - The increase of one residential unit is not anticipated to cause an unreasonable burden on the ability of the city to dispose of solid waste, no revisions to the proposed plan needed.

8. Scenic Beauty - No change – standard met.

9. Comprehensive Plan

Incentives for Affordable Housing and ***Housing – Sustaining Portland's Future***

The city believes that it is in the public interest to promote an adequate supply of affordable housing for its residents. 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. As described below and in (Attachment 1), the amendment increases the amount of housing provided and subsequently increases the Workforce Housing obligation.

10. Financial and Technical Capacity – No change – standard met.
11. Wetland/Water Body Impacts – No change – standard met.
12. Groundwater Impacts - No change – standard met.
13. Flood-Prone Area – No change – standard met.
14. Wetland/Water Body Impacts - No change – standard met.
15. Wetland/Water Body Impacts - No change – standard met.

(14-497(c) Conformity with Code) *Any proposed subdivision shall be in conformity with all relevant provisions of this Code.* Amendment does not affect the zoning code requirements except for the applicable design standards (see Section F below).

D. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing - The increase of one (1) residential unit is not anticipated to create significant traffic impacts.

Sidewalks – The street tree location and detail is proposed to be revised (Plan 3). The project includes a number of building overhangs into the right-of-way. This, in combination with the underground utilities, limits the ability to provide street trees for the project. The applicant's proposal keeps the same number of street trees with the remainder covered by the fee-in-lieu – the fee-in-lieu will increase with the dwelling unit increase. The applicant is requesting to relocate the one street tree provided on Federal Street – the relocation is a result of conflicts with utilities and building overhangs. Upon further review, staff and the applicant could not identify opportunities for more street trees directly adjacent to this project. Therefore, City Arborist Jeff Tarling approved the revised location on the condition that the tree be placed in a grate as large as possible in size for tree viability. The grate will not interfere with on-street parking and will allow for a wider pedestrian way.

In undergrounding the utilities, the applicant removed two existing street trees from Hampshire Street – a loss that was not accounted for in the Site Plan/Subdivision review and approval. City staff are working with the applicant and the affected neighboring property owners at 62 Hampshire Street to find a resolution to this loss of street trees. The proposed solution at the time of this report is to replace at least three street trees on the opposite side of Hampshire Street adjacent to the Rite Aid Plaza parking lot – these would be required to be raised granite tree wells. In addition, staff propose that unfixed, raised planters be provided in front of 62 Hampshire – it has been determined by staff and the applicant that street trees cannot be planted in this location due to the narrow sidewalk width and conflicts with the newly undergrounded utilities. Consensus has not been reached regarding these street tree strategies. These revisions are not proposed to be a part of this Site Plan amendment.

Public Transit Access - No change – standard met.

Parking – The amendment to the number of dwelling units increases the zoning requirement to 28 parking spaces for the residential project. Adequate parking is provided through the approved design of 60 spaces, 43 of which are for the residents of 56 Hampshire and includes three tiers of mechanical parking including one (1) required ADA space accommodated with a parked loading/unloading space adjacent to the lobby entrance. The parking is provided in a combination of structured, covered, and surface spaces.

The applicant intends to provide 17 residential surface parking spaces on-site for the neighboring apartment building. The new retail space is under 2,000 sf and does not require parking per the ordinance – no change.

Snow Storage – No change – standard met.

Transportation Demand Management – Not applicable

Landscape Preservation / Site Landscaping and Screening – No change – standards met.

Landscape Plan – The additional residential unit has implications on the street tree requirements for the project. The applicant also proposes revisions to the street tree location and detail. Jeff Tarling has reviewed and approved the street tree location as proposed but with the condition that the tree be in a grate and as large a tree pit as possible. There will need to be conditions of approval addressing the following:

- The Landscape Plan, Site Plan, and associated details should be revised to show the largest possible tree grate for the relocated street tree.
- Thirty (31) trees are required, thirteen (13) are provided or existing = 18 trees x $400 = **$7,200 contribution to the Street Tree Fund**

Water quality, Stormwater Management and Erosion Control - No change – standards met.

Public Safety – No change – standard met.

Fire Prevention and Public Utilities – Applicant received confirmation from the Water District showing capacity to serve. Department of Public Works confirmed the amendments do not impact the wastewater capacity (Attachment 2, B).

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review. The project is currently meeting the zoning height requirements – no changes to massing proposed.

Historic Resources – The project is not within the historic district and not within 100' of a historic landmark.

Exterior Lighting incl Street Lighting – No changes – standards met.

Noise and Vibration – The application shows additional mechanical equipment on the roof – these units affect the design review but not anticipated to impact noise and vibration.

Construction Management Plan – The proposed amendments do not impact this requirement.

E. IMPACT FEE ASSESSMENT

The Site Plan approval is dated September 11, 2018 – Site Plans approved prior to December 19, 2018 are exempt from the recently adopted Impact Fee Ordinance.

F. DESIGN STANDARDS

Figure 1 Preferred and approved Hampshire Street and Federal Street façade composition with two bays, copper material, vertical proportioned windows, regular window pattern

The site is located within the IS-FBC zone, Franklin Street is the UT subdistrict, Hampshire and Federal Streets are in the UN subdistrict. In the approval, Planning Board members discussed the importance of the Congress Street corner of the building conveying a gateway character without walling off the neighborhood; the character and façade composition on Hampshire Street. The board commented that the grey brick was acceptable as a material choice but found that the copper material on the bays was a critical element of the design in meeting the IS:FBC Building Standards to comply with standards around compatibility with context.

Revisions: The applicant is requesting several facade composition amendments including:

- Fenestration size and proportion – The window size and proportion has become shorter and more square on the facades of the three-story building facing Federal and Hampshire streets.
- Fenestration pattern – The fenestration pattern and rhythm is proposed to change with the addition of new windows on Federal Street.
- Material selection for the bays – The bay material is proposed to change from the previously approved copper metal for cost reasons. The applicant submitted renderings showing a grey standing seam metal or wood tone trespa panel as options.
- Rooftop appurtenances – Additional hvac equipment is proposed on the top roof in two sections and without screening or integration with the building design.

Staff Analysis: The surrounding built context could be divided into the low-rise historic residential structures of the narrow Hampshire Street and the newer, large-scale development on the wide Franklin Street. 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 three-story mass on Hampshire Street is contextually sensitive in scale and provides an active ground floor with commercial use. Staff supported the approved façade designs including the rhythm, scale, proportion of the façade, the addition of canopies and approval was granted with two bay windows facing Hampshire Street per staff recommendation. Given the contemporary nature of this design, **façade composition, fenestration proportions, and materials become very important for getting this project to meet the design standards around context compatibility.** Hampshire Street is a small-scale street with predominantly small-scale homes. Forms are simple and façade compositions and articulation follow traditional patterns (local and overall symmetry, recessed and covered entries, fine grain materials such as brick and clapboard, raised ground floor, vertical proportions, front-end gable or flat roof forms with distinct eaves, trim, and brackets, and similar articulation elements). Staff find the original approved façade composition including material choice, window pattern, and window proportions to be in keeping with the design standards. Amendments to these approved elevations should be evaluated against the applicable design standards listed below.

Excerpted from the IS:FBC Building Design Standards:

1. *Neighborhood Context:*
    - *Promote thoughtful architectural relationships between new and existing buildings and between adjacent urban neighborhoods.*
    - *New construction should respect the surrounding context demonstrating recognition of patterns and characteristics that exist in the context sharing the same streetscape. Such patterns and characteristics include:*
        - *Proportion, directional expression, and composition of principal facades*
        - *Rhythm of solids to voids in facades*
        - *Rhythm and proportion of openings*
        - *Relationship of materials, texture, and color*
        - *Roof shapes*

Articulation & Composition:

- *Establish architectural scale patterns or features that relate to adjacent buildings*

Building Materials:

- *Building materials and techniques shall reflect or complement the existing materials and techniques within the India Street Form-based Code zone and shall be visually compatible with the predominant materials used in the structures to which they are visually related.*

Roof Lines:

- *Integrate all building systems within a complete architectural form*
- *Respect the character of and views from the surrounding context*
- *All rooftop building systems shall be incorporated into the building form in a manner integral to the building architecture in terms of form and material. All mechanical, electrical, and telecommunications systems shall be screened from view of surrounding streets and structures.*

Fenestration Size and Proportion:
The approved window proportions were taller and more narrow and related to the residential buildings in the Federal and Hampshire streetscapes (refer to rendering above). Staff design review finds that the proposed window proportion does not adequately relate to the proportions found in context. The building scale and design is contemporary in nature and relies on details such as the windows and materials to meet standards around compatibility with context. The approved façade composition better relates in rhythm, proportion, and scale to the neighboring context.

Fenestration Pattern:
The approved façade composition designed to relate in rhythm, proportion, and scale to the neighboring context. Staff design review finds that the introduction of additional windows on Federal Street disrupts that contextual pattern and causes the building to relate less successfully to the patterns found in the residential streetscapes.

Material Selection for the bays:
Staff request that samples of the material be provided. Staff raise concern about materials that push the design out of context with the small-scale and traditional context of the surrounding streets. Though the project sits at the edge of the neighborhood and Franklin Street lacks a strong context, the project interfaces with Congress, Federal, and Hampshire streets and is highly visible from within the neighborhood – the renderings provided by the applicant convey these visual connections. Given that the scale, massing, and brick material are contemporary and differ from the context, **the bay material is considered to a be critical element to bringing a relatable scale and a material relationship from this building to the surrounding neighborhood**. Staff design review finds that the bay material should have a warm tone, fine-grain scale, and depth of color and texture to relate to the clapboard and red brick found in context in order to meet the standards and follow the intent of the original approval.

Figure 2 Approved Materials

Figure 3 Proposed Material Option

Figure 4 Proposed Materials (2 options)

Rooftop Appurtenances:

The applicant is indicating rooftop HVAC systems in two locations on the top of the building in a way that is not integrated with the design or screened from view. Staff design review finds that the introduction of additional rooftop HVAC systems do not meet the design standards calling for integrated design and simple roof forms. The forms and massing of this project are already complex and contemporary compared with the context – rooftop systems should be reconsidered to meet the standards and mitigate their impact on the surrounding street views.

The IS:FBC Building Design Standards call for unified and simple roof forms and for building systems to be integrated in the design. In addition, the Site Plan condition of approval states: *The mechanical equipment should be located to the interior of the site, away from abutting residential properties and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.*

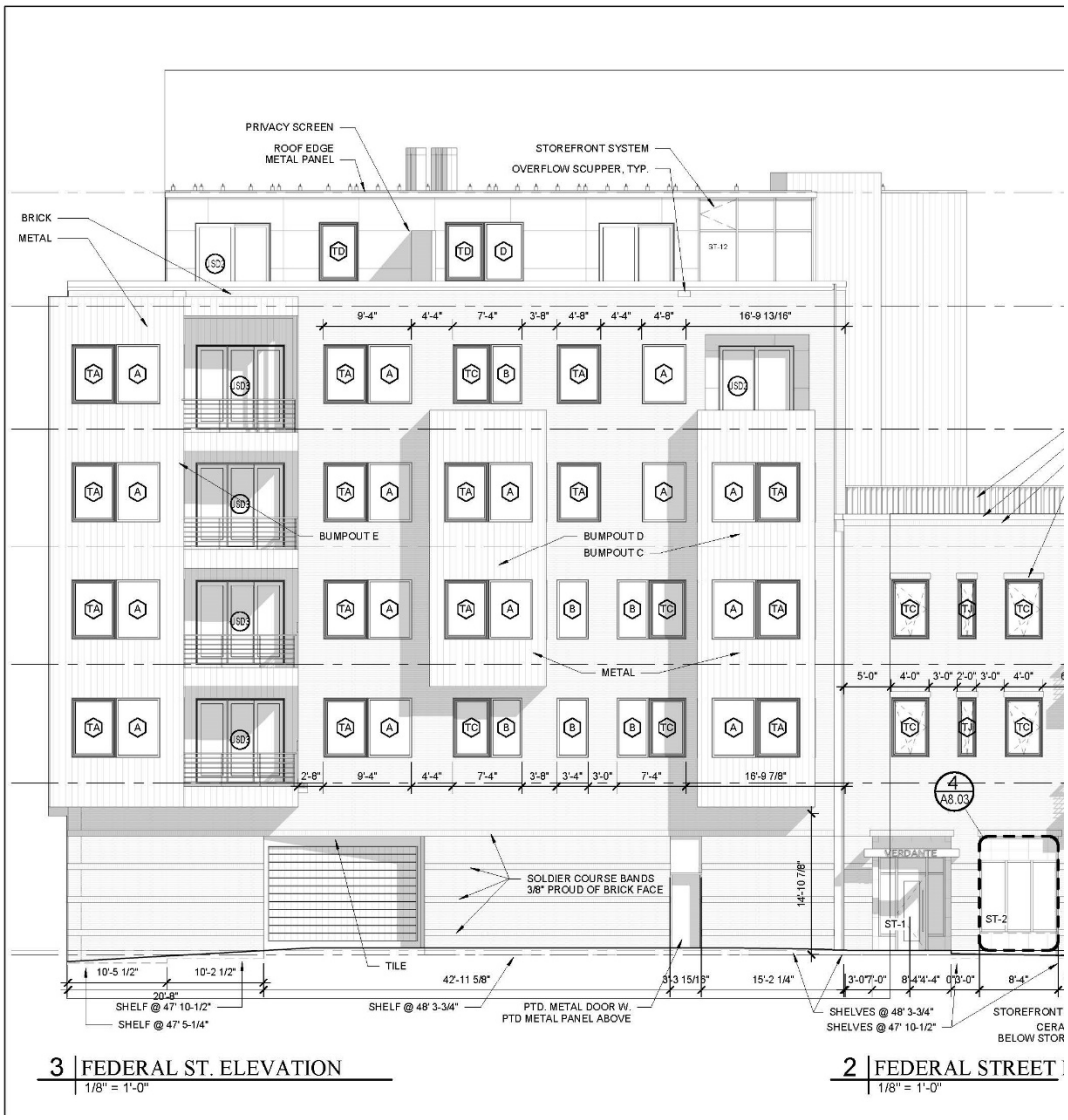


Figure 5Proposed new HVAC on roof

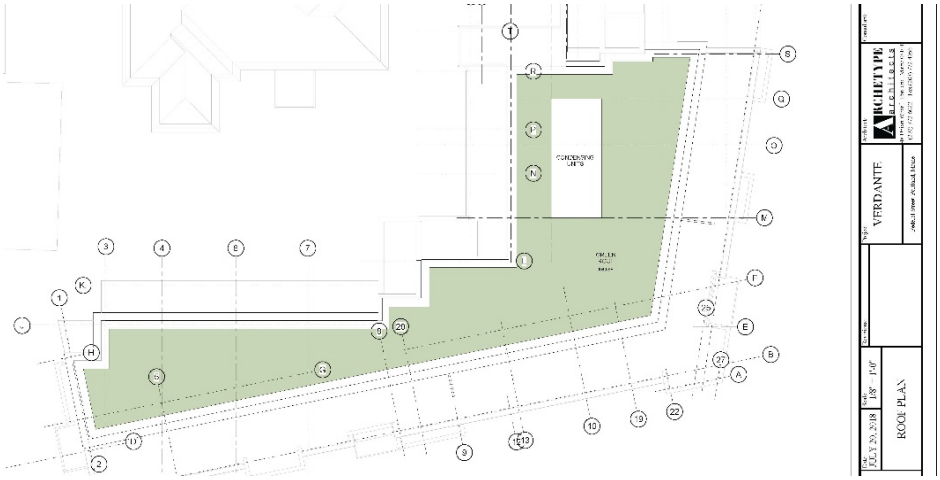


Figure 6Approved Roof Plan

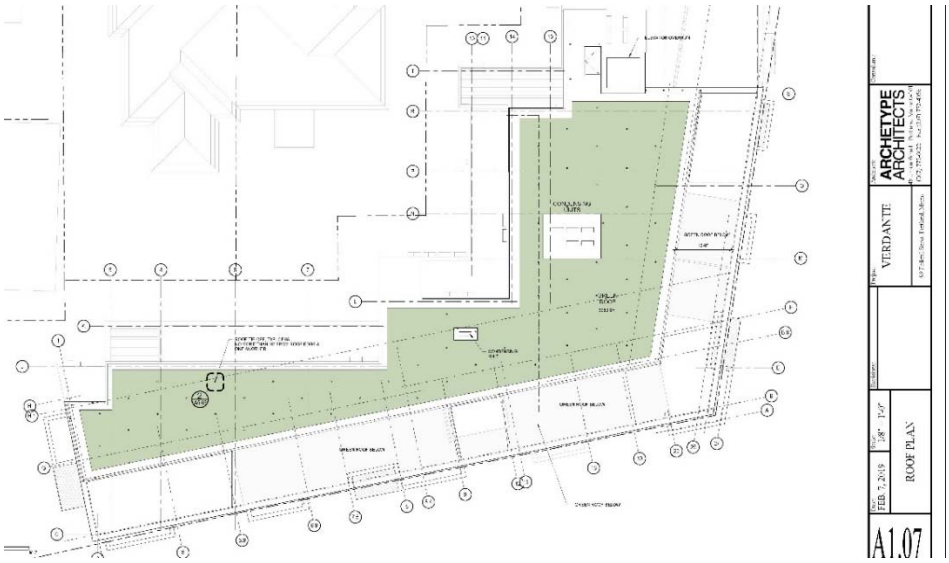


Figure 7 Proposed Roof Plan

IV. INCLUSIONARY ZONING CONDITIONAL USE

Division 30, Section 14-487 requires that 10% of the dwelling units must meet the definition of Workforce Housing. The previously approved project of 30 units required 3 workforce housing units (on-site or off-site) or pay the fee-in-lieu. The September 11, 2018 approval is as follows:

- *The Applicant has elected to* ***provide one (1) unit off-site at 42 Hampshire Street consisting of one (1) three-bedroom unit,*** *and* ***pay a fee-in-lieu of $209,398*** *into the City's Housing Trust Fund in-lieu of the creation of two units of workforce housing. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required.*

With the increase in residential units to 31, the applicant's obligation also increases proportionately. The applicant was approved to provide one (1) of these units off-site at 42 Hampshire Street as a three-bedroom. The remaining obligation will be accounted for through the fee-in-lieu. The new fee-in-lieu amount will be a combination of the previously approved $209,398 (for 20 units) plus an amount for the additional unit calculated at the 2019 value as stated by the Housing Program Manager in (Attachment 1). This final amount will be determined after approval and upon the release of the 2019 CPI-W by the U.S. Bureau of Labor after February 13, 2019.

The conditions of approval associated with the original September 11, 2018 approval for the Inclusionary Zoning Conditional Use shall remain in effect including the Capital Improvement Plan and physical improvements for the property at 42 Hampshire Street. An updated Affordable Housing Agreement will be required with the new fee-in-lieu amounts; this adjusted fee-in-lieu will be due prior to the Certificate of Occupancy.

V. STAFF RECOMMENDATIONS

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed amendments to the IZ Conditional Use for the Verdante development.

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed amendment to the Subdivision for the Verdante development.

Staff recommend bay materials that are warm in color that relate to the context of red brick. Staff do not recommend the proposed changes to the fenestration pattern or the revised window proportions or additional rooftop appurtenances that disrupt a cohesive roof form on the basis of the IS-FBC Building Design Standards. Therefore, Planning Division staff do not recommend the Planning Board approve the proposed the window type, pattern, or additional rooftop appurtenances amendments to the Site Plan for the Verdante development. Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the material amendments, but not the rooftop and window amendments to the Site Plan for the Verdante development.

VI. PROPOSED MOTIONS - REVISED

A. INCLUSIONARY ZONING

The Planning Board finds that the proposed development **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application subject to the following conditions:

1. That the approval date of September 11, 2018 and all associated conditions of approval shall remain in effect unless otherwise replaced by conditions of approval associated with this amendment.

PRIOR TO ISSUANCE OF BUILDING PERMIT for 56 Hampshire Street

2. That the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) as described in the memorandum from Housing Program Manager dated February 12, 2019 (Attachment 1).

PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY for 56 Hampshire Street

3. In lieu of the creation of two units of workforce housing, that the Applicant shall pay a fee-in-lieu of $219,868 as described in Attachment 1.

B. 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 February 12, 2019 for amendment application PL000488-2019 (Verdante) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code and **approves/does not approve** the amendment, subject to the following conditions of approval:

4. That the approval date of September 11, 2018 and all associated subdivision conditions of approval shall remain in effect unless otherwise replaced by conditions of approval associated with this amendment.

C. SITE PLAN

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 September 11, 2018 for application 2017-294 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 and **approves/does not approve** the application, subject to the following conditions of approval:

5. That the approval date of September 11, 2018 and all associated Site Plan conditions of approval shall remain in effect unless otherwise replaced by conditions of approval associated with this amendment.

PRIOR TO APPLYING FOR A BUILDING PERMIT

6. The landscape plan, site plan, and associated detail sheets shall be revised to show the street tree(s) in the correct location and with a grate sized at least 4'x6' and as large as is feasible.
7. No additional rooftop appurtenances shall be allowed beyond what is shown in the elevations and renderings in the Site Plan approved September 11, 2018. Rooftop appurtenances must meet the IS-FBC Building Design Standards which require rooftop systems that are integrated with the overall building design.
8. The final architectural drawings shall be revised per Planning Board discussion regarding bay material selection and to reflect the previously approved window proportion and pattern.

PRIOR TO ISSUANCE OF THE BUILDING PERMIT

9. Due to site constraints preventing the planting of required street trees in the right of way, the thirty-one street trees as required in Section 14-526(2)(b)(iii) of the Site Plan Ordinance cannot be met; the applicant shall contribute to the tree fund of $400 per tree for eighteen (18) trees for a total of $7,200.

ATTACHMENTS:

Attachments to Report

1. IZ Conditional Use 02.12.19 - Revised
2. DPW wastewater updated capacity to serve

Public Comments

PC1 Judith Allen 02.07.19
PC2 Tim Robinson and Judith Allen 02.07.19
PC3 Priscilla Slack 02.05.19
PC4 Tim Robinson 02.08.19
PC5 James Bushall 02.09.19
PC6 Derek Veilleux 02.11.19

Applicant's Submittal

A. Applicant Letter
B. Water Capacity – updated 2.7.19

Plans

P1 General Notes
P2 Recording Plat
P3 Site Plan
P4 Grading Drainage, and Erosion Plan
P5 Utility Plan
P6 Site Details
P7 Landscape Plan

P8 1st Floor Plan
P9 2nd Floor Plan
P10 3rd Floor Plan
P11 4th Floor Plan
P12 5th Floor Plan
P13 6th Floor Plan
P14 Roof Plan
P15 Elevations
P16 Elevations
P17 Elevations
P18 Perspectives

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

To: Caitlin Cameron Urban Designer, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: February 12, 2019

Subject: 56 Hampshire – Inclusionary Zoning Conditional Use

All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The number of units required is rounded down to a whole number whether the Workforce Units are provided on or off-site. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation will be provided in the form of a proportional fee-in-lieu. The ordinance under Section 14-487 e 4 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement. The in-lieu fee shall be paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued.

On September 11, 2018 the Planning Board approved the development located at 56 Hampshire Street. The developer proposed to create 30 units of owner-occupied housing consisting of nine (9) one-bedroom units, nine (9) two-bedroom units, and twelve (12) three-bedroom units. In my letter to the Planning Board (dated August 9, 2018) I noted: *Based on the requirements outlined in Section 14-487, the development is required to provide a minimum of three (3) two-bedroom workforce units or pay a fee in lieu of some or all of the units. The Applicant has elected to provide one (1) unit off-site at 42 Hampshire Street consisting of one (1) three-bedroom unit, and pay a fee-in-lieu of $209,398 into the City's Housing Trust Fund in-lieu of the creation of two units of workforce housing. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required. The designated Workforce unit will be restricted to households earning up to 100% of Area Median Income (AMI). As such, the project has met the minimum requirements set forth in Sec. 14-487.*

The developer is amending the approval by proposing the creation of 31 units of owner-occupied housing consisting of eleven (11) one-bedroom units, nine (9) two-bedroom units, and eleven (11) three-bedroom units. Based on the requirements outlined in Section 14-487, the applicant is required to provide a minimum of three (3) units with a total of 6 bedrooms and a fractional fee-in-lieu. The applicant has elected to provide one (1) unit off-site at 42 Hampshire Street consisting of one (1) three-bedroom unit, and pay a fee-in-lieu of $209,398

plus (+) a fractional fee-in-lieu of $10,470 into the City's Housing Trust Fund in-lieu of the creation of 2.1 units of workforce housing.

Staff recommends the agreed upon fee-in-lieu of $219,868 be paid into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 56 Hampshire Street.

Staff recommends the Board Approve this Conditional Use provided the Applicant complies with all staff recommendations as detailed in this memo and the memo from the Housing Program Manager dated August 9, 2018, and the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Unit and will be filed as covenant to the property's deed with the Cumberland County Registry of Deeds prior to issuance of the certificate of occupancy for 56 Hampshire Street.

Sincerely,

Victoria Volent
Housing Program Manager

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire - wastewater capacity update

Bradley Roland <brad@portlandmaine.gov> Mon, Feb 4, 2019 at 1:08 PM
To: Caitlin Cameron <ccameron@portlandmaine.gov>
Cc: Lauren Swett <lswett@woodardcurran.com>, Adrienne Fine <adrienne@terradynconsultants.com>, Michael Tadema-Wielandt <mtw@terradynconsultants.com>

Yes that should be fine Caitlin.
Thank you for following up.
Brad
--
Bradley A. Roland, P.E.
Senior Project Engineer
Portland Public Works
212 Canco Road
Portland, ME 04103
Tel: 207-874-8840
Fax: 207-874-8852
brad@portlandmaine.gov

On Wed, Jan 30, 2019 at 4:14 PM Caitlin Cameron <ccameron@portlandmaine.gov> wrote:

> Brad,
>
> the unit count at 56 Hampshire has increased from 30 to 31 units.
>
> Can you confirm whether the previous wastewater capacity letter is still valid?
>
> Thank you,
>
> --
> Caitlin Cameron, AICP, Associate AIA, LEED AP
> Urban Designer
> Planning & Urban Development Department
> 389 Congress Street
> Portland, ME 04101
> phone: (207) 874-8901
> email: ccameron@portlandmaine.gov

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CONSULTANTS, LLC

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New Gloucester, ME 04260

Portland
565 Congress Street, Suite 310
Portland, ME 04101

December 13, 2018

Caitlin Cameron, Urban Designer
Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

AMENDMENTS TO VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET

Dear Caitlin:

On behalf of NewHeight Group, Terradyn Consultants has prepared the attached revised plans and information for Verdante at Lincoln Park, located at 56 Hampshire Street. The project received Planning Board approval on September 11, 2018. Since that time, three changes have been made to the project design that will require further approval from the Planning Board. The proposed changes are described below:

1. **Unit Count:** The residential unit count has increased from 30 to 31. The third floor has been conformed to the second floor so that the units stack, which aids in constructability. This added one unit to the third floor within the existing footprint. No revisions to the site, building footprint, or building exterior result from this change.

   Revised Plans: C-1.1 General Notes
   C-2.0 Recording Plat

2. **Tree Well Relocation:** The electrical vaults have been installed in the Federal Street sidewalk. The vaults' final location is farther east than originally planned and interferes with the previously proposed location of the tree well. As a result, the tree well will be installed approximately 35' closer to Franklin Street than originally proposed. The new vault and tree well locations are shown on the enclosed plans.

   Revised Plans: C-2.0 Recording Plat
   C-3.0 Site Plan
   C-4.0 Grading, Drainage & Erosion Control Plan
   C-5.0 Utility Plan

3. **Building Materials:** Standing seam metal siding will be used in place of copper siding on building bump outs. Archetype provides the following explanation of the siding change:

   We have been diligently working on refining our design to be on budget. As a direct consequence we had to revisit the use of copper on the exterior of the building. After much careful thought and working with our clients we feel that we have a metal siding that will meet the high standards that our owners expect, while maintaining the quality of aesthetic that this building will deliver to Franklin Street and the surrounding neighborhood. Attached are two schemes, both showing a standing seam metal siding, one with a dark blue and the other with a grey blue color. While our clients and ourselves prefer the dark blue, we feel that either of these color schemes are successful against the background of the gray brick. We also made minor window changes on Franklin and Hampshire Street facades. These changes are outlined in red on the drawings. These changes were a result of working out final details and coordinating with structural issues.

   Revised Plans: A 2-01, A 2-02 & A 2-03 – Building Elevations
   Perspective Renderings

In addition to the three changes described above, the building footing locations have been finalized. The footing locations extending over the property line onto City property have been added to the revised Easement and License Plan (C-2.1).

The enclosed plans have also been uploaded to the City's electronic plan review system. We look forward to your review of the information provided and request to be placed on the next available Planning Board agenda. In the interim, if you have any questions or need additional information, please contact me.

Sincerely,
TERRADYN CONSULTANTS, LLC

Michael E. Tadema-Wielandt, P.E.
Vice President

cc: NewHeight Group
David Lloyd, Archetype PA

Att. B

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

February 7, 2019

Adrienne Fine
Terradyn Consultants
565 Congress Street Suite 310
Portland, ME 04102

Re: 56 Hampshire Street, PO
Ability to Serve with PWD Water

Dear Ms. Fine:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on December 7, 2017. Based on the information provided per plans dated August 17, 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 2-inch domestic service with 2-inch meter may be installed from the water main in Federal Street. The services should enter through the properties frontage on Federal Street at least 10-feet from any side property lines.

- Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- The existing building is currently served with a 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.

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 6-inch diameter cast iron water main in Federal Street and a public fire hydrant located approximately 125 feet from the site. The most recent static pressure reading was 86 psi on May 25, 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

Robert A. Bartels, P.E.
Senior Project Engineer

comments on 56 Hampshire St for Feb. 12 Planning Board

judith allen <judithallenefs@yahoo.com> Feb 7, 2019 10:37 PM
Posted in group: **Planning Board**

Judith Allen, resident and owner, 62 Hampshire St.
Comments regarding revisions to 56 Hampshire St. Site Plan (and attached)

Lack of street parking is a huge problem in Portland; please show the citizens of Portland you care about this problem. Please don't add to the problem.
I urge you to reject the additional residential unite requested UNLESS there is also an addition parking space add for the unit.

There are only 17 street parking spaces on all of Hampshire Street. This requested revision (31 residential units and 1 commercial space with only 28 parking spaces) increases demand on available street parking and hurts the existing affordable rental housing. Don't make it even more difficult for those of us on Hampshire St. who provide affordable rental housing for low-income tenants who depend on street parking.
Note: Together the Luminato and Verdant, projects add a total of 55 units and 1 commercial space in the 2 projects, more than doubling residential unites and traffic on Hampshire Street.

Worsening air quality is another problem looming in Portland with more traffic and fewer trees. Street trees are essential, not only for the beauty of Portland, but also for better air quality. Worsening Air quality in our neighborhood is of great concern with so many added cars expected from the 2 large condominium building, together with tree loss. On the block of the proposed Verdante construction, 13 or more mature trees will be removed and (according to the project plans) replaced by only a single street tree on Federal Street. Planters are no replacement for street trees. Hampshire Street should be tree-lined not denuded of trees. Please do not let any of the mature street trees on Franklin be cut, pruning would be more appropriate.

The decisions of the Planning Board have a rippling effect, for example: Verdate was allowed an exception to build balconies over a public sidewalk (on Federal at the corner of Hampshire). However there were utility poles in the view of these balconies. Further more, at the October meeting for final approval of the Verdate project, for cost cutting reasons, the developer asked for, and was allowed to replace bricks on the back of the building with a cheaper material, because it "would not be very visible" (see attached showing back of building and trees). In November the developers spent thousands of dollars (that could have gone to bricks) to put electrical wires under the sidewalk of Hampshire St, cutting down the street tree in the process (healthy street trees planted by the city 10 years ago). The value of the Verdante unite was increased by the improved view, but the value of our rental unites was decreased; Instead of a view of a beautiful tree, our units now have a view of the RiteAid parking lot The loss of these trees is a concern, not only to us, but to the entire neighborhood. Hampshire St. should not be deprived of street trees so that 2 luxury condos won't have a view of utility poles.

Please help the residents, property owners, and small business of Hampshire St:

The Developer of the planned Verdante building at 56 Hampshire Street is requesting permission to add another unit to the Verdante building with **no parking for this unit** and only 28 spaces for the 31 units and 1 commercial space. This impacts the already very limited parking on Hampshire St. There should be a least one parking space for each unit.

Further more there is no mention of replacing the trees cut down on Hampshire St in the November excavation to put electrical wires under the sidewalk of Hampshire St (so the high-end condos wouldn't have to look at a utility poles). During this work the tree wells where covered with asphalt and bricked over. The revised plans mention a tree well on Federal St. But no mention is made of the Hampshire St trees wells (not shown on the sight drawings either). **Please request that the developers be required to replace all tree wells and trees on Hampshire St in a timely fashion - this spring.** Hampshire St. should not be deprived of street trees so that 2 luxury condos will not have a view of utility poles.

Please note that the Verdante plans also call for cutting down the stand of mature street trees on Franklin St. in front of the Verdante building

Please make written comments by this Friday Feb 8 http://www.portlandmaine.gov/211/Planning-Board or mailed to the Planning Board at City Hall, 389 Congress St. 04101
And/or come to the meeting to make comments:

The PUBLIC HEARING will be held: **Tuesday, February 12, 2019, 6:30 p.m.**, Council Chambers, 2nd Floor, City Hall
A project and plan summary is available for viewing on the Citizen Self Service Portal (https://egweb.portlandmaine.gov/energovprod/selfservice), by referencing Plan Number PL-000488-2019. Memos and reports are posted on **http://www.portlandmaine.gov/211/Planning-Board**. If you have any questions regarding the proposal, please contact Caitlin Cameron, Urban Designer, by phone at 207-874-8901 or e-mail at ccameron@portlandmaine.gov.

Judy

Regarding 56 Hampshire St.

judith allen <judithallenefs@yahoo.com> Feb 7, 2019 10:37 PM
Posted in group: **Planning Board**

Tim Robinson and Judith Allen owners, 62 Hampshire St.
Comments for the Planning Board Feb. 12 hearing on
56 Hampshire St

The Verdate contractors came to Hampshire St. yesterday (Thursday) and it seems there was a mistake made in laying the underground wires in front of 60/62 Hampshire. Apparently they were not secured and this means re-excavating and breaking the concrete in search of the wires.

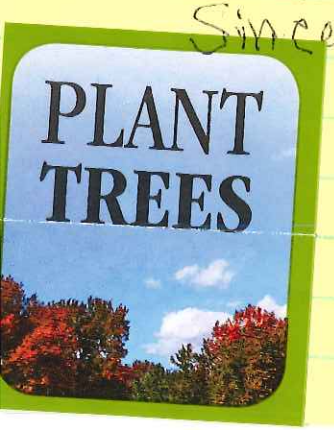
As I mentioned in a recent email to Deb Andrews and Jodie some damage was done to the arched brick structure in our basement with the excavation work in November that was done within inches of our building. We are very concerned that worse damage will be done if the site is re-excavated. We fear that the vibration from digging and whatever it will take to break concrete will be even more damaging to the structure of our building than the earlier work. We are happy to have someone from the historic preservation examine the brick foundation structure in our basement that we are concerned about.
Apparently these are only communication wires under our sidewalk, not electrical wires. We strongly feel that the existing, aboveground wires should remain as they are now strung to the utility pole in front of 56 Hampshire. Then the wires can be put underground in front of the Verdante property instead of risking damage to our property. This is the way it should have been done in the first place, and then Hampshire St wouldn't have lost 2 healthy, much love street trees and our building wouldn't have been so negatively impacted. All construction pertaining to the Verdante building should be contained to the immediate vicinity of their property.

Priscilla Slack
62 Hampshire St., Apt. 2F
Portland, ME 04101

2/5/2019

To whom it may concern
I agree ε Judy.
I am a resident of, over 30+ years in the Hampshire street area. I love Portland I've been here since 1976, Change doesn't come easy. Nor do we want too much too fast, Especially for the beauty of nature, every tree, I am a tree hugger, but still I love people Portland people need respect and not to forget the trees.

Sincerely,
Priscilla Slack



Planning Board Communication

February 8, 2019

Caitlin Cameron and Planning Board Members:

I would like to take this opportunity to express my concern with the proposed alterations to 56 Hampshire development project also known as Verdante Condominiums. According to Portland Planning Board's Staff-based Analysis 14-275.1, "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, which *preserves and values the existing historic neighborhood fabric*, and *fosters and supports* local businesses and *residential areas*."

To date, and as someone who both owns and resides in a historic property adjacent to 56 Hampshire this has not been my experience. Most recently, several 15-year old trees were slain and discarded on the once tree-lined upper Hampshire Street. Along with the trees the nesting sparrows have evacuated for greener pastures. The reasoning that prompted this degradation of the neighborhood fabric was the installation of an underground communication cable to benefit the project at 56 Hampshire Street.

As it turns out, the cable was improperly or incompletely installed, which means that in order to rectify this blunder 100+ feet of brick sidewalk and concrete encased cables will have to be re-excavated. This creates a distressing environment for me, my wife, tenants, and neighbors who yet again will have to listen to and dodge Caterpillar backhoes and construction tape. We also have a great concern that the vibration from the heavy equipment so close to our house will damage or collapse the 1870's era brick arch work located in the cellar.

In the Board's August of 2019 meeting, the issue concerning the quality of the proposed exterior at 56 Hampshire Street (copper and brick) was one area where the Board demonstrated extreme concern and resolve. I appeal to the board to reflect on their mission and refuse to acquiesce to Verdante's seemingly never ending request for exceptions, modifications, and zone changes.

Planning Board Communication

Currently in the Hampshire Street neighborhood parking and traffic congestion can be tight, and the prospect of 30-60 new vehicles milling around and negotiating one way Hampshire Street and dead end Federal Street is frightening. The allowance of an additional unit will only compound this problem.

In closing, I would ask you to, ". . . *preserve and value the existing historic neighborhood fabric*, and *foster and support* local businesses and *residential areas*" in accordance with the PPB's form-based code and deny Verdante's recent request. One can only imagine the cacophony and disharmony that awaits this neighborhood in the future. There simply is not enough space to achieve their development objectives.

Sincerely,

Timothy J. Robinson

Tim Robinson
Resident/Owner/Tax Payer
62 Hampshire Street
Portland, Maine

james bushell <jrbushell@gmail.com> Feb 9, 2019 4:09 PM
Posted in group: **Planning Board**

Why are you cutting down trees on Hampshire Street? You guys and your developer bosses are ruining this city! Stop it!

James R. Bushell
Portland Resident and taxpayer.

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

56 Hampshire Street submission

Derek J. Veilleux <dveilleux@mac.com> Mon, Feb 11, 2019 at 10:40 AM
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Thank you. I was finally able to download the files. I consider myself tech savvy, but that was not intuitive.

Anyway, in looking at the revised materials, I would encourage the applicant to explore warmer color tones for the metal panel siding. The building is already a bit jarring with large expanses of monolithic, gray brick. To mesh with the neighborhood, a warmer color tone would tie into the brick colors prominent in the neighborhood. Luminato introduced some "wood" siding and that little bit helped warm up the facade a bit. The current Verdante renderings leave me feeling a bit cold and stark. The copper was a nice balance to the grey brick and we have now lost that. And in combination with luminato, it is a lot of gray along that flank of Franklin. They do make faux copper colored metal siding.

I do not think the streetscape along Federal Street exhibits a high level of pedestrian friendliness. In particular, the lowermost level to the west of the building entrance and toward Franklin is extremely cold and blank. I understand soldier course brick was introduced, but this is not enough to give that portion of the facade a pedestrian scale. A slightly contrasting soldier course may help as would some trees.

Derek J. Veilleux
167 Newbury St, Unit 306
Portland, ME 04101
Email: dveilleux@mac.com
Mobile: 207.878.0187

Sent from my iPad
[Quoted text hidden]

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

56 Hampshire Street - Mechanicals & Form-Based Context

George Rheault <george.rheault@gmail.com> Tue, Feb 26, 2019 at 1:26 PM
To: "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>
Cc: Christine Grimando <cdg@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>, Barbara Barhydt <bab@portlandmaine.gov>, jmy <jmy@portlandmaine.gov>

I am opposed to any attempt by the Vernante development team being excused from the requirement to integrate their mechanical appliances (including rooftop appurtenances) into their design including, most importantly, the provision of proper screening.

Portland's planning staff and the Planning Board have not covered themselves in much glory with respect to Vernante's younger sibling (a/k/a "The Luminato") and it is exceedingly rare for a planning authority to be able to so quickly atone for its prior mistakes with an adjacent next-door project.

Attached are three photos that show how poorly the neighborhood context fared with the completed Luminato project. Not only has the "form-based" context been blown up by the introduction of the looming Luminato, its HVAC systems, centered in the middle of the eastern-facing facade of the project, are now a centerpiece of the Hampshire Street pedestrian experience, although I do not think anyone MEANT for this to be the case.

The only "fix" for this situation is for another large building, similar in scale to the Luminato (or even larger), to be built along Hampshire Street to "screen" the herd of heat pump condensing units that the development's designers have corralled for all to see.

It is unfortunate that the Verdante development team treated its mechanical systems as an after-thought and did not make provision for screening them from the beginning (including building that screening into its roof plans including tying that screening into the roof structure so that these screenings would be secure under any conditions the rest of the building would endure (like high-winds)).

The Planning Board should not compromise its requirements to screen mechanicals from public views, otherwise it makes a mockery of all of its exertions to otherwise ensure quality design in the projects that come before it.

3 attachments

image1.JPG
387K

image2.JPG
372K

image3.JPG
368K

Newbury St
DO NOT
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ONE WAY
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ENTER

NO
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TIME

ONE WAY
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167

GENERAL NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
3. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE), IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
5. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS, WHICHEVER IS MORE STRINGENT.
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON NORTHEASTERN SIDE OF HAMPSHIRE STREET, ELEVATION 49.30, NGVD 1929 DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 230051 0014 B. THE SITE IS LOCATED IN A C ZONE.
10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE CURB SHALL MEET THE REQUIREMENTS OF MaineDOT SPECIFICATIONS 609.03 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
14. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY. THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE PUBLIC SERVICE DIVISION FOR THE PLACEMENT/PARKING OF EQUIPMENT WITHIN THE PUBLIC RIGHT OF WAY.
18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DEMOLITION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W.(SIDEWALKS, BRICKS, GRANITE CURB) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE PROPERTY.
22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT OF WAYS.
23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MaineDOT STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE BUILDING PAD AREA (DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS, INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL DETAILS PERTAINING TO ANY BUILDING RELATED FOUNDATION WORK).
26. RECORD DRAWINGS MUST INCLUDE ALL BURIED UTILITIES INCLUDING, BUT NOT LIMITED TO, BENDS, APPURTENANCES, AND OTHER FEATURES, TO BE LOCATED IN THE FIELD BY GIS AND RECORDED AS AN AS-BUILT PLAN BY THE CONTRACTOR AT THE END OF THE PROJECT. THIS PLAN SHALL ALSO BE PROVIDED TO THE OWNER.
27. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS PREPARED BY ARCHETYPE ARCHITECTS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE POINTS.
28. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
29. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST THREE (3) BUT NOT MORE THAN (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A.

GRADING AND DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n = 0.013 OR LESS. UNLESS A SPECIFIC PIPE MATERIAL IS CALLED FOR ON THE CONTRACT DRAWINGS. PVC PIPING SHALL NOT BE USED IN AREAS OF EXPOSED SUNLIGHT.
2. SLOPE PROTECTION IS TO BE PROVIDED PER THE DESIGN PLANS AND MAY INCLUDE RIPRAP, SOD OR MULCH.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EARTHWORK OPERATIONS TO INSURE THAT DISTURBANCE TO ANY STEEP SLOPE AREAS ARE MINIMIZED TO THE EXTENT PRACTICABLE.
4. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-DIGSAFE) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
5. ALL PAVING WITHIN THE PUBLIC R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF PORTLAND RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN THE PUBLIC R.O.W.
6. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
7. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
8. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES AND PHYSICAL FEATURES THAT ARE OUTSIDE THE SCOPE OF WORK. THE CONTRACTOR SHALL MAINTAIN SITE STABILITY DURING CONSTRUCTION TO AVOID EROSION AND SEDIMENT TRANSPORT. CONTRACTOR SHALL RESTORE ALL AREAS TO A FINAL STABILIZED CONDITION AS DIRECTED BY DESIGN DRAWINGS.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
10. EXTERIOR GRADES AROUND PROPOSED STRUCTURE SHALL BE COORDINATED WITH FINAL BUILDING PLANS AND PROVIDE FOR ALL ACCESS OPENINGS.
11. SUBGRADE FILL PLACED BENEATH ALL PERMANENT PAVEMENT, SIDEWALK OR CONCRETE SURFACES EXCLUDING ANY BUILDING AREAS, SHALL BE GRANULAR BORROW. SUBGRADE FILL PLACED BENEATH ALL LANDSCAPE AREAS EXCEPT THOSE ADJACENT THE FOUNDATION SYSTEMS MAY BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANICS, ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. EXCAVATED ONSITE MATERIALS MAY NOT BE USED AS COMPACTED STRUCTURAL FILL BENEATH THE BUILDING AREAS OR AS FOUNDATION BACKFILL. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH MaineDOT SPECIFICATIONS.
12. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557, MODIFIED AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).
13. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.

CONSTRUCTION MANAGEMENT NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH 2009 NFPA 1 CHAPTER 16 SAFE GUARDS DURING BUILDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
2. ANY CUTTING AND WELDING WORK PERFORMED ONSITE SHALL REQUIRE A "HOT WORK" PERMIT FROM THE PORTLAND FIRE DEPARTMENT.
3. THE GENERAL CONTRACTOR SHALL POST EMERGENCY CONTACT INFORMATION ON THE PROJECT SITE PROPERTY DURING CONSTRUCTION IN THE EVENT OF AN AFTER HOURS EMERGENCY. THIS CONTACT INFORMATION SHALL ALSO BE PROVIDED TO THE PORTLAND FIRE DEPARTMENT.
4. IF THE SITE IS SECURED BY TEMPORARY OR PERMANENT FENCING WITH LOCKED GATES, THEN THE APPLICANT OR ASSIGNED REPRESENTATIVE SHALL PURCHASE A KNOX PADLOCK FROM THE PORTLAND FIRE DEPARTMENT TO ALLOW ACCESS BY THE PORTLAND FIRE DEPARTMENT.
5. STREETS SHALL MAINTAIN A 20' WIDTH FOR FIRE DEPARTMENT ACCESS AT ALL TIMES.
6. FIRE HYDRANTS SHALL NOT BE BLOCKED OR ENCLOSED BY FENCING. A 3' CLEARANCE SHALL BE MAINTAINED AT ALL TIMES AROUND FIRE HYDRANTS.

UTILITY NOTES:

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED BETWEEN THE SITE WORK CONTRACTOR AND DIVISION 22/26 CONTRACTOR(S). THE SITE WORK CONTRACTOR SHALL BE RESPONSIBLE TO EXTEND ALL PROPOSED UTILITIES TO WITHIN FIVE (5) FEET OF THE BUILDING TO A LOCATION COORDINATED WITH THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. THE BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES WITHIN FIVE (5) FEET AND INSIDE THE BUILDING OR UNDER SLAB.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH FAIRPOINT COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER, THE TELECOMMUNICATIONS SERVICE WITH FAIRPOINT COMMUNICATIONS, AND THE CABLE SERVICE WITH TIME WARNER CABLE. ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS OR UTILITY COMPANY STANDARDS, WHICHEVER IS MORE STRINGENT.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
6. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.
8. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. A 12 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
9. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER, AND AFFECTED BUSINESSES.
10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL SERVICES IN CONDUIT TO SITE LIGHTING, COMPLYING WITH APPLICABLE CODES. COORDINATE WITH OWNER, SITE ELECTRICAL, ARCHITECTURAL AND CMP PLANS.
11. ALL SANITARY SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. ALL SANITARY SERVICES AND APPURTENANCES TO BE ABANDONED SHALL BE PROPERLY RECORDED WITH PORTLAND PUBLIC WORKS ENGINEERING DEPARTMENT. A DIGITAL VIDEOTAPE SHALL BE MADE OF SANITARY SEWER SYSTEMS TO BE UTILIZED PRIOR TO CONSTRUCTION; UPSTREAM PIPES INTENDED FOR ABANDONMENT SHALL BE INSPECTED TO VERIFY THAT THEY NO LONGER SERVE OTHER FACILITIES.

PERMITTING NOTES:

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

DIMENSIONAL REQUIREMENTS (IS-FBC ZONE)			
STANDARD	UN SUBDISTRICT REQUIRED	UT SUBDISTRICT REQUIRED	PROVIDED
MIN. LOT SIZE	NONE	NONE	19,366 SF
MIN. LOT AREA PER DWELLING UNIT	NONE	NONE	625 SF
LOT COVERAGE	90% MAX	90% MAX	71%
FRONT YARD	MIN: 0 FT, MAX: 5 FT	MIN: 0 FT, MAX: 10 FT	APPROX. 1 FT ON HAMPSHIRE ST, VARIES ON FEDERAL ST 0 - 9 FT
MIN. SIDE YARD	5 Ft	10 FT	10 FT
MIN. REAR YARD	10 Ft	10 FT	10 FT
MAX. STRUCTURE HEIGHT	45 FT	65 FT + 12 FT BONUS	40 FT IN UN, 77 FT IN UT
MAX. IMPERVIOUS SURFACE	90%	90%	50%
PARKING	1 SPACE PER UNIT, FIRST 3 UNITS EXEMPT (28 SPACES)		60 ON-SITE SPACES 43 SPACES FOR VERDANTE + 17 SPACES FOR 312 CONGRESS STREET
BICYCLE PARKING	2 SPACES FOR EVERY 5 UNITS (12 SPACES)		12 SPACES IN BIKE TRAC PARKING SYSTEM IN GARAGE + 4 SPACES AT FEDERAL STREET BIKE HITCH

LEGEND

- EXISTING PROPERTY LINE
- PROJECT SITE BOUNDARY
- EXISTING SETBACK LINE
- PROPOSED EASEMENT
- 124 EXISTING MINOR CONTOUR
- 124 EXISTING MAJOR CONTOUR
- 124 PROPOSED CONTOUR
- SD EXISTING STORMDRAIN
- SD PROPOSED STORMDRAIN
- S EXISTING SANITARY SEWER
- S PROPOSED SANITRY SEWER
- W EXISTING WATER LINE
- W PROPOSED WATER LINE
- UD EXISTING UNDERDRAIN
- UD PROPSED UNDERDRAIN
- OHE EXISTING OVERHEAD ELECTRIC & TELEPHONE
- OHE PROPOSED OVERHEAD ELECTRIC & TELEPHONE
- UGE EXISTING UNDERGROUND ELECTRIC & TELEPHONE
- UGE PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- EXISTING CURB
- PROPOSED CURB
- PROPOSED FENCE
- SF SILT FENCE
- TP-A TEST PIT
- EXISTING VALVE
- PROPOSED VALVE
- EXISTING HYDRANT
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING DRAIN MANHOLE
- PROPOSED DRAIN MANHOLE
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- + 30.20 EXISTING SPOT GRADE
- 30.20 PROPOSED SPOT GRADE
- SURVEY CONTROL POINT
- EXISTING MONUMENT
- EXISTING IRON PIPE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED PAVEMENT
- PROPOSED BRICK

STATE OF MAINE — MICHAEL E. TADEMA-WIELANDT — 10/1/2018 — LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 12-13-2018

NO.	DATE	REVISIONS	APP'D BY
16	12-13-2018	SUBMITTED TO PLANNING BOARD FOR AMENDED APPROVAL	MTW
15	11-15-2018	REVISED PER CITY COMMENTS	MTW
14	10-23-2018	REISSUED FOR PLANNING APPROVAL OF OFF SITE ELECTRICAL WORK	MTW
13	09-25-2018	REVISED PER PLANNING BOARD APPROVAL LETTER	MTW
12	08-27-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
10	08-17-2018	PRICING SET - AUG. 17, 2018	MTW
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
8	07-27-2018	REVISED UNIT COUNT AND ADDED EASEMENT #3	MTW

TERRADYN CONSULTANTS, LLC
41 CAMPUS DRIVE, SUITE 105, NEW GLOUCESTER, ME 04260
565 CONGRESS STREET, SUITE 410, PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com
CIVIL ENGINEERING | LAND PLANNING | STORMWATER DESIGN | ENVIRONMENTAL PERMITTING

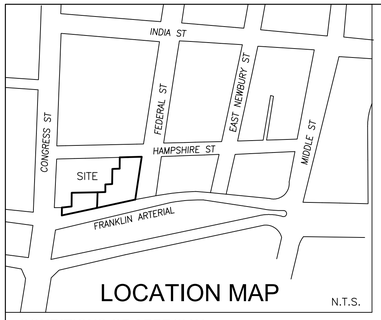
SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101

GENERAL NOTES & LEGEND

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	AS NOTED
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728-COVER.DWG	
SHEET	C-1.1

PRELIMINARY - NOT FOR CONSTRUCTION



LOCATION MAP

N.T.S.

CONDITIONS OF APPROVAL:

1. SUBDIVISION RECORDING PLAT A REVISED RECORDING PLAT, LISTING ALL CONDITIONS OF SUBDIVISION APPROVAL, MUST BE SUBMITTED TO THE PLANNING AND URBAN DEVELOPMENT DEPARTMENT FOR REVIEW, ONCE APPROVED, THE PLAT SHALL BE SIGNED BY THE PLANNING BOARD PRIOR TO THE ISSUANCE OF A PERFORMANCE GUARANTEE. THE PERFORMANCE GUARANTEE MUST BE ISSUED, PRIOR TO THE RELEASE OF THE RECORDING PLAT, FOR RECORDING AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS.

2. SUBDIVISION WAIVERS PURSUANT TO 30-A MRSA SECTION 4406(B)(1), ANY WAIVER MUST BE SPECIFIED ON THE SUBDIVISION PLAN OR OUTLINED IN A NOTICE. THE PLAN OR NOTICE MUST BE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS WITHIN TWO (2) YEARS OF THE FINAL SUBDIVISION APPROVAL.

3. PERFORMANCE GUARANTEE AND INSPECTION FEES A PERFORMANCE GUARANTEE COVERING THE SITE IMPROVEMENTS, INSPECTION FEE PAYMENT OF 2.0% OF THE GUARANTEE AMOUNT AND THREE (3) FINAL SETS OF PLANS MUST BE SUBMITTED TO AND APPROVED BY THE PLANNING AND URBAN DEVELOPMENT DEPARTMENT AND PUBLIC WORKS DEPARTMENT PRIOR TO THE RELEASE OF A BUILDING PERMIT, STREET OPENING PERMIT OR CERTIFICATE OF OCCUPANCY FOR SITE PLANS. IF YOU NEED TO MAKE ANY MODIFICATIONS TO THE APPROVED PLANS, YOU MUST SUBMIT A REVISED SITE PLAN APPLICATION FOR STAFF REVIEW AND APPROVAL.

4. DEFECT GUARANTEE A DEFECT GUARANTEE, CONSISTING OF 10% OF THE PERFORMANCE GUARANTEE, MUST BE POSTED BEFORE THE PERFORMANCE GUARANTEE WILL BE RELEASED.

5. PRECONSTRUCTION MEETING PRIOR TO THE RELEASE OF A BUILDING PERMIT OR SITE CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE. THIS MEETING WILL BE HELD WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE DEVELOPMENT REVIEW COORDINATOR WILL CONFIRM THAT THE CONTRACTOR IS WORKING FROM THE APPROVED SITE PLAN. THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRE-CONSTRUCTION MEETING.

6. SEPARATE BUILDING PERMITS ARE REQUIRED THIS APPROVAL DOES NOT CONSTITUTE APPROVAL OF BUILDING PLANS, WHICH MUST BE REVIEWED AND APPROVED BY THE CITY OF PORTLAND'S PERMITTING AND INSPECTIONS DEPARTMENT.

7. DEPARTMENT OF PUBLIC WORKS PERMITS IF WORK OR OBSTRUCTIONS WILL OCCUR WITHIN THE PUBLIC RIGHT-OF-WAY, SUCH AS UTILITIES, CURB, SIDEWALK, DRIVEWAY CONSTRUCTION, SITE DELIVERIES AND EQUIPMENT SITING, A STREET OPENING AND/OR OCCUPANCY PERMIT (S) IS REQUIRED FOR YOUR SITE. PLEASE CONTACT THE DEPARTMENT OF PUBLIC WORKS PERMIT CLERK AT 874-8300, EXT. 8828. (ONLY EXCAVATORS LICENSED BY THE CITY OF PORTLAND ARE ELIGIBLE.)

8. CONSTRUCTION MANAGEMENT PLANS - *PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY* - THE APPLICANT, CONTRACTOR AND SUBCONTRACTORS ARE REQUIRED TO CONFORM TO THE APPROVED CONSTRUCTION MANAGEMENT PLAN, AND ALL CONDITIONS CONTAINED WITHIN THE PROJECT'S APPROVAL, FOR THE ENTIRE DURATION OF THE PROJECT. ANY AMENDMENTS TO THE APPROVED CONSTRUCTION MANAGEMENT PLAN SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE EXECUTION. THE PLANNING AUTHORITY AND THE DEPARTMENT OF PUBLIC WORKS HAVE THE RIGHT TO SEEK REVISIONS TO AN APPROVED CONSTRUCTION MANAGEMENT PLAN. THE APPLICANT SHALL COORDINATE THE PROJECT'S CONSTRUCTION SCHEDULE WITH THE TIMING OF NEARBY CONSTRUCTION ACTIVITIES TO AVOID CUMULATIVE IMPACTS ON A NEIGHBORHOOD AND PREVENT UNSAFE VEHICLE AND PEDESTRIAN MOVEMENTS. ACCORDINGLY, NEARBY CONSTRUCTION ACTIVITIES COULD INVOLVE A DELAY IN THE COMMENCEMENT OF CONSTRUCTION.

9. AS-BUILT FINAL PLANS - *PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY* - FINAL SETS OF AS-BUILT PLANS SHALL BE SUBMITTED DIGITALLY TO THE PLANNING AND URBAN DEVELOPMENT DEPARTMENT, ON A CD OR DVD, IN AUTOCAD FORMAT (*.DWG), RELEASE AUTOCAD 2005 OR GREATER.

10. DEVELOP SITE ACCORDING TO PLAN - *ONGOING CONDITION OF APPROVAL* - THE SITE SHALL BE DEVELOPED AND MAINTAINED AS DEPICTED ON THE SITE PLAN AND IN THE WRITTEN SUBMISSION OF THE APPLICANT. MODIFICATION OF ANY APPROVED SITE PLAN OR ALTERATION OF A PARCEL WHICH WAS THE SUBJECT OF SITE PLAN APPROVAL AFTER MAY 20, 1974, SHALL REQUIRE THE PRIOR APPROVAL OF A REVISED SITE PLAN BY THE PLANNING BOARD OR PLANNING AUTHORITY PURSUANT TO THE TERMS OF CHAPTER 14, LAND USE, OF THE PORTLAND CITY CODE.

11. SITE PLAN EXPIRATION THE SITE PLAN APPROVAL WILL BE DEEMED TO HAVE EXPIRED UNLESS WORK HAS COMMENCED WITHIN ONE (1) YEAR OF THE APPROVAL OR WITHIN A TIME PERIOD UP TO THREE (3) YEARS FROM THE APPROVAL DATE AS AGREED UPON IN WRITING BY THE CITY AND THE APPLICANT. REQUESTS TO EXTEND APPROVALS MUST BE RECEIVED BEFORE THE ONE (1) YEAR EXPIRATION DATE.

12. SUBDIVISION EXPIRATION THE SUBDIVISION APPROVAL IS VALID FOR UP TO THREE (3) YEARS FROM THE DATE OF PLANNING BOARD APPROVAL.

10. MYLAR COPIES MYLAR COPIES OF THE AS-BUILT DRAWINGS FOR THE PUBLIC STREETS AND OTHER PUBLIC INFRASTRUCTURE IN THE SUBDIVISION MUST BE SUBMITTED TO PUBLIC WORKS PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

GENERAL NOTES:

1. OWNERS OF RECORD: VERDANTE CONDOMINIUM, LLC
   TAX MAP 28 BLOCK C LOTS 13,16&17
   BOOK 34803 PAGE 8
   BOOK 34999 PAGE 178

   CLARK BOX, LLC
   TAX MAP 28 BLOCK C LOT 18
   BOOK 31943 PAGE 126

   ROBINSON & ALLEN
   PORTION OF TAX MAP 28 BLOCK C LOT 9
   BOOK 20875 PAGE 305

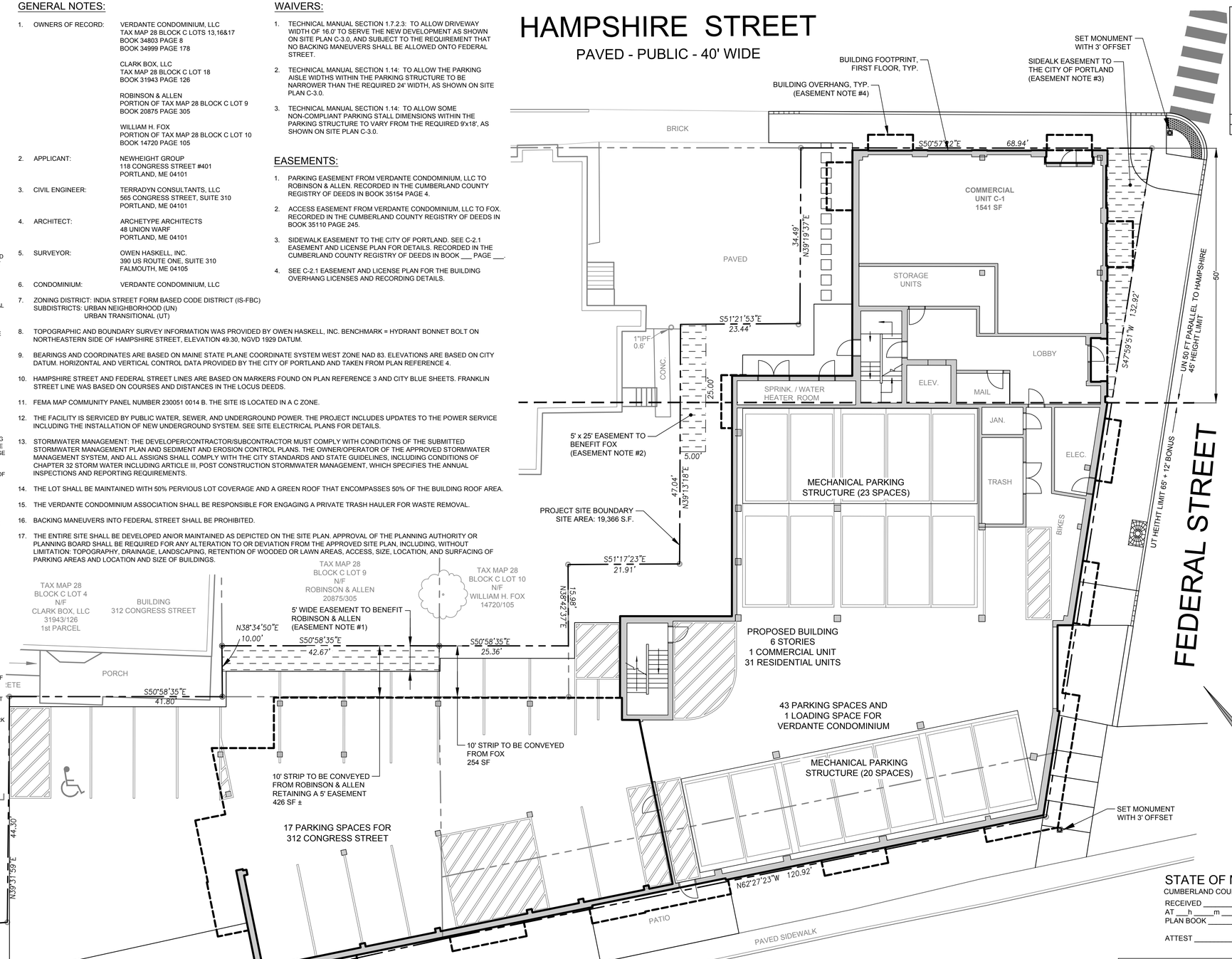
   WILLIAM H. FOX
   PORTION OF TAX MAP 28 BLOCK C LOT 10
   BOOK 14720 PAGE 105
2. APPLICANT: NEWHEIGHT GROUP
   118 CONGRESS STREET #401
   PORTLAND, ME 04101
3. CIVIL ENGINEER: TERRADYN CONSULTANTS, LLC
   565 CONGRESS STREET, SUITE 310
   PORTLAND, ME 04101
4. ARCHITECT: ARCHETYPE ARCHITECTS
   48 UNION WARF
   PORTLAND, ME 04101
5. SURVEYOR: OWEN HASKELL, INC.
   390 US ROUTE ONE, SUITE 310
   FALMOUTH, ME 04105
6. CONDOMINIUM: VERDANTE CONDOMINIUM, LLC
7. ZONING DISTRICT: INDIA STREET FORM BASED CODE DISTRICT (IS-FBC)
   SUBDISTRICTS: URBAN NEIGHBORHOOD (UN)
   URBAN TRANSITIONAL (UT)
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON NORTHEASTERN SIDE OF HAMPSHIRE STREET, ELEVATION 49.30, NGVD 1929 DATUM.
9. BEARINGS AND COORDINATES ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83. ELEVATIONS ARE BASED ON CITY DATUM. HORIZONTAL AND VERTICAL CONTROL DATA PROVIDED BY THE CITY OF PORTLAND AND TAKEN FROM PLAN REFERENCE 4.
10. HAMPSHIRE STREET AND FEDERAL STREET LINES ARE BASED ON MARKERS FOUND ON PLAN REFERENCE 3 AND CITY BLUE SHEETS. FRANKLIN STREET LINE WAS BASED ON COURSES AND DISTANCES IN THE LOCUS DEEDS.
11. FEMA MAP COMMUNITY PANEL NUMBER 230051 0014 B. THE SITE IS LOCATED IN A C ZONE.
12. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
13. STORMWATER MANAGEMENT: THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLANS. THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM, AND ALL ASSIGNS SHALL COMPLY WITH THE CITY STANDARDS AND STATE GUIDELINES, INCLUDING CONDITIONS OF CHAPTER 32 STORM WATER INCLUDING ARTICLE III, POST CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS.
14. THE LOT SHALL BE MAINTAINED WITH 50% PERVIOUS LOT COVERAGE AND A GREEN ROOF THAT ENCOMPASSES 50% OF THE BUILDING ROOF AREA.
15. THE VERDANTE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR ENGAGING A PRIVATE TRASH HAULER FOR WASTE REMOVAL.
16. BACKING MANEUVERS INTO FEDERAL STREET SHALL BE PROHIBITED.
17. THE ENTIRE SITE SHALL BE DEVELOPED AN/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.

WAIVERS:

1. TECHNICAL MANUAL SECTION 1.7.2.3: TO ALLOW DRIVEWAY WIDTH OF 16.0' TO SERVE THE NEW DEVELOPMENT AS SHOWN ON SITE PLAN C-3.0, AND SUBJECT TO THE REQUIREMENT THAT NO BACKING MANEUVERS SHALL BE ALLOWED ONTO FEDERAL STREET.
2. TECHNICAL MANUAL SECTION 1.14: TO ALLOW THE PARKING AISLE WIDTHS WITHIN THE PARKING STRUCTURE TO BE NARROWER THAN THE REQUIRED 24' WIDTH, AS SHOWN ON SITE PLAN C-3.0.
3. TECHNICAL MANUAL SECTION 1.14: TO ALLOW SOME NON-COMPLIANT PARKING STALL DIMENSIONS WITHIN THE PARKING STRUCTURE TO VARY FROM THE REQUIRED 9'x18', AS SHOWN ON SITE PLAN C-3.0.

EASEMENTS:

1. PARKING EASEMENT FROM VERDANTE CONDOMINIUM, LLC TO ROBINSON & ALLEN. RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 35154 PAGE 4.
2. ACCESS EASEMENT FROM VERDANTE CONDOMINIUM, LLC TO FOX. RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 35110 PAGE 245.
3. SIDEWALK EASEMENT TO THE CITY OF PORTLAND. SEE C-2.1 EASEMENT AND LICENSE PLAN FOR DETAILS. RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK ___ PAGE ___.
4. SEE C-2.1 EASEMENT AND LICENSE PLAN FOR THE BUILDING OVERHANG LICENSES AND RECORDING DETAILS.



PLAN REFERENCES:

1. "BOUNDARY & TOPOGRAPHIC SURVEY AT 56 HAMPSHIRE STREET, PORTLAND, MAINE MADE FOR THE NEWHEIGHT GROUP" DATED JANUARY 27, 2017, REV. DATE AUGUST 16, 2018 BY OWEN HASKELL, INC.
2. "EXISTING CONDITIONS SURVEY AT 290 CONGRESS STREET, PORTLAND, MAINE MADE FOR CASCO BAY ENGINEERING" MAY 6, 2014 BY OWEN HASKELL, INC.
3. "LAND TITLE SURVEY ON CONGRESS ST., HAMPSHIRE ST., FEDERAL ST., PORTLAND, MAINE FOR OAK LEAF TERRACE CO." SEPT. 28, 1995 REV. 1 3-17-02 BY OWEN HASKELL, INC.
4. "CITY OF PORTLAND PUBLIC WORKS DEPARTMENT CONTRACT DRAWINGS HAMPSHIRE STREET RECONSTRUCTION BRATTLE STREET RECONSTRUCTION PROJECT NO. 210-3100-430" DATED 11/16/01. ON FILE AT THE CITY OF PORTLAND.
5. "PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR RALPH J. TALIENTO & JOHN J. TALIENTO" DATED MARCH 24, 1978 BY H.I. & E.C. JORDAN COMPANY, PLAN FILE #77.
6. "ALTA/ACSM LAND TITLE SURVEY ON LAND LOCATED AT 316-316A CONGRESS STREET IN PORTLAND, MAINE" DATED 7/13/2000 BY NADEAU & LODGE, INC.

RECORDING REFERENCES:

1. VERDANTE CONDOMINIUM, LLC DECLARATION OF CONDOMINIUM RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK ___ PAGE ___.
2. STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT FOR VERDANTE CONDOMINIUM, LLC RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK ___ PAGE ___.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

LEGEND

- EXISTING PROPERTY LINE
- PROJECT SITE BOUNDARY
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING CURB
- PROPOSED CURB
- EXISTING IRON PIPE OR ROD
- CAPPED IRON ROD TO BE SET
- GRANITE MONUMENT TO BE SET
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED EASEMENT

STATE OF MAINE
CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED _____, 20___
AT ___h _____m ____M. AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST _____ REGISTER

APPROVAL- CITY OF PORTLAND PLANNING BOARD

_____ DATE

_____ CHAIRPERSON

TO BE REVIEWED

STATE OF MAINE · MICHAEL E. TADEMA-WIELANDT · LICENSED PROFESSIONAL ENGINEER

PLS:

P.E.: MICHAEL E. TADEMA-WIELANDT

DATE: 02-07-2019

NO.	DATE	REVISIONS	APP'D BY
17	02-07-2019	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
16	12-13-2018	SUBMITTED TO PLANNING BOARD FOR AMENDED APPROVAL	MTW
15	11-15-2018	REVISED PER CITY COMMENTS	MTW
14	10-23-2018	REISSUED FOR PLANNING APPROVAL OF OFF SITE ELECTRICAL WORK	MTW
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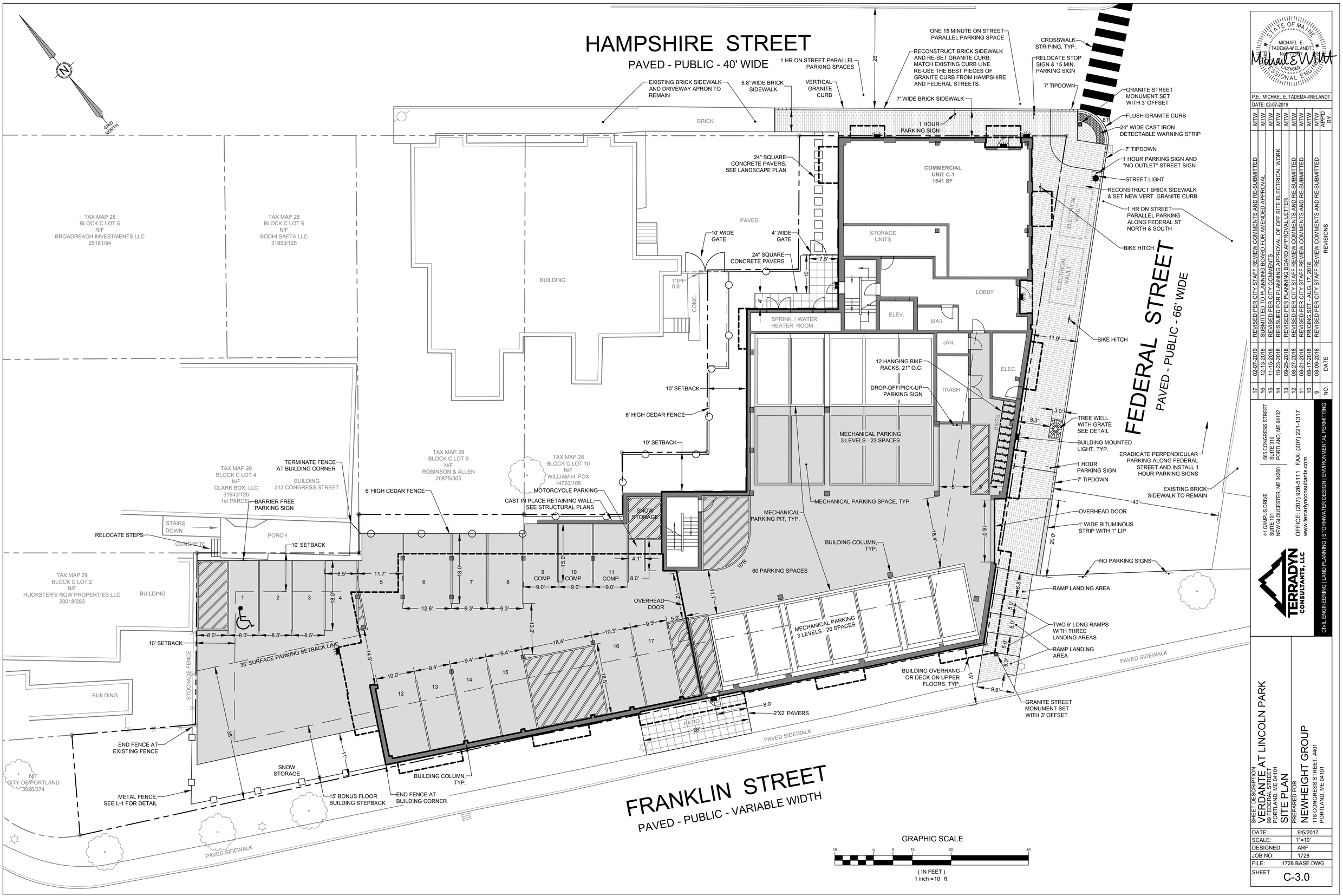
TERRADYN CONSULTANTS, LLC
CIVIL ENGINEERING | LAND PLANNING | STORMWATER DESIGN | ENVIRONMENTAL PERMITTING
565 CONGRESS STREET SUITE 310 PORTLAND, ME 04102
41 CAMPUS DRIVE SUITE 101 NEW GLOUCESTER, ME 04260
OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101

RECORDING PLAT

PREPARED FOR:
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-2.0



STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 02-07-2019

NO.	DATE	REVISIONS	APP'D BY
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565 CONGRESS STREET
SUITE 310
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SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101
SITE PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

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SHEET	C-3.0

HAMPSHIRE STREET
PAVED - PUBLIC - 40' WIDE

FEDERAL STREET
PAVED - PUBLIC - 66' WIDE

FRANKLIN STREET
PAVED - PUBLIC - VARIABLE WIDTH

GRID NORTH

BENCHMARK: TOP BONNET BOLT ELEV. =49.30

EXISTING BRICK SIDEWALK AND DRIVEWAY APRON TO REMAIN

RELOCATE CATCH BASIN AND CURB INLET, RESET RIM AT EL. 47.11, AND REPLACE 12" SD OUTLET

RIM=47.46
(A) 15" INV. IN=38.36
(B) 12" INV. IN=38.36
(C) 12" INV. IN=41.76
(D) 12" INV. IN=38.36
(E) 12" INV. IN=41.76
(F) 15" INV. OUT=38.26

RIM=47.47
INV. IN=38.17
INV. OUT=38.07

INSTALL DMH-1 ALONG 15" SD
RIM=47.46
INV IN=38.16 (APPROX. EXISTING)
INV IN= 38.26 (FROM DMH-2)
INV OUT=38.16 (APPROX. EXISTING)

ALTER & ADJUST CATCH BASIN, REMOVE CURB INLET, AND REPLACE FRAME & GRATE

RIM=47.14
INV. IN=43.34
INV. OUT=43.14

RIM=47.13
INV. IN=42.83
INV. OUT=42.73

12" SD L=112', S=0.039

COMMERCIAL UNIT C-1 1541 SF

STORAGE UNITS

LOBBY

SPRINK. / WATER HEATER ROOM

ELEV.

MAIL

JAN.

ELEC.

TRASH

MECHANICAL PARKING PIT

BIKES

BRICK

PAVED

BUILDING

CONC.

1"IPF 0.6'

2'x4' STONE APRON AT DOWNSPOUT

DOWNSPOUT (DS)

CAST IN PLACE RETAINING WALL

BUILDING
312 CONGRESS STREET

STAIRS DOWN

CONCRETE

PORCH

BUILDING

STOCKADE FENCE

BUILDING

CLEAN OUT INV.=46.41

6"x12" WYE

6"x12" WYE INV.=45.75

TRENCH DRAIN, SEE DETAIL

MECHANICAL PARKING PIT

OIL WATER SEPARATOR
INV IN=45.15
INV OUT=44.90

12" SD L=126', S=0.01

PATIO

PAVED SIDEWALK

APPROX. LOCATION OF 6" ROOF DRAIN CONNECTIONS TO STORM DRAIN, TYP. OF 2 SEE MECHANICAL PLANS FOR CONTINUATION

DMH-2
RIM ELEV 48.72
INV IN=42.72
INV OUT 42.62

12" SD L=44', S=0.05

STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION GATE PER CONSTRUCTION MANAGEMENT PLAN

EXISTING BRICK SIDEWALK TO REMAIN

EXISTING PAVED PARKING

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch =10 ft.

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
REGISTERED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 02-07-2019

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565 CONGRESS STREET SUITE 410 PORTLAND, ME 04102
OFFICE: (207) 926-5111 FAX: (207) 221-1317
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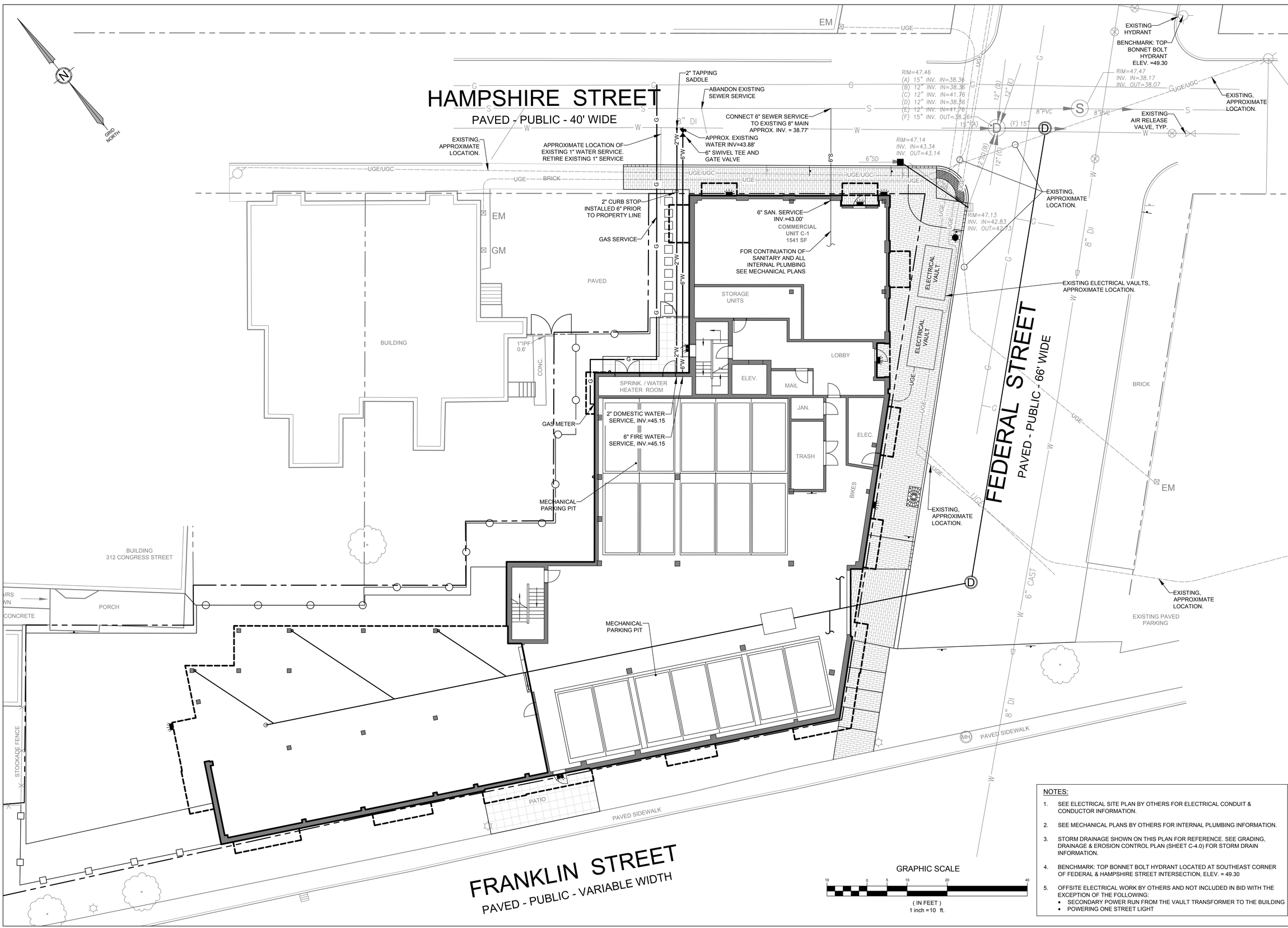
SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101

GRADING, DRAINAGE & EROSION CONTROL PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	C-4.0



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

NOTES:

1. SEE ELECTRICAL SITE PLAN BY OTHERS FOR ELECTRICAL CONDUIT & CONDUCTOR INFORMATION.
2. SEE MECHANICAL PLANS BY OTHERS FOR INTERNAL PLUMBING INFORMATION.
3. STORM DRAINAGE SHOWN ON THIS PLAN FOR REFERENCE. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN (SHEET C-4.0) FOR STORM DRAIN INFORMATION.
4. BENCHMARK: TOP BONNET BOLT HYDRANT LOCATED AT SOUTHEAST CORNER OF FEDERAL & HAMPSHIRE STREET INTERSECTION, ELEV. = 49.30
5. OFFSITE ELECTRICAL WORK BY OTHERS AND NOT INCLUDED IN BID WITH THE EXCEPTION OF THE FOLLOWING:
   - SECONDARY POWER RUN FROM THE VAULT TRANSFORMER TO THE BUILDING
   - POWERING ONE STREET LIGHT

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565 CONGRESS STREET SUITE 410 PORTLAND, ME 04260

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101
UTILITY PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
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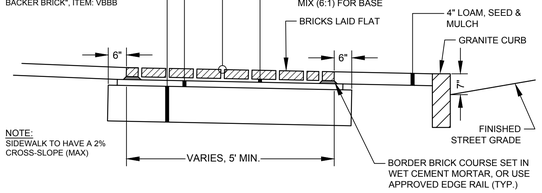
SHEET	C-5.0

BRICKS TO BE USED:

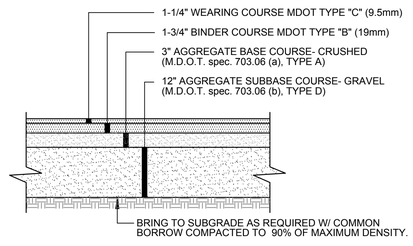
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK, MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. "VERMONT BACKER BRICK", ITEM: VBBB



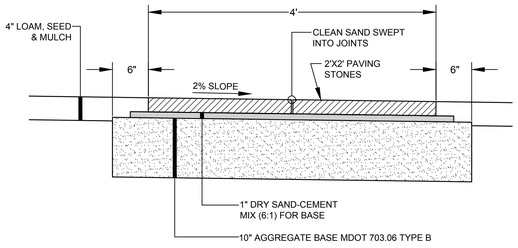
NOTE:
SIDEWALK TO HAVE A 2% CROSS-SLOPE (MAX)

BRICK SIDEWALK WITH BITUMINOUS BASE
NOT TO SCALE



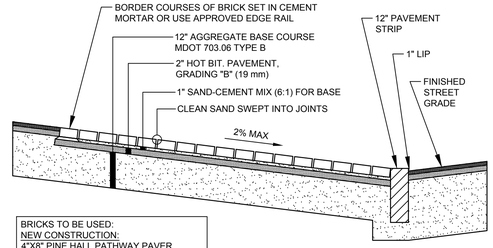
NOTES:
1. MDOT TYPE D AGGREGATE GRADATION SHALL BE MODIFIED FOR A MAXIMUM 4" STONE AND LIMIT #200 SIEVE TO 5% PASSING.

TYP. PAVEMENT SECTION
NOT TO SCALE



PAVER NOTES:
PAVING STONES: LEXINGTON PARK TILE BY GENESTE CONCRETE.
COLOR: GRANITE BLEND
LAYING PATTERN: STACK BOND

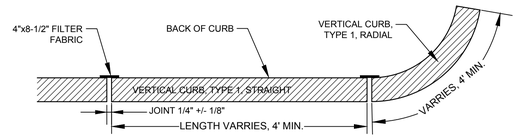
PAVER PATIO
NOT TO SCALE



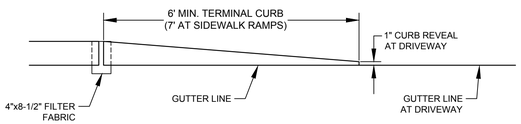
BRICKS TO BE USED:
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK MFG. BY PINE HALL BRICK CO., MADISON, NC, LACHANCE ITEM # 193623

REPAIR/MAINTENANCE TO EXISTING:
VERMONT BACKER BRICK, SUPPLIED BY GAGNE & SONS, ITEM # VBBB

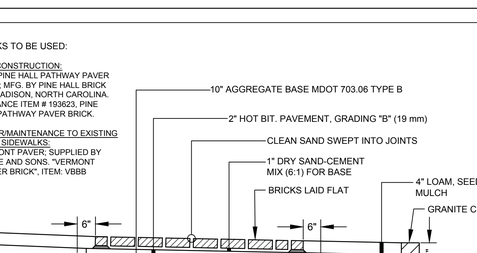
BRICK DRIVEWAY APRON
NOT TO SCALE



PLAN VIEW



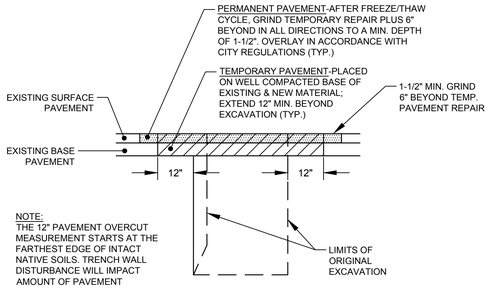
TERMINAL CURB PROFILE



SECTION

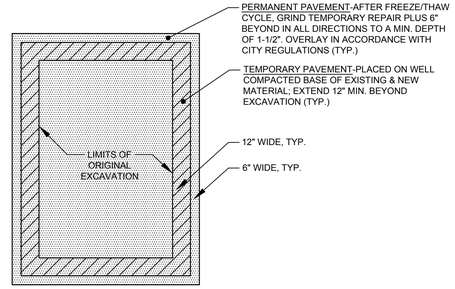
NOTES:
1. MIN. LENGTH OF STRAIGHT CURB STONES: 4', MAX. LENGTH: 8'
2. CIRCULAR CURB REQ. FOR RADIUS LESS THAN 50'
3. BASE GRAVEL SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB.

VERTICAL GRANITE CURB
NOT TO SCALE

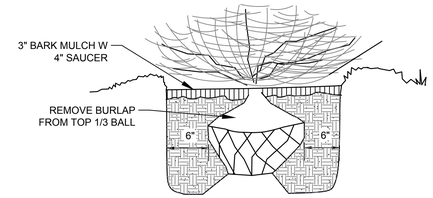


NOTE:
THE 12" PAVEMENT OVERCUT MEASUREMENT STARTS AT THE FARTHEST EDGE OF INTACT NATIVE SOILS. TRENCH WALL DISTURBANCE WILL IMPACT AMOUNT OF PAVEMENT REMOVAL REQUIRED

TYP. EXCAVATION IN CITY RIGHT OF WAY
NOT TO SCALE



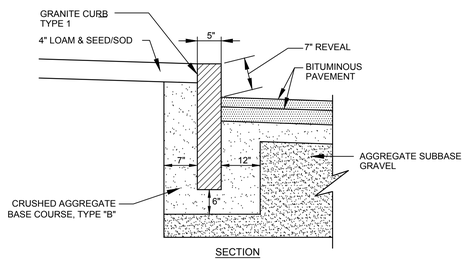
PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR
NOT TO SCALE



NOTE:
SHRUBS SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING.

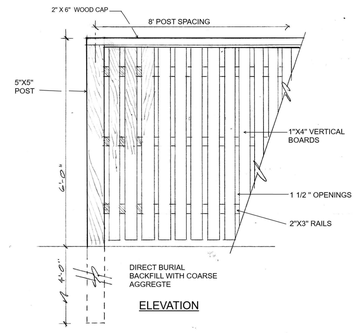
SOIL MIX NOTES:
1. EVERGREEN: 4 PARTS TOPSOIL, 1 PART HUMUS
2. DECIDUOUS: 4 PARTS TOPSOIL, 1 PART MANURE

SHRUB PLANTING DETAIL
NOT TO SCALE



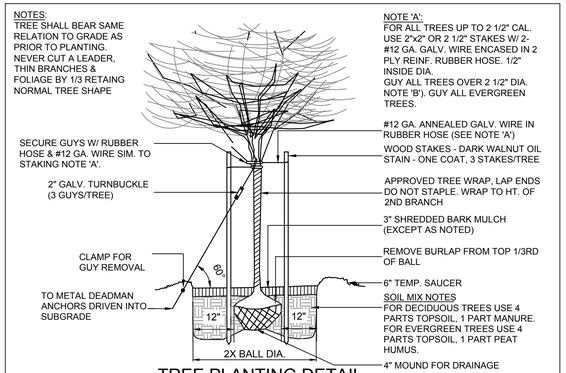
NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL RAMPS SHALL HAVE DETECTABLE WARNINGS THE FULL WIDTH AND 24" DEPTH OF THE RAMP PER SECTION 4.29 OF THE ADA.
3. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

HANDICAP RAMP AT ROAD INTERSECTION
NOT TO SCALE



ELEVATION

WOOD FENCE DETAIL
NTS

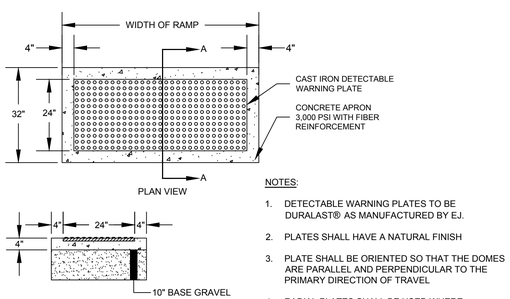


NOTES:
TREE SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING. NEVER CUT A LEADER, THIN BRANCHES & FOLIAGE BY 1/3 RETAING NORMAL TREE SHAPE

NOTE 'A':
FOR ALL TREES UP TO 2 1/2" CAL. USE 2"x2" OR 2 1/2" STAKES W/ 2-#12 GA. GALV. WIRE ENCASED IN 2 PLY REINF. RUBBER HOSE. 1/2" INSIDE DIA.
GUY ALL TREES OVER 2 1/2" DIA. NOTE 'B'). GUY ALL EVERGREEN TREES.

#12 GA. ANNEALED GALV. WIRE IN RUBBER HOSE (SEE NOTE 'A')
WOOD STAKES - DARK WALNUT OIL STAIN - ONE COAT, 3 STAKES/TREE
APPROVED TREE WRAP, LAP ENDS DO NOT STAPLE. WRAP TO HT. OF 2ND BRANCH
3" SHREDDED BARK MULCH (EXCEPT AS NOTED)
REMOVE BURLAP FROM TOP 1/3RD OF BALL
6" TEMP. SAUCER
SOIL MIX NOTES
FOR DECIDUOUS TREES USE 4 PARTS TOPSOIL, 1 PART MANURE. FOR EVERGREEN TREES USE 4 PARTS TOPSOIL, 1 PART PEAT HUMUS.
4" MOUND FOR DRAINAGE

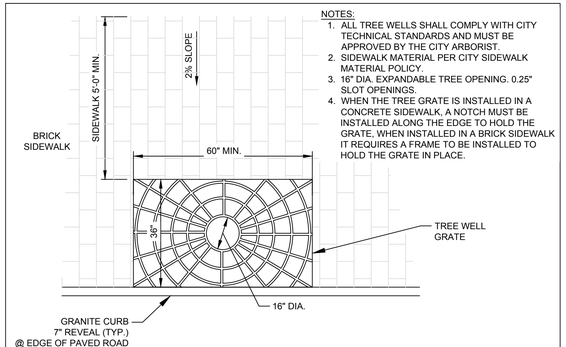
TREE PLANTING DETAIL
NOT TO SCALE



SECTION A-A

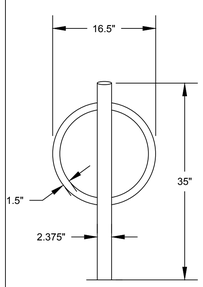
NOTES:
1. DETECTABLE WARNING PLATES TO BE DURALAST® AS MANUFACTURED BY EJ.
2. PLATES SHALL HAVE A NATURAL FINISH
3. PLATE SHALL BE ORIENTED SO THAT THE DOMES ARE PARALLEL AND PERPENDICULAR TO THE PRIMARY DIRECTION OF TRAVEL
4. RADIAL PLATES SHALL BE USED WHERE APPLICABLE.

DETECTABLE WARNING PLATE DETAIL
NOT TO SCALE



NOTES:
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.
2. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.
3. 16" DIA. EXPANDABLE TREE OPENING. 0.25" SLOT OPENINGS.
4. WHEN THE TREE GRATE IS INSTALLED IN A CONCRETE SIDEWALK, A NOTCH MUST BE INSTALLED ALONG THE EDGE TO HOLD THE GRATE. WHEN INSTALLED IN A BRICK SIDEWALK IT REQUIRES A FRAME TO BE INSTALLED TO HOLD THE GRATE IN PLACE.

EXPANDABLE TREE GRATE NEENAH MODEL R-8810
NOT TO SCALE



NOTES:

PRODUCT:
DERO BIKE HITCH AS MANUFACTURED BY DERO BIKE RACKS

CAPACITY:
2 BIKES

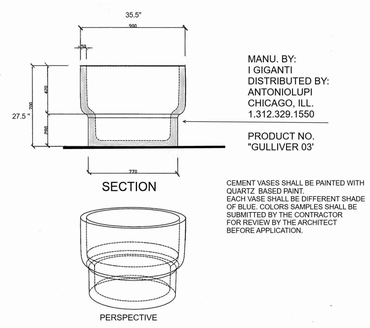
MATERIALS:
CENTERBEAM 2" SCHEDULE 40 PIPE (2.375" OD)
RING 1.5" OD 11 GAUGE TUBE

INSTALLATION METHODS:
IN-GROUND MOUNT IS EMBEDDED INTO CONCRETE BASE. SURFACE MOUNT HAS ONE 5"x6" FOOT WHICH IS ANCHORED TO THE GROUND WITH FOUR ANCHORS

SETBACKS:
24" PARALLEL TO WALL
54" PERPENDICULAR TO WALL
36" PARALLEL TO STREET
76" PERPENDICULAR TO STREET

BIKE HITCH SHALL BE INSTALLED USING THE IN GROUND METHOD

BIKE HITCH
NOT TO SCALE



CEMENT VASES SHALL BE PAINTED WITH QUARTZ BASED PAINT. EACH VASE SHALL BE DIFFERENT SHADE OF BLUE. COLORS SAMPLES SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY THE ARCHITECT BEFORE APPLICATION.

ROOFTOP PLANTER DETAIL
NTS

STATE OF MAINE
MICHAEL E. TADEMA-WIELANDT
#10121
LICENSED PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WIELANDT
DATE: 02-07-2019

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14	10-23-2018	REISSUED FOR PLANNING APPROVAL OF OFF SITE ELECTRICAL WORK	MTW
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12	08-27-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
10	08-17-2018	PRICING SET - AUG. 17, 2018	MTW
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW

565 CONGRESS STREET
SUITE 410
PORTLAND, ME 04101

41 CAMPUS DRIVE
SUITE 101
NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317
www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC
CIVIL ENGINEERING | LAND PLANNING | STORMWATER DESIGN | ENVIRONMENTAL PERMITTING

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
99 FEDERAL STREET
PORTLAND, ME 04101
SITE & PLANTING DETAILS

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	N.T.S.
DESIGNED:	ARF
JOB NO:	1728
FILE: 1728 DETAILS.DWG	

SHEET C-6.0

HAMPSHIRE STREET

CONGRESS STREET

N

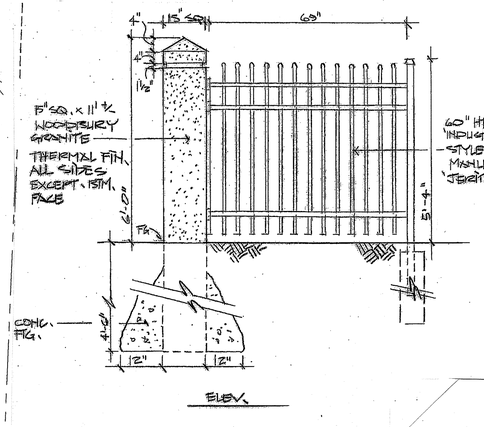
PLANT LIST

TREES & SHRUBS

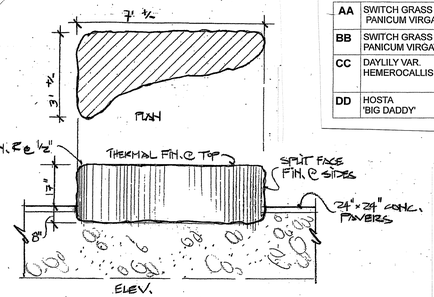
KEY	COMMON & BOTANICAL NAME	SIZE	ROOT	QTY	NOTES
A	STREETKEEPER HONEYLOCUST G. TRIACANTHOS Var. 'inermis' 'Streetkeeper'	2 ½" Cal.	B&B	7	Trim for 8' clear under branches
C	SHASTA VIBURNUM V. PLICATUM Var. TOMENTOSUM 'SHASTA'	3'-4' HT.	B&B	9	
D	CORNELIAN CHERRY CORNUS MAS	4' HT.	B&B	2	
E	NORTHERN BAYBERRY M. PENSYLVANICA	18-24" HT.	PTD	8	
F	FRAGRANT SUMAC RHUS AROMATICA 'Gro-Low'	#2	CONT	37	
G	SHASTA VIBURNUM V.PLICATUM VAR. Tomentosum 'Summer Snowflake'	#5	B&B	6	
H	GREEN CARPET JUNIPER J. SABINA	#3	CONT	10	
I	CLETHRA CLETHRA ALNIFOLIA 'Hummingbird'	#2	CONT.	6	
J	SHADBLOW AMELANCHIER X GRANDIFLORA 'Autumn Brilliance'	6'-7' HT.	B&B	3	2 Trunk
K	BLUE PRINCESS HOLLY [Rooftop Planters] ILEX MESERVE ' Blue Princess'	#10	CONT.	3	

PERENNIALS

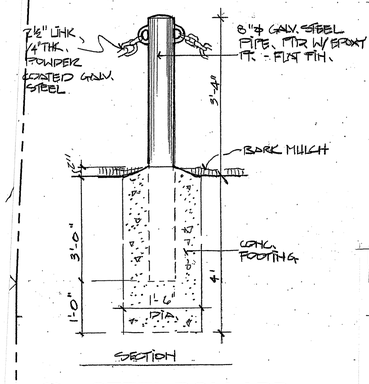
AA	SWITCH GRASS PANICUM VIRGATUM 'Cheyenne sky'	——	16	@18" O.C.
BB	SWITCH GRASS PANICUM VIRGATUM ' Shenandoah'	——	24	"
CC	DAYLILY VAR. HEMEROCALLIS	PTD	70	BLOOM IN JULY THRU SEPT 18" O.C.
DD	HOSTA 'BIG DADDY'	——	25	



1/L-1 **METAL FENCE DETAIL**
1½" = 1'-0"



3/L-1 **STONE BENCH DETAIL** NTS



2/L-1 **STEEL BOLLARD DETAIL**

PLANTING NOTES

1. The contractor shall supply all plants in quantities sufficient to complete the work shown on plan. Any discrepancies between quantities shown on plant list and those required by this drawing shall not entitle contractor to additional remuneration.
2. Any plant substitutions must be approved by the owner.
3. Any tree or shrub which comes over or under any utility shall be relocated on the site by the landscape architect.
4. All lawn areas to have 6" of topsoil unless noted otherwise.
5. All trees and shrubs shall be placed in the designated areas as shown on the plan and before planting shall be approved by the landscape architect.
6. The contractor shall relocate any tree or shrub as directed by the landscape architect.
7. All plant material installed shall meet the specifications of the American Standard for Nursery Stock (latest edition) as set forth by the American Association of Nurserymen.
8. The landscape contractor shall replace or repair to original condition any and all utilities, paving, curbing, etc., damaged as a result of their operations at no additional cost to the owner.

GRAPHIC SCALE
5 10 20 40
(IN FEET)
1 inch = 10 ft.

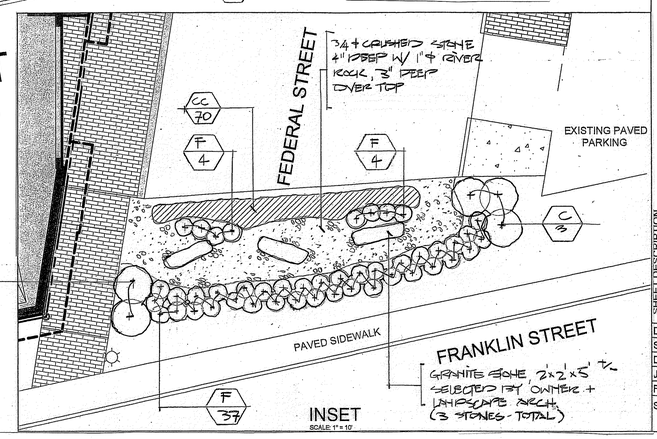
(EXISTING TREES - TOTAL 3 TREES)
PROTECT TREES IF POSSIBLE.
COORDINATE WITH CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT

PATIO, UNDERSTORY PLANTING AND GRANITE BLOCKS W/IN R.O.W. TO BE MAINTAINED BY THE CONDO ASSOCIATION.

THE CITY WILL MAINTAIN THE STREET TREES W/IN THE R.O.W..

24" SQ. CONC. PAVERS SHT. C-6.0
STEEL BOLLARD CONNECT & BOLLARDS W/ CHAIN
6' HT. WOODEN FENCE
10' W WOODEN GATE
4' W GATE
BARK MULCH
EASEMENT
NEW 6' WOOD FENCE
BARK MULCH - 3" DEEP
TOTAL 3 PLANTERS
GREEN ROOF 698 SF
ROOFTOP PLANTER
SHT. C-6.0
SCREEN
PRIVATE DECK 283 SF
WILD GINGER, AJUGA & THYME VAR.
PAVER SK. PLAN VIEW
NEW 6' HT. WOOD FENCE
EASEMENT
PORCH
CONCRETE
STAIRS DOWN
STONE BENCH
SEE INSET
PAVED SIDEWALK
BUILDING
STOCKADE FENCE
BRICK
SIGNAL POLE
3/4"Ø CRUSHED STONE 4" DEEP W/ 1" Ø RIVER ROCK, 3" DEEP OVER TOP
4" BARK MULCH
CITY OF PORTLAND
LAWN
GRANITE STONE 2'x2'x5' +/- SELECTED BY OWNER & LANDSCAPE ARCH.
METAL FENCE
GRANITE POST
PAVED SIDEWALK

FRANKLIN STREET
PUBLIC - VARIABLE WIDTH



REGISTERED LANDSCAPE ARCHITECT
ANTHONY MARK WENCH
No. 7
9-7-18
State of Maine

DATE: 11-15-2018

NO.	DATE	REVISIONS	APP'D
16	1-15-2019	ADDED 3 PLANTERS ON ROOF	MTW
15	11-15-2018	ISSUED FOR BID	MTW
14	10-23-2018	REISSUED FOR PLANNING APPROVAL OF OFF SITE ELECTRICAL WORK	MTW
13	09-25-2018	REVISED PER PLANNING BOARD APPROVAL LETTER	MTW
12	09-07-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
11	08-21-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
10	08-17-2018	PRICING SET + ADDS	MTW
9	08-09-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
8	07-27-2018	REVISED UNIT COUNT AND ADDED EASEMENT #3	MTW
7	07-20-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
6	07-03-2018	PRICING SET - JULY 3, 2018	MTW
5	06-11-2018	REVISED PER COMMENTS AND RE-SUBMITTED	MTW
4	04-09-2018	REVISED BUILDING FOOTPRINT AND PARKING DIMENSIONS	MTW
3	03-06-2018	REVISED PER CITY STAFF REVIEW COMMENTS AND RE-SUBMITTED	MTW
2	01-12-2018	UPDATED UTILITY PLAN PER PORTLAND WATER DISTRICT COMMENTS	MTW
1	12-22-2017	SUBMITTED TO PLANNING BOARD FOR APPROVAL	MTW

TERRADYN CONSULTANTS, LLC
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting
565 CONGRESS STREET SUITE 310 PORTLAND, ME 04101
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www.terradynconsultants.com
P.O. BOX 339 111 FLEWELLEN'S LANE NEW GLOUCESTER, ME 04260

SHEET DESCRIPTION
VERDANTE AT LINCOLN PARK
56 HAMPSHIRE STREET
PORTLAND, ME 04101
LANDSCAPE PLAN

PREPARED FOR
NEWHEIGHT GROUP
118 CONGRESS STREET, #401
PORTLAND, ME 04101

DATE:	9/5/2017
SCALE:	1"=10'
DESIGNED:	ARF
JOB NO:	1728
FILE:	1728 BASE.DWG
SHEET	L-1

HAMPSHIRE STREET

68
HAMPSHIRE

60-62
HAMPSHIRE

312
CONGRESS

AREA CALCULATIONS

1ST FLOOR	12,456 GSF	
2ND FLOOR	13,380 GSF	9 UNITS
3RD FLOOR	13,420 GSF	9 UNITS
4TH FLOOR	9,655 GSF	5 UNITS
5TH FLOOR	9,449 GSF	5 UNITS
6TH FLOOR	5,953 GSF	3 UNITS
	64,313 GSF	31 UNITS

1 RETAIL SPACE
60 PARKING SPACES

RETAIL
A
+EL. 48'-5 1/2"

CHAINLINK FENCE
STORAGE UNITS

+EL. 50'-8"

ADA STOR.

RESTROOM N.I.C.
PROVIDE ROUGH-INS
AT THESE LOCATIONS

LOBBY
SEE DETAIL 4 / A6.20
+EL. 48'-9"

SPRINKL / WATER
HEATER ROOM
+EL. 48'-9"

MAIL
ROOM

JAN./
STORAGE

GREEN WALL

PARKING PIT
EL. 42'-11"

MECHANICAL PARKING
SYSTEM 3 LEVELS

MECHANICAL PARKING
SYSTEM 2 LEVELS

TRASH

ELEC.

EL. 49'-0 1/4" +

ADA
DROP-OFF

BIKES

FEDERAL STREET

RETAING WALL
SEE CIVIL DRAWINGS

BIKES

60 PARKING SPACES

16'x10' PTD METAL GARAGE
DOOR - THERMACORE MODEL
591 BY OVERHEAD DOOR

+EL. 49'-0 3/4"

EL. 49'-3" +

+EL. 49'-8"

+EL. 49'-7"

WIRE MESH METAL SCREEN
BESIDE MECHANICAL PARKING

MECHANICAL PARKING
SYSTEM 3 LEVELS

12' X 10' ROLLING STEEL DOOR
MODEL 610 BY OVERHEAD DOOR CO.

EL. 49'-6 1/2" +

RAMP UP

PARKING STRIPING &
NUMBERING, TYP.

PARKING PIT
EL. 42'-11"
30'-11"

PATIO

SIDEWALK

CONC. WHEEL STOP, TYP.

FRANKLIN STREET

1 | 1ST FLOOR
1/8" = 1'-0"

Prepared For:
NewHeight Group
167 Newbury Street #503
Portland ME 04101

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: FEB. 7, 2019

FIRST FLOOR

A1.01

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

SIDEWALK

UNIT 201 — SEE DETAIL 1 / A6.01

UNIT 202 — SEE DETAIL 7 / A6.01

UNIT 203 — SEE DETAIL 1 / A6.02

UNIT 204 — SEE DETAIL 7 / A6.02

UNIT 205 — SEE DETAIL 1 / A6.03

UNIT 206 — SEE DETAIL 7 / A6.03

UNIT 207 — SEE DETAIL 1 / A6.04

UNIT 208 — SEE DETAIL 1 / A6.05

UNIT 209 — SEE DETAIL 1 / A6.06

FITNESS RM 200 — SEE DETAIL 6 / A6.20

STORAGE UNITS

CHAINLINK FENCE STORAGE UNITS

DECK

MUD ROOM

1 2ND FLOOR
1/8" = 1'-0"

Prepared For:
NewHeight Group
167 Newbury Street #503
Portland ME 04101

Consultant:

Architect:
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48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

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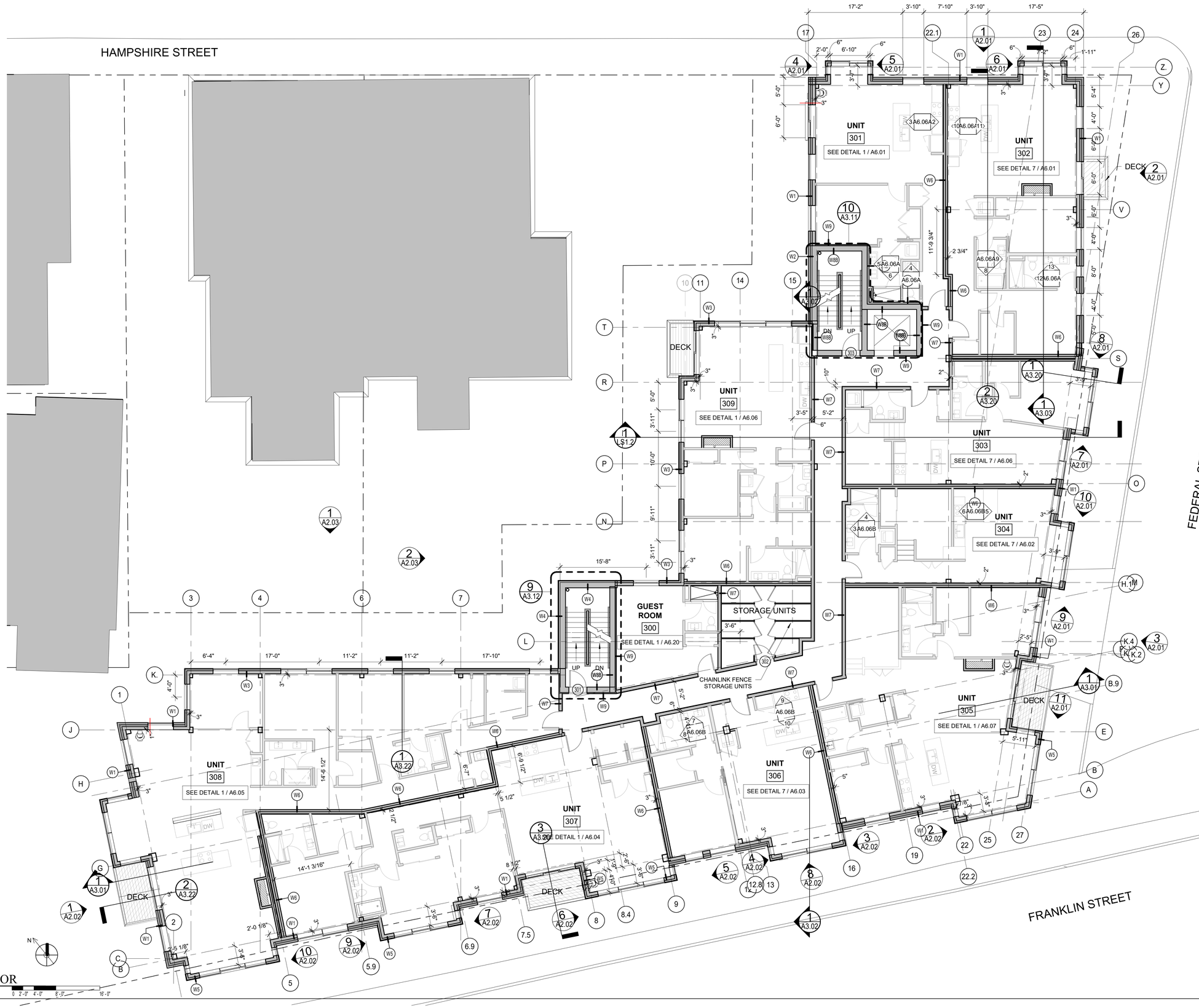
Date: FEB. 7, 2019

SECOND FLOOR

A1.02



1 3RD FLOOR
1/8" = 1'-0"

Prepared For:
NewHeight Group
167 Newbury Street #503
Portland ME 04101

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

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Date: FEB. 7, 2019

THIRD FLOOR

A1.03

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

COMMON DECK 566 SF

MIN. 42" HIGH PARAPET

TREE IN PLANTER

GREEN ROOF 696 SF

GENERATOR

MECHANICAL SCREEN

CONDENSING UNITS

SCREEN

PRIVATE DECK 283 SF

PRIVATE DECK 262 SF

UNIT 401

SEE DETAIL 1 / A3.03

UNIT 405

SEE DETAIL 1 / A6.13

GREEN ROOF 331 SF

CONDENSING UNITS

CLEARSTORY WINDOWS

42" HIGH GUARDRAIL

KEYED MECHANICAL ACCESS GATE

PRIVATE DECK 130 SF

GREEN ROOF 369 SF

UNIT 404

SEE DETAIL 1 / A6.12

UNIT 403

SEE DETAIL 1 / A6.11

UNIT 402

SEE DETAIL 1 / A6.10

DECK

DECK

DECK

1 4TH FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

N

Prepared For:
NewHeight Group
167 Newbury Street #503
Portland ME 04101

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: FEB. 7, 2019

FOURTH FLOOR

A1.04

HAMPSHIRE STREET

FEDERAL STREET

FRANKLIN STREET

ROOF BELOW

UNIT 501 — SEE DETAIL 6 / A6.13

UNIT 505 — SEE DETAIL 1 / A6.17

UNIT 504 — SEE DETAIL 1 / A6.16

UNIT 503 — SEE DETAIL 1 / A6.15

UNIT 502 — SEE DETAIL 1 / A6.14

DECK

CLEARSTORY WINDOWS

5'-9" PRIVACY SCREEN

1 | 5TH FLOOR
1/8" = 1'-0"

0 2'-0" 4'-0" 8'-0" 16'-0"

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
99 Federal Street Portland, Maine

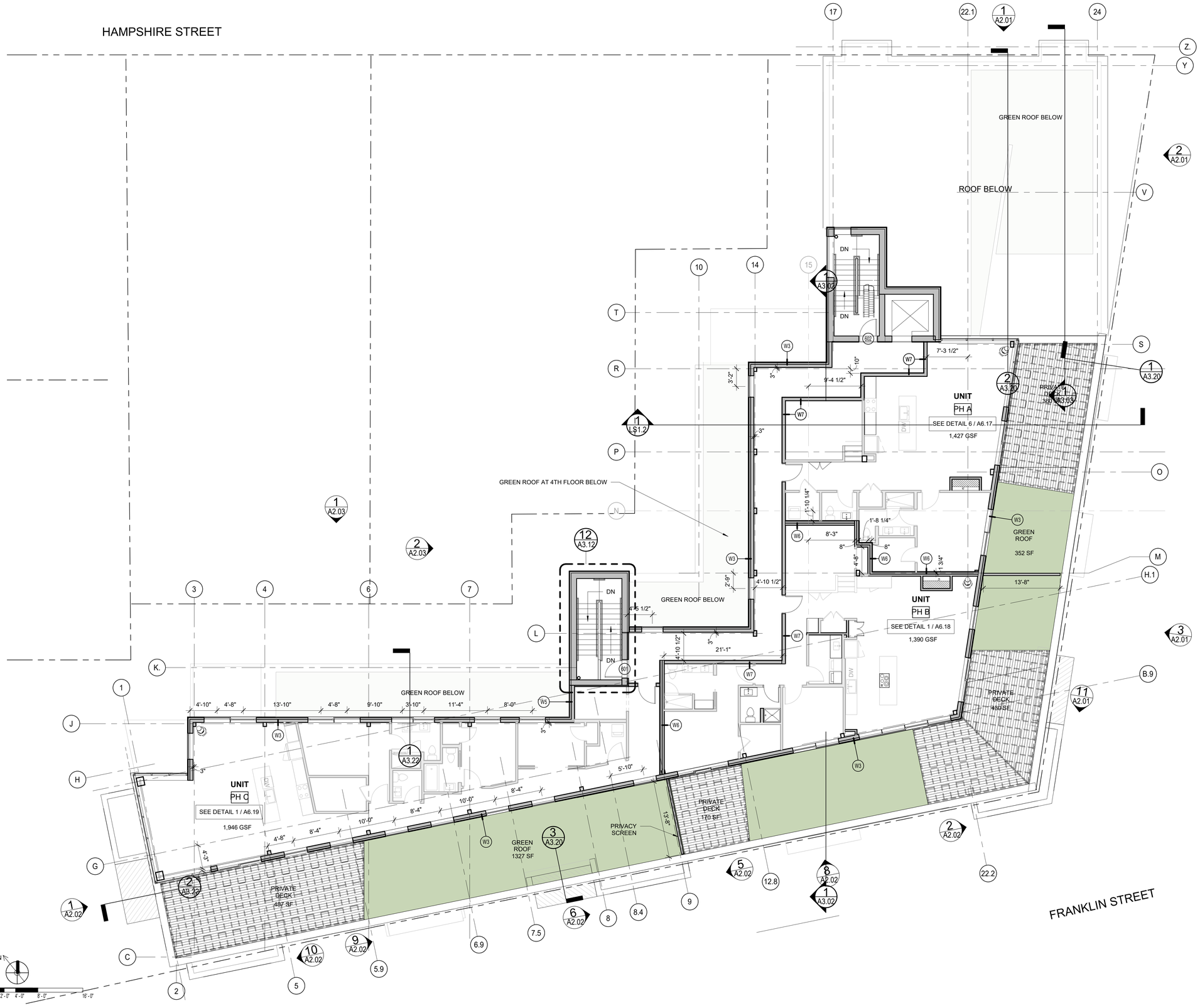
Revisions:

Scale: 1/8" = 1'-0"

Date: FEB. 7, 2019

FIFTH FLOOR

A1.05



Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

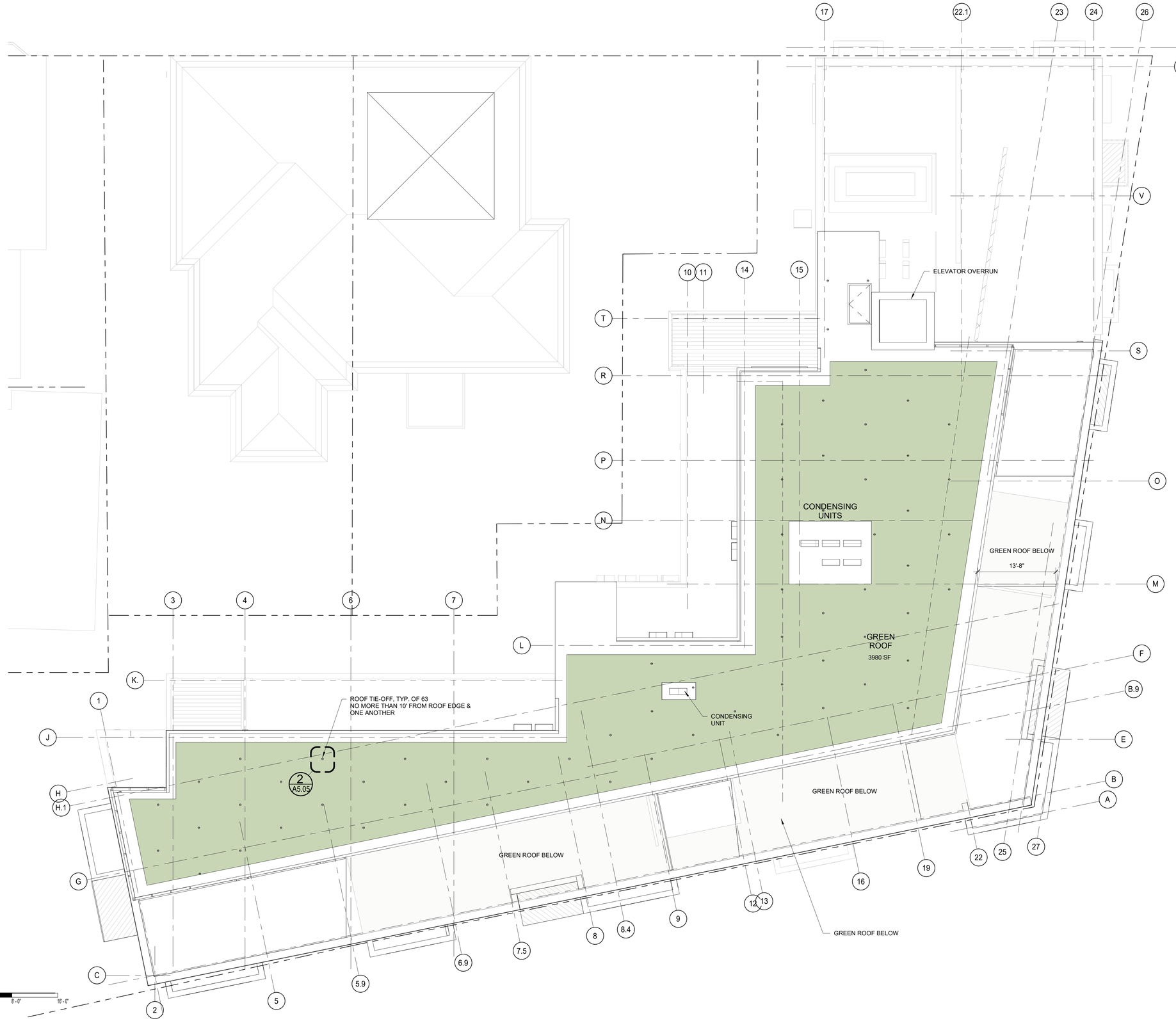
Revisions:

Scale: 1/8" = 1'-0"

Date: FEB. 7, 2019

SIXTH FLOOR

A1.06



1 ROOF
1/8" = 1'-0"
0 2'-0" 4'-0" 8'-0" 16'-0"

Prepared For:
NewHeight Group
118 Congress Street #401
Portland, Maine

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

Scale: 1/8" = 1'-0"

Date: FEB. 7, 2019

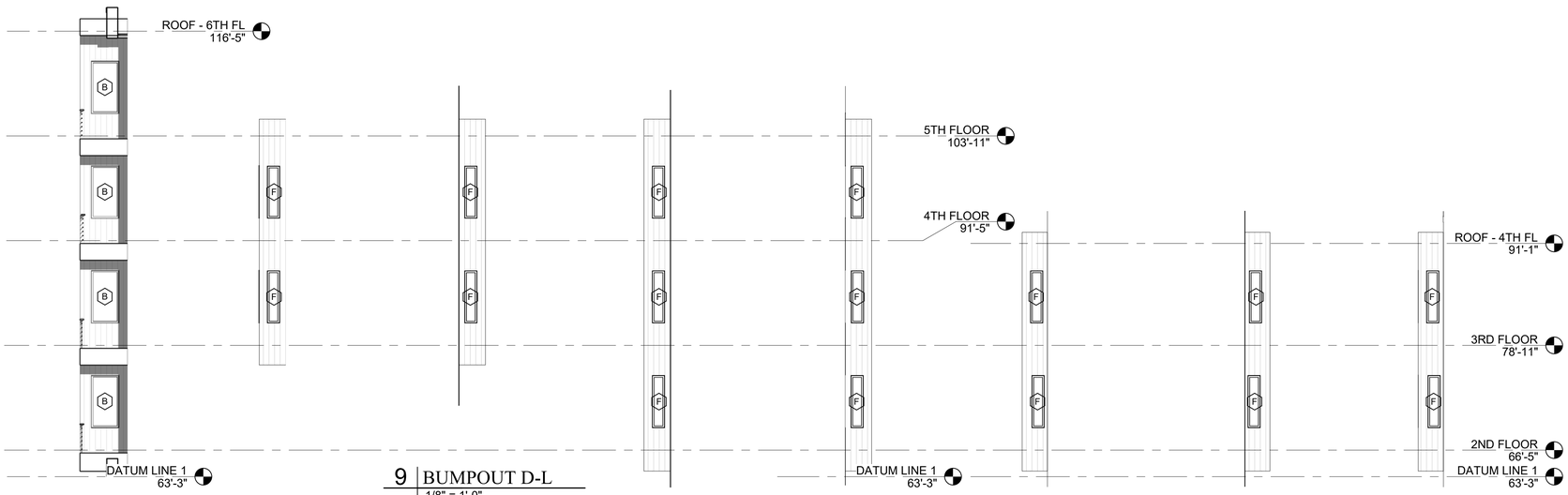
ROOF PLAN

A1.07

3 | FEDERAL ST. ELEVATION
1/8" = 1'-0"

2 | FEDERAL STREET ELEVATION
1/8" = 1'-0"

1 | HAMPSHIRE ST. ELEVATION
1/8" = 1'-0"



11 | BUMPOUT E-R
1/8" = 1'-0"

10 | BUMPOUT D-R
1/8" = 1'-0"

9 | BUMPOUT D-L
1/8" = 1'-0"

8 | BUMPOUT C-R
1/8" = 1'-0"

7 | BUMPOUT C-L
1/8" = 1'-0"

6 | BUMPOUT B-R
1/8" = 1'-0"

5 | BUMPOUT A-L
1/8" = 1'-0"

4 | BUMPOUT A-R
1/8" = 1'-0"

GENERAL NOTES:

1. AVERAGE GRADE BY DEFINITION: GRADE TAKEN AT THE FIVE (5) BUILDING CORNERS DIVIDED BY FIVE (5) - 49'-9" + 47'-11" + 49'-0" + 54'-6" + 55'-3"= 256'-5" /5 = 51'- 2"

2. BUILDING HEIGHT: THE VERTICAL MEASUREMENT FROM AVERAGE GRADE TO HIGHEST POINT OF THE ROOF BEAMS = 77' - 0"

GENERAL NOTE:

* WINDOW PANS AND JAMB FLASHING AT ALL WINDOWS AND EXTERIOR DOORS
* SOUND ISOLATION FOR ALL BUILDING MOUNTED HEAT PUMPS
* ANY THROUGH WALL STEEL TO BE SQUARE TUBE AND THERMAL ISOLATION CONNECTIONS

Prepared For: NewHeight Group

Consultant:

Architect: ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project: VERDANTE
99 Federal Street Portland, Maine

Revisions:

Scale: As indicated

Date: FEB. 7, 2019

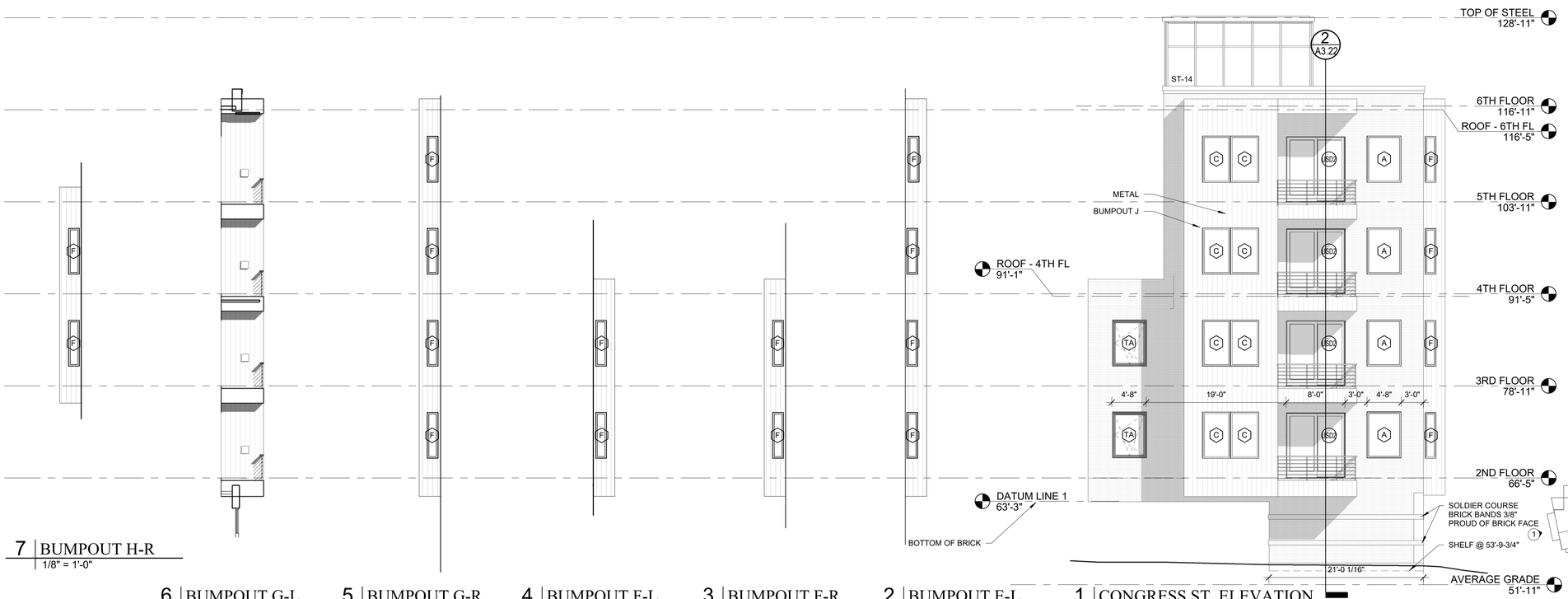
ELEVATIONS

A2.01

10 | BUMPOUT I-R
1/8" = 1'-0"

9 | BUMPOUT H-L
1/8" = 1'-0"

8 | FRANKLIN ST. ELEVATION
1/8" = 1'-0"



7 | BUMPOUT H-R
1/8" = 1'-0"

6 | BUMPOUT G-L
1/8" = 1'-0"

5 | BUMPOUT G-R
1/8" = 1'-0"

4 | BUMPOUT F-L
1/8" = 1'-0"

3 | BUMPOUT F-R
1/8" = 1'-0"

2 | BUMPOUT E-L
1/8" = 1'-0"

1 | CONGRESS ST. ELEVATION
1/8" = 1'-0"

Prepared For:
NewHeight Group

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

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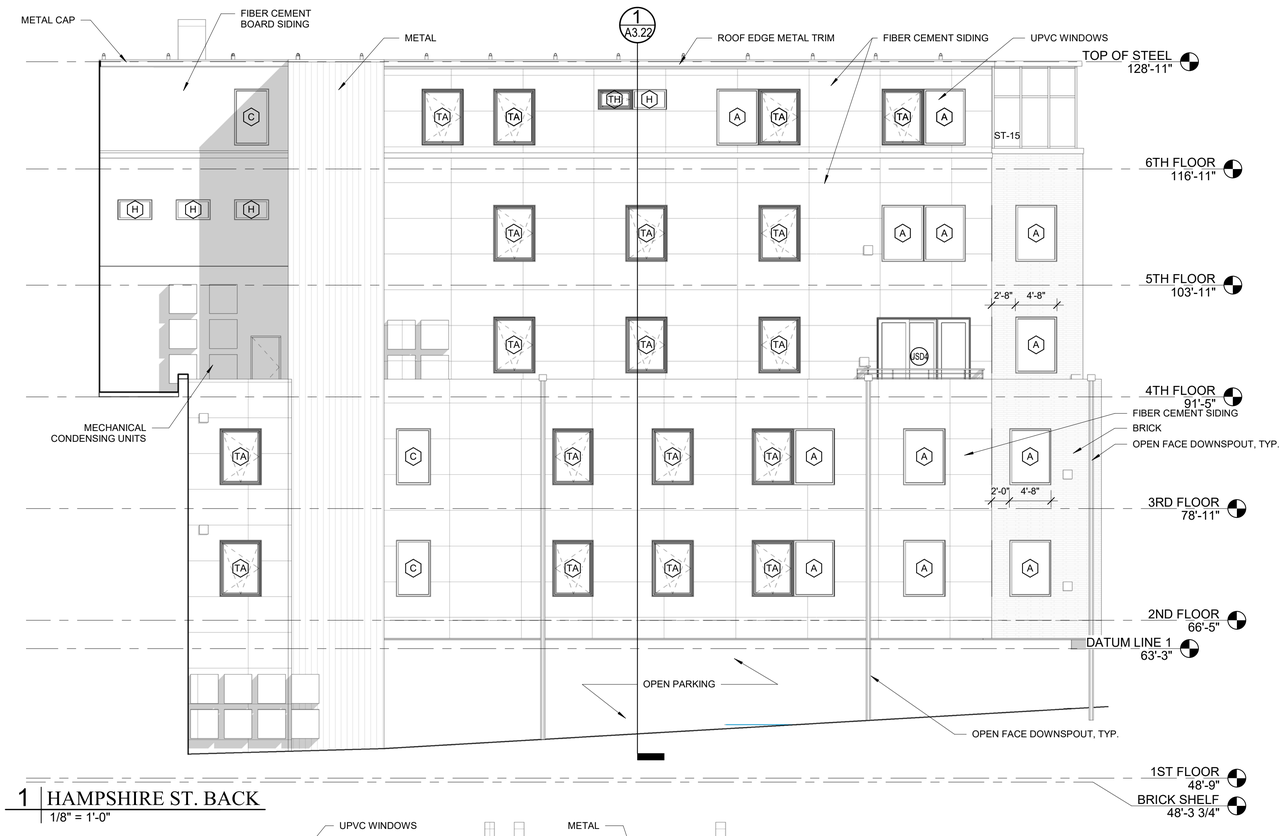
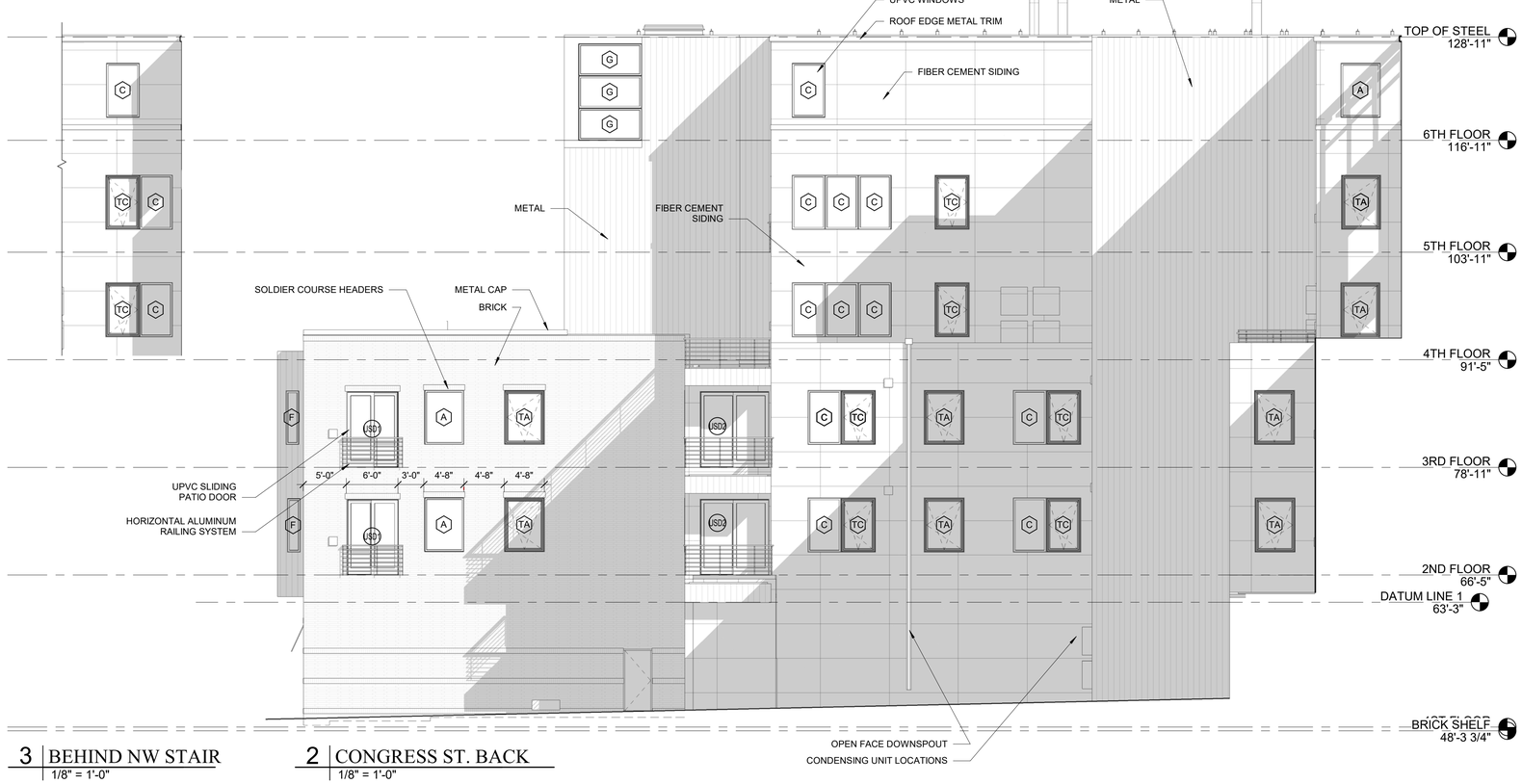
ELEVATIONS

A2.02

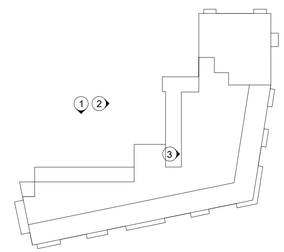


1 | HAMPSHIRE ST. BACK
1/8" = 1'-0"



3 | BEHIND NW STAIR
1/8" = 1'-0"

2 | CONGRESS ST. BACK
1/8" = 1'-0"



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NewHeight Group

Consultant:

Architect:
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48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
VERDANTE
99 Federal Street Portland, Maine

Revisions:

Scale:
As indicated

Date:
FEB. 7, 2019

ELEVATIONS

A2.03

ONLY

ONLY

VERDANTE

VERDANTE

VERDANTE

VERDANTE

PLANNING BOARD REPORT
PORTLAND, MAINE
150 Riverside Street
Self-Storage Facility
Level III Site Plan
PL-000310-2018
Applicant: Patagon Storage, LLC

Submitted to Portland Planning Board Public Hearing Date: February 26, 2019	Prepared by: Christian Roadman Date: February 22, 2019

Rendering of the proposed project (image provided by applicant team)

I. INTRODUCTION / PROPOSED DEVELOPMENT

Patagon Storage seeks to construct a three-story 100,343 square foot self-storage facility on a partially developed site in the B-4 Commercial Corridor zone. The proposed project is located at 150 Riverside Street, which is north of Larrabee Road near the City's boundary with Westbrook. Two lots, totaling 156,711 square feet, comprise the site.

At present, a one story building exists on the site. This building, previously used for furniture sales, would be demolished under the applicant's proposal. Another portion of the site served as inventory storage for a car dealer.

The Planning Board held a workshop for the project on October 23, 2018. A significant change to the project since that workshop is a reduction in the number of parking spaces. Previously, the applicant intended to offer vehicle storage on site. Per zoning, that use was not permissible. The project now proposes 53 parking spaces.

The reductions in parking resulted in additional changes to stormwater management and landscaping. Some revisions related to stormwater management are required, forthcoming, or under review. Lauren Swett, the City's third party civil engineering reviewer, is comfortable with approval with conditions (detailed later) in this instance. Several previous reviewer requests, such as improved sidewalk, driveway, and landscape design, are now accommodated.

This item was originally scheduled for a Public Hearing on 2/12/2019, but was postponed due to weather.

The site in May 2018. Riverside Street is visible in the top right of the picture. (image: Pictometry)

Applicant: Daniel Lyman, Patagon Storage, LLC
Consultants: Sebago Technics (engineering, surveying) Di'Velept (architecture)

II. REQUIRED REVIEWS

Review	Relevant Code
Site Plan	*Section 14-526*
Waiver Request	**Applicable Standard**
Twenty seven 10' x 20' spaces and four 10' x 34' spaces. Tom Errico, P.E., supports the waiver.	Technical Manual, Section 1.14, requiring standard parking space dimensions of 9' x 18'

III. PROJECT DATA

Existing Zoning	B-4 Commercial Corridor Zone
Existing Use	Commercial (vacant; formerly furniture sale and car dealer inventory)
Proposed Development Program	Three-story self-storage facility
Parcel Size	156,711

	Existing	*Proposed*	*Net Change*
Building Footprint (sq. ft.)	19,900	33,344	13,444
Building Floor Area (sq. ft.)	19,900	100,343	80,443
Impervious Surface Area (sq. ft.)	113,842	88,426.8	25,415.2
Parking Spaces	45	53	8
Bicycle Parking Spaces	0	4	4
Estimated Cost of Project	Not provided		

IV. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

The Planning Department did not receive public comment regarding this project.

The applicant team held a neighborhood meeting for the proposed project on November 20, 2018, which no neighbors attended (attachment P)

V. RIGHT, TITLE, INTEREST AND FINANCIAL / TECHNICAL CAPACITY

The applicant submitted a quitclaim deed (attachment C) as evidence of ownership of the property in question.

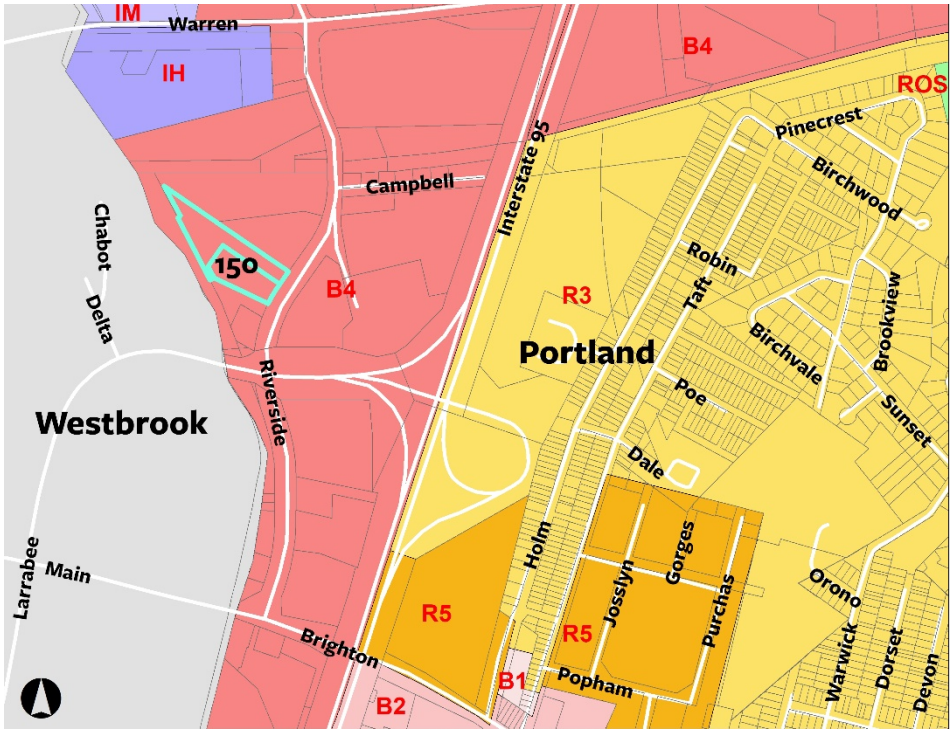
A reference letter from Chad Neubecker, Senior Vice President of BOK Financial stated that the project has sufficient funding in place (attachment F).

A document provided by the applicant (attachment G) cites the project team's experience, and the applicant's previous self-storage projects, as evidence of capacity for successful project completion.

VI. ZONING ANALYSIS

Self-storage facilities are a permissible use under the B-4 zone. In the Land Use Code, self-storage facility is defined as "fully enclosed buildings with individual, secure units (accessed with or without supervision) used for the exclusive purpose of storage of non-hazardous business or personal materials." The proposed development conforms to height, setback, floor area ratio, and impervious surface percentage requirements.

As part of the development, the applicant proposes 53 parking spaces and two bike racks (a total of four bike spaces).



Zoning context of proposed 150 Riverside project. Associated project parcels are outlined in turquoise.

VII. DEVELOPMENT REVIEW

A. SITE PLAN (Section 14-526)

The proposed development prompts review for conformance with relevant standards of Portland's site plan ordinance and applicable regulations.

1. Transportation Standards

a) Impact on Surrounding Street Systems, Access, and Circulation; Sidewalks; Parking; Construction Management Plan

The applicant's proposal involves some curb installation along Riverside Street, which is currently under a road cut moratorium. Keith Gray, the City's engineering services manager, is amenable to curb installation in this instance (attachment 1). Per staff's request, the applicant provided a curb installation detail. Review and acceptance of the proposed detail by the Department of Public Works is suggested as a condition of approval.

Tom Errico, the City's consulting traffic engineer, reviewed the proposed project (attachment 2). Mr. Errico accepts the trip generation estimate provided by the applicant (attachment H) as evidence that the project will not have a significant impact on area vehicle traffic operations. A traffic impact study is not required.

Mr. Errico previously expressed concern about the proposed driveway design, sidewalk connectivity, and lack of an esplanade. These designs were revised to address his concerns.

Thirty-one of the fifty-three proposed parking spaces are above the standard size (9' x 18'). Consulting traffic engineer Tom Errico supports a waiver for non-standard spaces, as large vehicles like moving vans and trucks are expected to use the site.

Mr. Errico requested a revised construction management plan with greater details related to lane closures on Riverside Street and sidewalk closure. The applicant team acknowledged this comment, and a satisfactory revised plan is suggested as a condition of approval.

b) Public Transit Access

The proposed development does not require installation of a bus shelter; Riverside Street is not part of Metro bus routes.

2. Environmental Quality Standards

a) Preservation of Significant Natural Features

Consulting Civil Engineer Lauren Swett reviewed the project (attachment 3), and noted that the proposed project is located within the watershed of Capisic Brook, a designated Urban Impaired Stream. The applicant acknowledged this in their updated application (attachment O), and addressed the concern adequately with their stormwater treatment plans (attachment L).

Ms. Swett also noted that, because the project will disturb over an acre, it will require a Construction General Permit from the Maine Department of Environmental Protection. A copy of the authorization to proceed under the Construction General Permit should be provided to the City upon receipt. This is suggested as a condition of approval.

b) Landscaping and Landscape Preservation

Jeff Tarling, the City Arborist, previously provided feedback (attachment 4) on the project's landscape plan (attachment P6). The plan was revised to Mr. Tarling's satisfaction (attachment 6).

c) Water Quality, Stormwater Management and Erosion Control

Consulting Civil Engineer Lauren Swett previously provided comments related to water quality, stormwater management, and erosion control (attachment 3). Generally, they included the following feedback.

- Additional calculations, specifications, grading information, catch basin locations, as well as other details and submittals are required to confirm that stormwater measures meet adequate standards.
- Several stormdrain structures, proposed with minimal cover, may have constructability issues or not perform adequately. Constructability of the proposed stormdrain system should be reviewed.
- The proposed underdrained soil filter is larger than specified by Maine Department of Environmental Protection standards.
- As acknowledged by the applicant, a stormwater maintenance agreement with the City of Portland will be required.

The applicant acknowledged Ms. Swett's comments, and provided a draft stormwater maintenance agreement. Other revisions are expected, and at least one clarification from the Maine Department of Environmental Protection is required for Ms. Swett's review of the proposed project. Submission, review, and approval of relevant documentation by Ms. Swett is suggested as a condition of approval.

3. Public Infrastructure and Community Safety Standards

a) Public Safety and Fire Prevention

Division Chief Robert Thompson of the Fire Department reviewed the project and required no corrections (attachment 5).

b) Availability and Adequate Capacity of Public Utilities

The applicant submitted an ability to serve letter from the Portland Water District (attachment J). The applicant applied for municipal confirmation of wastewater capacity (attachment K), and the Department of Public Works confirmed adequate capacity (attachment Q).

The applicant proposes underground utilities running to the site from an existing utility pole standing in the right-of-way in front of the project.

4. Site Design Standards

a) Snow and Ice Loading

The proposed project is anticipated to have adequate capacity for snow and ice loading. Snow storage areas are noted on the submitted site plan (attachment P4).

b) Historic Resources

The proposed project is not located within a historic district, nor is it expected to impact historic resources.

c) Exterior Lighting

The applicant provided a lighting plan (attachment P13) and lighting cutsheets (attachment M). The lighting plan does not reflect recent site design changes, and also anticipates light spillage across the property line in excess of the Technical Standard requirement of .1 foot candles. The applicant communicated that a revised lighting plan is forthcoming. Review and approval of this plan is suggested as a condition of approval.

d) Noise and Vibration

The applicant noted (attachment N) that no equipment associated with the proposed use should result in the generation of noise or vibrations.

e) Materials & Waste

In their land use code conformance analysis (attachment N) the applicant specifies that no on-site dumpsters or solid waste removal is provided, because any required waste removal will be the responsibility of individuals renting storage units. The applicant also states that any waste generated by the on-site office will be minimal and hauled off site by a private service.

f) Zoning Related Design Standards

The B-4 zone does not have associated design standards. Elevations for the building are provided in attachment P12.

VIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the planning board report for the public hearing on February 26, 2018 for application PL-000310-2018 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **[finds / does not find]**, based upon the consulting transportation engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standard (Section 1.14) which requires that parking spaces be nine feet by eighteen feet. The Planning Board **[waives / does not waive]** the Technical Manual standard (Section 1.14) to allow twenty-seven 10' x 20' spaces and four 10' x 34' spaces.

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 February 26, 2018 for application PL-000310-2018 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:

CONDITIONS WHICH MUST BE MET PRIOR TO SUBMITTAL OF A BUILDING PERMIT APPLICATION:

1. The applicant shall provide updated documents addressing the necessary revisions and submissions detailed in Attachment 3 (L Swett Comments 2-4-19), for review and approval by the Planning Authority and the City's consulting civil engineer.

CONDITION WHICH MUST BE MET PRIOR TO ISSUANCE OF A BUILDING PERMIT APPLICATION:

2. The applicant shall provide a revised construction management plan for review and approval by the Planning Authority and the City's consulting traffic engineer.

3. The applicant shall provide adequate documentation of a Construction General Permit from the Maine Department of Environmental Protection.

4. The applicant shall submit a revised lighting plan in conformance with the City's Technical Manual, for review and approval by the Planning Authority. Light fixtures shall be full cutoff.

5. The granite curb construction details shall be reviewed by the Planning Authority and Department of Public Works, and any necessary revisions made.

6. The applicant shall submit a stormwater maintenance agreement with the City of Portland for review and approval by the Planning Authority and Corporation Counsel.

REPORT ATTACHMENTS

1. K Gray Comments 2-5-19
2. T Errico Comments 1-31-19
3. L Swett Comments 2-4-19
4. J Tarling Comments 1-25-19
5. Energov Comments Report 2-4-19
6. J Tarling Comments 2-21-19

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Checklist and Application
C. Right Title and Interest Documentation
D. Easements
E. Zoning Analysis Table
F. Financial Capacity Letter
G. Technical Capacity Documents
H. Traffic Memo
I. Fire Checklist

J. Portland Water District Ability to Serve Letter
K. Wastewater Capacity Application
L. Stormwater Management Report
M. Lighting Cutsheets
N. Land Use Code Conformance Analysis
O. Response to Comments 1-22-19
P. Neighborhood Meeting Materials
Q. Wastewater Capacity Authorization
R. Project Renderings
S. Response to Comments 2-18-19
T. Stormwater Maintenance Document

PLANS

P1. Cover Sheet
P2. Existing Conditions
P3. Demolition
P4. Site Plan
P5. Grading and Utility
P6. Landscape
P7. Erosion Control Notes
P8. Detail Plan 1
P9. Detail Plan 2
P10. Stormwater Predevelopment
P11. Stormwater Postdevelopment
P12. Elevations
P13. Lighting
P14. Construction Management

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

150 Riverside

Keith Gray <kgray@portlandmaine.gov> Tue, Feb 5, 2019 at 5:19 PM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Barbara Barhydt <bab@portlandmaine.gov>

Hello,

I've just reviewed our Street Opening Moratorium repair standards and any deviation from those standards requires Director approval. We will allow for the curb installation with the condition that the applicant back-fill the granite curb in concrete and minimize that cut into the pavement. The curb should be installed with 6 inches or less of pavement disturbance.

Thank you,
Keith
[Quoted text hidden]
--
Keith D. Gray, PE
City Engineer
Engineering Services Manager
Dept. of Public Works
City of Portland Maine

207.874.8834
kgray@portlandmaine.gov

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

150 Riverside Street - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Jan 31, 2019 at 9:53 AM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Christian – I have reviewed the revised application materials and offer the following final traffic comments as a status update of prior comments.

- The Applicant has conducted a trip generation estimate and the project is not expected to generate a significant number of new vehicle trips. I concur that the project will not have a significant impact on area vehicle traffic operations. A traffic impact study is not required.

Status: I have no further comment.

- Given traffic conditions on Riverside Street, the Applicant is proposing to restrict site movements to right in/out only. I am concerned about the geometric layout of the driveway and making illegal movements difficult. It is recommended that the driveway configuration be modified to achieve the objective of restricted movements.

Status: The plans have been revised and I find conditions to be acceptable.

- A sidewalk connection to the building from the Riverside Street sidewalk should be provided.

Status: The plans have been revised and I find conditions to be acceptable.

- An esplanade separating the sidewalk from the roadway (similar condition exist to the north), should be considered.

Status: The plans have been revised and I find conditions to be acceptable.

- The Applicant has noted pavement moratorium restrictions and this issue will need to be coordinated with DPW.

Status: It is my understanding that you are coordinating with DPW. I have no further comment.

- The Applicant has provided a Construction Management Plan. Greater detail is required as it related to lane closures on Riverside Street and sidewalk closure.

Status: The applicant shall provide details of sidewalk closures and lane closures on Riverside Street for review and approval.

- It is my understanding that the parking lot design will be revised. I would note that parking stall size and aisle width under the current layout requires formal waiver requests.

Status: I have reviewed the parking lot design and I find it to be acceptable. I support a waiver for larger parking stall dimensions given larger vehicle generation.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

City Arborist	Jeff Tarling
Civil Engineering - Third Party Reviewer	Lauren Swett

Comment(s)/ Recommendation(s):

Several stormdrain structures are still proposed with minimal cover throughout the site. Some of these may have constructability issues, and it is anticipated that standard structures as provided on the detail sheets may not work. Slab-top structures or Nyloplast basins may be required for structures. The Applicant should review the constructability of their system.

The Applicant has indicated that a Notice of Intent to Comply with the Maine Construction General Permit will be submitted to the Maine DEP and confirmation will be provided to the City upon receipt.

The Applicant submitted a Wastewater Capacity Application in March of 2018; the response confirming ability to serve the proposed development should be submitted upon receipt.

The project is required to provide stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 regulations. The project is required to comply with the Basic standards for erosion control. The project is also required to evaluate the General, Flooding, Redevelopment, and Urban Impaired Stream Standards. We have the following comments on stormwater management.
-Some additional clarification on the stormwater calculations is required. The Applicant's General Standards Calculation table indicates that there is no existing onsite impervious area; however based on the existing conditions plans and the narrative discussion. There is existing onsite impervious surface. Also, note that the City of Portland's Redevelopment standard requires treatment of 50% of non-roof redeveloped impervious surface. Please verify that the treatment is meeting this standard.
-The updated pre- and post-development figures appear to be missing from the latest submission. Please provide for review with the stormwater model.
-Please provide design calculations for the sizing of the proposed Filterra tree box filter.
-Per MaineDEP standards, an underdrained soil filter area should not have greater than 3,000 square feet in area. This is due to the inability to adequately maintain such a large filter surface area.
-Additional clarification is required on the grading along the eastern side of the grassed underdrained soil filter. It is unclear how runoff from the pavement will enter the filter area.
-Please provide additional information on the existing grades along the southwestern corner of the property boundary at the pipeline easement. The HydroCAD model indicates that the peak elevation of stormwater in the underdrained soil filter during the 25-year storm is 70.79. Confirm that drainage will not leave the property during this storm event, either by confirming existing spot grades, or grading the property corner to ensure stormwater remains within the site.
-The plans should specify proposed locations and details for catch basin inlet protection measures. Applicant has referred to their erosion control notes and details; however no detail for a typical inlet protection device has been provided.
-The Inspection, Maintenance, and Housekeeping Plan should include provisions for the requirements of Chapter 32 of the City of Portland Code of Ordinances and maintenance requirements associated with the Filterra treatment system that has now been proposed.
-A stormwater maintenance agreement with the City of Portland will be required. The Applicant has requested that this be a condition of approval prior to issuance of building permits. We agree with this request.

DPW Water Resources Engineering	Brad Roland
Planning	Christian Roadman
Traffic - Third Party Reviewer	Tom Errico

Conditions Required

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Tree & Landscape Reviews

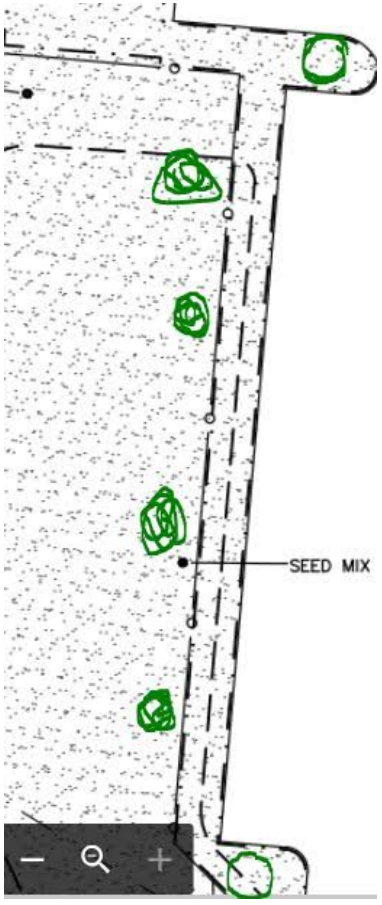
Jeff Tarling <jst@portlandmaine.gov> Fri, Jan 25, 2019 at 4:13 PM
To: Christian Roadman <croadman@portlandmaine.gov>

Hi Christian -

The landscape plan for the proposed 150 Riverside Street project is improved, the only remaining issue would be the back parking lot and meeting the parking lot landscape standard. Placing 5 - 7 trees in the open area near the parking lot would improve. The trees could be spaced to allow snow storage. The attached sketch shows one option.

Thanks,

Jeff



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

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PLAN CORRECTIONS REPORT PL-000310-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 150 Riverside St
Portland, Maine 04103

PARCEL: 267 A006001

APPLICATION DATE: 08/31/2018

SQUARE FEET: 0.00

EXPIRATION DATE:

VALUATION: $0.00

DESCRIPTION: The proposed project consists of the redevelopment of a 1.37-acre parcel at 142 Riverside Street and a 2.23-acre parcel at 150 Riverside Street. The 150 Riverside Street parcel is currently the site of used furniture store. The existing building will be removed to allow for the construction of a three-story, climate controlled, self-storage facility. The remaining portion of this parcel and the parcel at 142 Riverside Street will be used to provide parking and roadway areas to service the self-storage building.

CONTACTS	Name	Company	Address
Agent/Representative	James Seymour	Sebago Technics Inc.	75 John Roberts Rd., Suite 1A South Portland, ME 04106

Comments & Corrections Required

City Arborist — Jeff Tarling

Comment(s)/ Recommendation(s):

The proposed landscape plan contains a well thought out design with a good selection of plant material. Overall the proposed landscape improves the site. Parking lot islands benefit from having curbing to protect the plant material.

Civil Engineering - Third Party Reviewer — Lauren Swett

v.1.00 - Not Resolved

Correction: General

The “decorative stone spreader” detail refers to a “focal point inlet structure”; the Applicant should clarify where this “decorative stone spreader” detail applies and what is meant by the “focal point inlet structure”.

Correction: General

A stormwater maintenance agreement with the City of Portland will be required.

Correction: General

Several storm drains are proposed with less than 1.5-feet of cover; precast drainage structures typically require at least 1.5-feet of cover in order to drill the holes for the storm drain inlets/outlets. The Applicant should verify that the precast drainage structures can be constructed as designed. Additionally, the Applicant should clarify what provisions have been made for frost conditions for storm drain pipes with less than three feet of cover.

Correction: General

The plans should specify proposed locations and details for catch basin inlet protection measures.

Correction: General

The plans indicate that several existing drainage structures will be abandoned or reused as part of the project, but it is unclear where existing drainage structures flow to or from and what purpose they serve or whether they will conflict with the proposed infrastructure. The Applicant should clarify and field verify components of the system as necessary. We note the following specific structures: (1) Existing DMH 1241 is shown with only one pipe inlet/outlet, and it is unclear whether the existing drainage system associated with the structure will conflict with the proposed drainage system; (2) There is an existing catch basin that has not been field verified and does not show any inlets or outlets; it is unclear whether this catch basin will be abandoned or demolished or whether the existing drainage system associated with the structure will conflict with the proposed drainage system; (3) CB 1086 will be modified by plugging the existing inlet and installing new inlets and outlets, with the new outlet connecting to an existing storm drain that is also not shown on the plans; (4) The Grading and Utility Plan indicates that existing CB 1435 should be abandoned; however, the catch basin is located within the proposed parking lot area, which will be re-graded. The Applicant should clarify how this structure will be abandoned.

Correction: General

The Inspection, Maintenance, and Housekeeping Plan should include provisions for the requirements of Chapter 32 of the City of Portland Code of Ordinances and maintenance requirements associated with the Cultech chamber system.

Correction: General

The Applicant is proposing a buffer to provide stormwater treatment; per Chapter 5 of Volume III of the MaineDEP Stormwater BMP Manual. Based on NRCS web soil survey data, the proposed buffer is located within Hydrologic Soil Group C/D; soils that in their natural condition are in group D are assigned to dual classes. Meadow buffers are not allowed on Hydrologic Soil Group D soils. A forested buffer is allowed if the D soils in a buffer are not wetland soils. In addition, the buffer sizing calculations indicate that insufficient berm length will be provided. The proposed meadow buffer is not suitable for use unless the Applicant has a soil investigation completed to provide verification that soil conditions are adequate to meet DEP requirements, or provides documentation that the DEP finds the location to be suitable. If a buffer is to be used, it must be protected from disturbance by deed restrictions and covenants, and the Inspection, Maintenance, and Housekeeping Plan should include provisions for the maintenance criteria specified in the BMP manual.

Correction: General

The Applicant submitted a Wastewater Capacity Application in March of 2018; the response confirming ability to serve the proposed development should be submitted upon receipt.

Correction: General

The HydroCAD model indicates that the roof runoff from the new building will discharge directly to the Riverside Street drainage system, but the plans do not appear to specify a roof drain system; the Applicant should clarify how roof runoff from the new building will be collected and discharged from the site.

Correction: General

The Applicant is proposing several FocalPoint systems to provide stormwater treatment; per the MaineDEP Approval Letter for FocalPoint systems dated February 2, 2017, the following comments should be addressed:

(1) A HydroCAD model must demonstrate that the entire volume of a 0.95 inch Type III 24-hr storm is treated prior to activation of the bypass/overflow; a HydroCAD report demonstrating this should be provided. A HydroCAD report should also be provided demonstrating that the Cultech chamber system has been appropriately sized for the 1-year storm event.

(2) 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 must be placed in-line with a subsurface chamber-based treatment row approved by the Department such that both the treated discharge and the bypass discharge from the FocalPoint system drain to the treatment row; FocalPoint-1 drains to FocalPoint-2 rather than its own treatment row.

(4) It does not appear that sufficient storage will be provided for the required water quality volume downstream of the FocalPoint and treatment row.

Correction: General

The project is located within the Capisic Brook Watershed, which is identified as an Urban Impaired Stream by the Maine DEP. Section 5 of the City of Portland Technical Manual requires that all development within the Capisic Brook watershed, except single and two family homes, comply with the Urban Impaired Stream Standard pursuant to MaineDEP Chapter 500 Rules. To meet the Urban Impaired Stream standard, the Applicant must either pay a compensation fee or mitigate project impacts by treating, reducing, or eliminating an off-site or on-site pre-development impervious stormwater source.

Correction: General

The Applicant should note that the new sidewalk proposed along Riverside Street should comply with the City's Standard Bituminous Sidewalk detail (Figure I-12 of the City's Technical Manual). The details should be revised accordingly for work within the Right-of-Way.

Correction: General

The HydroCAD model should be revised as necessary to address the following comments to confirm that the Flooding Standard will be met: (1) The Pre-Development Watershed Map shows the Time of Concentration Path for Subcatchment 2S going through the existing building; the Time of Concentration should be adjusted to go around the building; (2) The dimensions and elevations utilized to model the storage, the elevations of the outlets, and the size of the overflow drains associated with the FocalPoint systems do not appear to agree with the dimensional data provided on the plan detail sheet; the Applicant should revise as necessary to ensure that the model and the plans are consistent; (3) It appears that the HydroCAD model is accounting for storage within the FocalPoint filter media; this is not typical and should be removed.

Correction: General

The Applicant has indicated on the submission checklist that evidence of state or federal approvals do not apply to the project; however, the project will disturb over an acre and as such will require a Construction General Permit from the MaineDEP. A copy of the authorization to proceed under the Construction General Permit should be provided to the City upon receipt.

Correction: General

The existing conditions plan shows a sewer line along the northern portion of the parcel; however, this sewer line is not shown on the proposed grading and utility plan and it is not specified for removal or abandonment. The Applicant should clarify the intent for the existing sewer line and verify whether it will conflict with proposed storm drain infrastructure.

Correction: General

The Applicant is proposing to connect to existing CB 1433, which appears to be located within the City Right-of-Way. Stormdrain pipes are not permitted to be connected into City of Portland catch basins per the City of Portland Technical Manual, Section 2.7.8. The Applicant should propose an alternate means of stormdrain connection or work with DPS to determine if the proposed approach is acceptable.

Fire — Robert Thompson

Comment(s)/ Recommendation(s):

The Fire Department has no concerns on this project as submitted in the original site plan.

Planning — Christian Roadman

Traffic - Third Party Reviewer — Tom Errico

Transportation/Planning — Bruce Hyman

City Arborist	Jeff Tarling
Civil Engineering - Third Party Reviewer	Lauren Swett

Comment(s)/ Recommendation(s):

Several stormdrain structures are still proposed with minimal cover throughout the site. Some of these may have constructability issues, and it is anticipated that standard structures as provided on the detail sheets may not work. Slab-top structures or Nyloplast basins may be required for structures. The Applicant should review the constructability of their system.

The Applicant has indicated that a Notice of Intent to Comply with the Maine Construction General Permit will be submitted to the Maine DEP and confirmation will be provided to the City upon receipt.

The Applicant submitted a Wastewater Capacity Application in March of 2018; the response confirming ability to serve the proposed development should be submitted upon receipt.

The project is required to provide stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 regulations. The project is required to comply with the Basic standards for erosion control. The project is also required to evaluate the General, Flooding, Redevelopment, and Urban Impaired Stream Standards. We have the following comments on stormwater management.
-Some additional clarification on the stormwater calculations is required. The Applicant's General Standards Calculation table indicates that there is no existing onsite impervious area; however based on the existing conditions plans and the narrative discussion. There is existing onsite impervious surface. Also, note that the City of Portland's Redevelopment standard requires treatment of 50% of non-roof redeveloped impervious surface. Please verify that the treatment is meeting this standard.
-The updated pre- and post-development figures appear to be missing from the latest submission. Please provide for review with the stormwater model.
-Please provide design calculations for the sizing of the proposed Filterra tree box filter.
-Per MaineDEP standards, an underdrained soil filter area should not have greater than 3,000 square feet in area. This is due to the inability to adequately maintain such a large filter surface area.
-Additional clarification is required on the grading along the eastern side of the grassed underdrained soil filter. It is unclear how runoff from the pavement will enter the filter area.
-Please provide additional information on the existing grades along the southwestern corner of the property boundary at the pipeline easement. The HydroCAD model indicates that the peak elevation of stormwater in the underdrained soil filter during the 25-year storm is 70.79. Confirm that drainage will not leave the property during this storm event, either by confirming existing spot grades, or grading the property corner to ensure stormwater remains within the site.
-The plans should specify proposed locations and details for catch basin inlet protection measures. Applicant has referred to their erosion control notes and details; however no detail for a typical inlet protection device has been provided.
-The Inspection, Maintenance, and Housekeeping Plan should include provisions for the requirements of Chapter 32 of the City of Portland Code of Ordinances and maintenance requirements associated with the Filterra treatment system that has now been proposed.
-A stormwater maintenance agreement with the City of Portland will be required. The Applicant has requested that this be a condition of approval prior to issuance of building permits. We agree with this request.

DPW Water Resources Engineering	Brad Roland
Planning	Christian Roadman
Traffic - Third Party Reviewer	Tom Errico

Conditions Required

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Tree & Landscape Reviews

Jeff Tarling <jst@portlandmaine.gov> Thu, Feb 21, 2019 at 9:50 AM
To: Christian Roadman <croadman@portlandmaine.gov>

Hi Christian -

The revised landscape plan looks good. The tree sizes can be reduced on the deciduous trees, the Tupelo and Beacon Oak from 3" caliper to 2-2.5" if needed. Sometimes the larger trees are less available. Overall, the tree and landscape plan looks good.

Thanks

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

[Quoted text hidden]

September 17, 2018
17500

Barbara Barhydt
City of Portland
389 Congress Street
4th Floor
Portland, ME 04101

Level 3 Site Plan Application
150 & 142 Riverside Street, Portland, Patagon –Climate Controlled Self Storage Facility

Dear Ms. Barhydt:

On behalf of our client Patagon Storage, LLC, Sebago Technics Inc. is please to submit the following Site Plan application for your consideration. The proposed project involves the construction of a three story, climate controlled self-storage facility on a previously developed lot on Riverside Street.

Project Description:

Project Site: The project site was originally two separate lots, 150 Riverside Street and 142 Riverside Street, but has been recently closed to consist of one holding; The property now referred to as 150 Riverside Street is a combination of the lots consisting of 3.6 acres. The Original 150 Riverside lot was 2.23-acre parcel that was the site of a small used furniture store. 142 Riverside Street is a 1.37-acre parcel that is was as an inventory lot for a used car dealership. Both parcels are located within the City of Portland's Industrial B-4 Zone.

Proposed Project: The proposed project consists of the redevelopment of the two parcels for a self-storage facility. The existing building at 150 Riverside Street will be removed to allow for the construction of the proposed three-story, climate controlled, self-storage facility. The remaining portion of this 3.6 ac. parcel will be used to provide parking and roadway areas to service the self-storage building, and will be preserved in a buffer for stormwater treatment, and apportion holds the common detention for this site and the adjacent property.

The site anticipates to utilize all existing utilities that served the furniture store, but will require realignment and trench relocation to serve the proposed structure. There was an existing sewer main that was in place to feed the rear of the lot, that was installed to serve a proposed hotel project, and that was never completed. That utility will be removed and abandoned due to the conflicts it will have the stormwater measures being proposed.

The site will be treated for stormwater utilizing a device called Focal Point, as required due to the site falling within the watershed of Capisic Brook as listed by the Maine DEOP as an Urban Impaired Stream.

We are aware of the improvement that have been completed at Riverside Street and the MTA Exit 48 improvements. The owner did attempt to get some improvements completed prior to the final paving but due to closing dates and terms of the closing they were not able to close an entrance the will need to for the project. We are hopeful we can work out a curb install with the City of Portland that will limit the disturbance along the roadside edge, such that we can safely proceed with the site work and not compromise the road surface. We understand that the street is in a moratorium state, and will work to find a solution with the City. Otherwise we foresee no reason to conduct any other work within the street itself.

We have also discovered that the site is under a difficult geological formation of soft soils consisting of silt clay which further hampered some of our design efforts, and due to the bearing capacities we were forced to hold the site at the approximate same grade/elevation that the structures are currently established. In establishing that floor grade, it presented challenges to the overall stromwater design, given the shallow depths of the existing storm drains in Riverside Street. However, we feel we have devised a manner to connect and meet both State and City treatment standards for the proposed site.

We feel we have provided a complete application and look forward, to being placed on the next available Planning Board agenda for a Public Hearing.

As always, please contact me if you have any questions or require further information.

Sincerely,

SEBAGO TECHNICS, INC.

James R. Seymour, P.E.
Sr. Project Manager

JRS:

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes to the left

General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

Please submit each document as a separate PDF file.

TRANSPORTATION

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

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ✔ ☐ ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ✔ ☐ ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ✔ ☐ ☐	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ✔ ☐ ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

SITE DESIGN

Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

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

☐ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☐ **Existing Conditions**

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☐ **Proposed Site Plan**

- Ground floor area, and grade elevations for all buildings

☐ **Access, Circulation, and Parking**

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☐ **Site Considerations**

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☐ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

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

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:	Patagon Storage
Proposed Development Address:	142 & 150 Riverside st.
Project Description:	Self Storage Facility
Chart/Block/Lot:	267 / A / 4&6
Preliminary Plan	
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Daniel Lyman
Business Name:	Patagon Storage, LLC
Address:	1700 Main St. - Suite 70
City/State:	Washaugal, Washington
Zip Code:	98671
Work #:	801-550-6109
Home #:	N/A
Cell #:	801-550-6109
Fax #:	N/A
E-mail:	dl@patagon.co

OWNER

Name:	Patagon Storage, LLC
Address:	1700 Main St. - Suite 70
City/State:	Washaugal, Washington
Zip Code:	98671
Work #:	801-550-6109
Home #:	N/A
Cell #:	801-550-6109
Fax #:	N/A
E-mail:	dl@patagon.co

AGENT/REPRESENTATIVE

Name:	James Seymour
Address:	75 John Roberts Rd. Suite 4A
City/State:	South Portland / Maine
Zip Code:	04106
Work #:	207-200-2083
Home #:	N/A
Cell #:	N/A
Fax #:	N/A
E-mail:	jseymour@sebagotechnics.com

BILLING (to whom invoices will be forwarded to)

Name:	Patagon Storage, LLC attn: Daniel Lyman
Address:	1700 Main St, Suite 70
City/State:	Washaugal, Washington
Zip Code:	98671
Work #:	801-550-6109
Home #:	N/A
Cell #:	801-550-6109
Fax #:	N/A
E-mail:	dl@patagon.co

ENGINEER

Name:	James Seymour
Address:	75 John Roberts Rd. Suite 4A
City/State:	South Portland / Maine
Zip Code:	04106
Work #:	207-200-2083
Home #:	N/A
Cell #:	N/A
Fax #:	N/A
E-mail:	jseymour@sebagotechnics.com

SURVEYOR

Name:	Jimmy Courbron
Address:	75 John Roberts Rd. Suite 4A
City/State:	South Portland / Maine
Zip Code:	04106
Work #:	207-200-2084
Home #:	N/A
Cell #:	N/A
Fax #:	N/A
E-mail:	jcourbron@sebagotechnics.com

ARCHITECT

Name:	Jarod Hall
Address:	454 N 600 W
City/State:	Salt Lake City / Utah
Zip Code:	04116
Work #:	801-680-4485
Home #:	N/A
Cell #:	801-680-4485
Fax #:	N/A
E-mail:	j@divelept.com

ATTORNEY

Name:	N/A
Address:	N/A
City/State:	N/A
Zip Code:	N/A
Work #:	N/A
Home #:	N/A
Cell #:	N/A
Fax #:	N/A
E-mail:	N/A

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	James Seymour
E-mail:	jseymour@sebagotechnics.com
Name:	Rebecca Gabryszewski
E-mail:	rgabryszewski@sebagotechnics.com
Name:	Dylan Stuart
E-mail:	dstuart@sebagotechnics.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	$
☐	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:	$ 1750.00

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	156,711	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE		sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	113,842	sq. ft.
Impervious Area (Total Proposed)		sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	19,900	sq. ft.
Building Footprint (Total Proposed)	33,344	sq. ft.
Building Floor Area (Total Existing)	19,900	sq. ft.
Building Floor Area (Total Proposed)	100,343	sq. ft.
ZONING		
Existing	B-4	
Proposed, if applicable	N/A	
LAND USE		
Existing	Furniture Sales and Car dealer inventory	
Proposed	Self Storage	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	N/A	
# of Residential Units (Total Proposed)	N/A	
# of Lots (Total Proposed)	N/A	
# of Affordable Housing Units (Total Proposed)	N/A	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	N/A	
# of One-Bedroom Units (Total Proposed)	N/A	
# of Two-Bedroom Units (Total Proposed)	N/A	
# of Three-Bedroom Units (Total Proposed)	N/A	
PARKING SPACES		
# of Parking Spaces (Total Existing)	504	
# of Parking Spaces (Total Proposed)	57	
# of Handicapped Spaces (Total Proposed)	1	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	0	
ESTIMATED COST OF THE PROJECT	$	

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:	9/14/18

COPY

QUITCLAIM DEED With COVENANT (LONG FORM)

KNOW ALL BY THESE PRESENTS,

THAT **J PROPERTIES LP** , a Maine Limited Partnership, and **DOVER DEVELOPMENT CORP.**, Maine Corporation, both of having a place of business in Portland, Cumberland County, Maine in consideration of ONE DOLLAR and other valuable consideration paid by **BOYER PATAGON HOLDINGS, L.C.** , a Utah Limited Liability Company with a place of business in Salt Lake City, Utah, and whose mailing address is 101 South 200 East, Suite 200 Salt Lake City, UT 84111 the receipt whereof they do hereby acknowledge, do hereby REMISE, RELEASE, BARGAIN, SELL and CONVEY and FOREVER QUITCLAIM unto Boyer Patagon Holdings, L.C. , its successors and assigns forever, the land and buildings in Portland, Cumberland County, Maine, more fully described on Exhibit A attached to this instrument.

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to Boyer Patagon Holdings, L.C., its successors and assigns, to its and their use and behoof forever.

AND THEY DO COVENANT with the Grantee, its successors and assigns, that they and their successors shall and will warrant and defend the same to Boyer Patagon Holdings, L.C., its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under us.

IN WITNESS WHEREOF, J Properties LP and Dover Development Corp. have hereunto caused this instrument to be signed and sealed this 15th day of May, 2018.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF:

(Witness)

(Witness)

J PROPERTIES LP

By: John E. Locke, its General Partner

DOVER DEVELOPMENT CORP.

By: John E. Locke, its President

COPY

STATE OF MAINE
CUMBERLAND, ss.

May 18, 2016

Then personally appeared John E. Locke, General Partner of J Properties LP and President of Dover Development Corp., and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said J Properties LP and Dover Development Corp.

Before me: _____
~~Notary Public~~/Attorney at Law

NOTARY PRINT NAME: _____

COPY

EXHIBIT A

PARCEL 1:

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

Beginning at a stake on the westerly sideline of relocated Riverside Street marking the point of tangency of a curve whose radius is seven hundred seventy-six and twenty hundredths feet (776.20') at station 43+85.28 as shown on plan of Brighton Avenue Interchange made by the Maine Turnpike Authority and recorded in the Cumberland County Registry of Deeds in Plan Book 41, Page 70, which stake is located forty and four hundredths feet (40.04') southeasterly of the southeasterly corner of the General Motors Building so-called; thence running southerly by said relocated Riverside Street as shown on said plan on a curve to the left whose radius is seven hundred seventy-six and twenty hundredths feet (776.20'), a distance of ninety-nine and fifty-five hundredths feet (99.55') when measured on the arc thereof to a point which is the northeasterly corner of Parcel 2 hereof; thence running along the northerly sideline of said Parcel 2 North sixty-three degrees forty-one and one-half minutes West (N 63° 41-½ W) three hundred fifty-six and ninety-seven hundredths feet (356.97') to a point, which is situated fifty feet (50') easterly when measured at right angles from the center line of Central Maine Power Company pole line and which point is the northwest corner of said Parcel 2; thence running by land now or formerly of Guy E. Knowles parallel with and fifty feet (50') distant from said pole line, North twenty-seven degrees fifty-eight and one-half minutes West (N 27° 58-½' W) thirty-six and seventy-four hundredths feet (36.74') to a point; thence running by land now or formerly of Whitney Real Estate, Inc. on the following described courses; North thirty-five degrees eight minutes East (N 35° 08' E) one hundred forty-seven and eighty-eight hundredths feet (147.88') to a point; thence South fifty-four degrees fifty-two minutes East (S 54° 52' E) three hundred seventy-nine and thirteen hundredths feet (379.13') to the westerly sideline of said relocated Riverside Street; thence by said relocated Riverside Street South thirty-five degrees eight minutes West (S 35° 08' W) ten and forty-five hundredths feet (10.45') to the point of beginning.

Also a certain lot or parcel of land situated on the westerly side of relocated Riverside

COPY

Street in the City of Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Beginning at a point on the westerly sideline of relocated Riverside Street which point is ninety-nine and fifty- five hundredths feet (99.55') southwesterly on a curve to the left from a stake on said westerly sideline which marks the point of tangency of a curve whose radius is seven hundred seventy-six and twenty hundredths feet (776.20') at station 43+85.28 as shown on plan of Brighton Avenue Interchange made by the Maine Turnpike Authority and recorded in the Cumberland County Registry of Deeds in Plan Book 41, Page 70 and which point marks the southeasterly corner of Parcel 1 hereof; thence running along said westerly sideline of Riverside Street twenty feet (20') to a point; thence running by land now or formerly of Guy E. Knowles North sixty-three degrees forty-one and one-half minutes West (N 63°41-½' W) three hundred twenty-eight and eighty-nine hundredths feet (328.89') to a point which is situated fifty feet (50') easterly when measured at right angles from the center line of a Central Maine Power Company pole line; thence running by other land of said Knowles parallel with and fifty feet (50') distant from said pole line, North twenty-seven degrees fifty-eight and one-half minutes West (N 27° 58-½' W) thirty-four and twenty-six hundredths feet (34.26') to a point; thence running by the southerly sideline of Parcel 1 hereof South sixty-three degrees forty-one and one-half minutes East (S 63°41-½' E) three hundred fifty-six and ninety-seven hundredths (356.97') feet to the point of beginning.

The above described courses are true North and the above describe parcels or lots of land are subject to the following encumbrances;

1. Pipeline easement from Dennis D. Decormier to Portland Pipe Line Company dated October 10, 1941, recorded in said Registry of Deeds in Book 1646, Page 289.

2. Pole easement from Whitney Real Estate, Inc. to Central Maine Power Company and New England Telephone and Telegraph Company dated September 22, 1964, recorded in said Registry of Deeds in Book 2860, Page 60.

The above described parcels of land being part of the property conveyed by Fred J. Foley, Jr. to Locke Properties by warranty deed dated October 1, 1981, recorded in said Registry in Book 4863, Page 123.

COPY

PARCEL 2:

A certain lot or parcel of land situated on the westerly side of Riverside Street in the City of Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Beginning at a stake on the westerly sideline of Riverside Street marking the point of tangency of a curve whose radius is seven hundred seventy-six and twenty hundredths (776.20) feet at station 43+85.28 as shown on Plan of Brighton Avenue Interchange made by the Maine Turnpike Authority and recorded in the Cumberland County Registry of Deeds in Plan Book 41, Page 70; thence southerly by said Riverside Street as shown on said Plan on a curve to the left whose radius is seven hundred seventy-six and twenty hundredths (776.20) feet, one hundred nineteen and fifty-five hundredths (119.55) feet when measured on the arc thereof to an iron; thence by land now or formerly of one Knowles N 63°41½' W three hundred twenty-eight and eighty-nine hundredths (328.89) feet to an iron situated fifty (50) feet easterly when measured at right angles from the center line of a Central Maine Power Company pole line; thence by land now or formerly of said Knowles and keeping fifty (50) feet from and running parallel with said pole line N 27° 58-½' W five hundred ninety-one and twenty hundredths (591.20) feet to an iron; thence by land now or formerly of Knowles S 54° 52' E eight hundred forty-three and seven hundredths (843.07) feet to an iron and the westerly sideline of Riverside Street; thence by said Riverside Street S 35° 08' W ninety-seven and eighty-eight hundredths (97.88) feet to the point of beginning. Said above described courses are true North.

Being the same premises conveyed to Dover Development Corp. by J Properties by deed dated March 10, 2000 and recorded in the Cumberland County Registry of Deeds in Book 15365, Page 278.

Excepting from the premises above described so much thereof as was conveyed by Whitney Real Estate, Inc. to Fred J. Foley, Jr. by deed dated January 23, 1965 and recorded in said Registry of Deeds in Book 2877, Page 214, which excepted parcel was subsequently conveyed by Warranty Deed of Fred J. Foley, Jr. to Locke Properties.

And further conveying to Dover Development Corp. whatever rights or interests J Properties gained or was granted by deed of Portland Pipe Line Company to J Properties dated December 5, 1984, and recorded in said Registry of Deeds in Book 6636, Page 3.

COPY

This conveyance is made subject to two easements given by Whitney Real Estate, Inc. to Central Maine Power Company and New England Telephone and Telegraph Company dated August 19,1964 and September 22,1964 and recorded in said Registry of Deeds in Book 2877, Page 312 and Book 2860, Page 60, respectively.

This conveyance is further made subject to a pipeline easement from Dennis D. Decormier et al, to Portland Pipe Line Company dated October 10, 1941 and recorded in said Registry of Deeds in Book 1646, Page 289, as further delineated and/or modified by said deed from the Portland Pipe Line Company to the Grantor herein dated December 5, 1984 and recorded in said Registry of Deeds as above set forth.

PARCEL 3:

The real estate situated in the City of Portland, County of Cumberland, and State of Maine and more specifically described as follows:

Beginning at an iron pin marking the northerly most point of a parcel of land now or formerly of J Properties which parcel was formerly of Ameri-Cana Transport, Inc. (described in Book 3175 at Page 471 in the Cumberland County Registry of Deeds);

Thence: proceeding on a heading of S 27° 58.5' E a distance of approximately 192.9 feet to a point (hereinafter called the "Point of Beginning");

Thence: proceeding on a heading of S 62° 1.5' W a distance of approximately 25 feet to a point the sideline of land now or formerly of Central Maine Power Co. of Augusta;

Thence: proceeding on a heading of S 27° 58.5' E a distance of approximately 364 feet to a point at the intersection of the lands now or formerly of Bounty Realty, William A. Berger and Central Maine Power Co. of Augusta;

Thence: proceeding on a heading of S 63° 41.5' E a distance of approximately 42.82 feet along the land now or formerly of William A. Berger;

Thence: proceeding on a heading of N 27° 58.5' W a distance of approximately 327.3 feet to the Point of Beginning.

Being the same premises conveyed from Bounty Realty by Quitclaim Deed to J Properties and dated December 11, 1986 and recorded in the Cumberland County Registry of Deeds in Book 7619, Page 120;

Also hereby conveying the right in common with the Grantor herein and its successors

COPY

and assigns, to drain and impound water from land of the Grantee herein and for land adjacent thereto of Locke Properties and from the premises herein conveyed (Collectively called Locke Land) in a detention basin on land of the Grantor herein (The Detention Basin), being located partially on the Northwesterly portion of property conveyed to the Grantor herein by William Sexton et al by deed dated January 3D, 1986 and recorded in the Cumberland County Registry of Deeds in Book 7056, Page 115, and partially on the easement and use of the triangular piece of land conveyed by Grantee to Grantor, (provided that the additional surface water drained into the Detention Basin from the Locke Land shall not, after satisfying the Grantor's drainage needs, exceed the capacity of The Detention Basin) and further conveying to the Grantee and Locke Properties, their respective successors and assigns, the right to expand the Detention Basin onto the remaining land of the Grantee herein and use in connection therewith the Grantors piping and underground drainage system to Riverside Street. The Grantee agrees that any work to be done to increase the capacity of the Detention Basin shall first be approved as to reasonable engineering matters by Sebago Technics, Inc. or such successor engineering firm as the Grantee shall previously in writing have designated to the Grantor, with all costs for such expansion being borne by Grantee.

Easements

The proposed development site includes two parcels and the record deed and available survey information indicates the following:

A. Existing Easements and other encumberances:

1. Access easement and right of way over land of an abutter as described in an easement from Mitchco Properties, Inc. to J Properties LP dated January 1, 2017 and recorded in Book 33778, Page 151.

B. New Easements

No new easements are proposed as part of the site development.

Note: Formal deed research was not performed as part of this easement compilation statement.

ZONING ANALYSIS Relevant Zone(s) B4

All Projects:

	Required	Proposed
Lot Size	10,000 sf	3.6 acres total
Area Per Dwelling Unit	n/a	n/a
Minimum Street Frontage	60 feet	~200 feet
Front Yard Minimum	20 feet	20 feet
Front Yard Maximum	n/a	n/a
Rear Yard	20 feet	20 feet
Yard Right	12 feet	12 feet
Yard Left	12 feet	12 feet
Side Street Setback	12 feet	n/a
Step Back	n/a	n/a
Maximum Lot Coverage	80%	56.4%
Minimum Lot Coverage	n/a	n/a
Maximum Height	65 feet	31.33 feet
Open Space	n/a	n/a
Maximum Impervious Area	80%	56.4%
Pavement Setback	12 feet	12 feet
Floor Area Ratio	65%	22%
Off Street Parking Spaces	34	116
Loading Bays	n/a	n/a
Other 1		
Other 2		
Other 3		

BOK FINANCIAL
Commercial Real Estate Banking

Chad S. Neubecker
Senior Vice President
BOK Financial
1600 Broadway, Suite 1510
Denver, CO 80202
cneubecker@bokf.com

August 8, 2018

City of Portland
389 Congress Street
Portland, ME 04101

RE: Reference Letter for The Boyer Company

To Whom it May Concern:

I am sending this reference letter on behalf of BOK Financial (Bank), which is the construction lender for the proposed self-storage project in Portland, Maine, for the capabilities of The Boyer Company and Patagon. The Boyer Company and Patagon are the project sponsors for the proposed Portland self storage project along with the related entity; Boyer Patagon Holdings, LLC.

The Boyer Company has been a valued client of the Bank since 2013 and I have been personally banking Boyer since 1998. The Boyer Company is one of the largest and financially strongest developers in the West and since being a client of the Bank, we have lent over $200 Million to The Boyer Company and all loans have performed as agreed. In addition, as previously stated, I have personally been The Boyer Company's commercial real estate banker since 1998 and have lent well over $400 Million over the 20 years with all loans being paid as agreed.

On the project side, the self-storage project in Portland, Maine is fully committed by the Bank for construction financing. In addition, the equity for the loan and project is in-place. Thus, the funding for the project is available for immediate funding. In addition to the funding for the project, the sponsorship has a strong record of delivery. Since first personally banking The Boyer Company in 1998 and with BOK Financial since 2013, all projects have been completed on time and within budget.

Please reach out to me with any questions on this valued client at 602-808-5356 and I would be happy to answer any other questions you may need.

Sincerely,

Chad S. Neubecker
SVP, Western Market Manager
BOK Financial

Technical Capacity

Technical Capacity:

Patagon has assembled a team of highly qualified contractors, consultants, and engineers for this proposed project. The project team includes:

Sebago Technics, Inc. (STI) is a multi-disciplinary engineering firm with over 35 years of experience, that offers a wide range of services specializing in land development, planning, permitting and engineering design services. We maintain a staff of multi-disciplinary professionals to provide services in the areas of general civil engineering, road and utility infrastructure design, construction management, permitting, landscape architecture, soil science, wetlands science, geotechnical services, land surveying, and environmental engineering.

James Seymour, PE, is a Registered Professional Engineer in the State of Maine. Maine License #9984.

Di'velept Design is an architecture firm that specializes in Self Storage facilities. The firm principals are Jarod Hall and Jeremy Larsen. In the last couple of years they have designed over a half million square feet of storage space, ranging from Washington state to Massachusetts and many locations in between. Many of the storage projects they have worked on have been with this same client, so they have developed a strong understanding of how to achieve the owner's goals while keeping the building compliant with local restrictions. They strive to bring design minded thinking to a project type where this is often lacking.

Please see the following pages for additional information on Patagon.

PATAGŌN™

Patagon is a new venture founded in 2017 by Benjamin Q. Bradley and Daniel A. Lyman. They are the founders behind the Get Space storage project based in the Portland, Oregon. See more at www.getspace.com. Patagon is the focus beyond Portland, OR. As part of that strategy Patagon formed a new long-term partnership with the Boyer Company to develop the portfolio of self-storage facilities all across the United States.

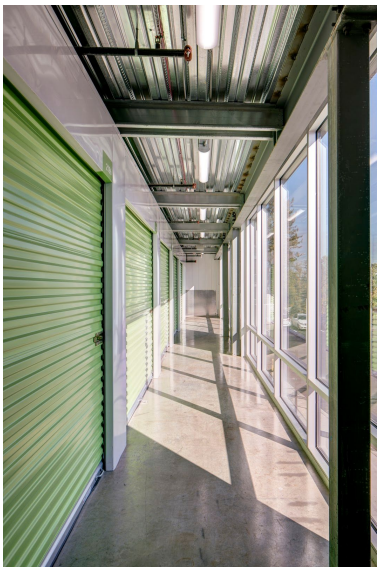
To date, they're building or have built over 1,500,000 SF of storage; over 12,000 self storage units. Currently nine facilities are open for business, three are under construction, with four more breaking ground very soon. Nine of the Portland, OR facilities have a joint venture partnership with Extra Space Storage; they are one of only a few groups across the whole country with such arrangement.

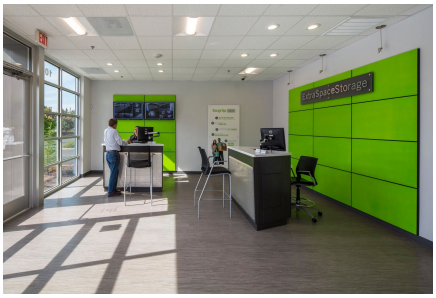
T: (801) 510-1178

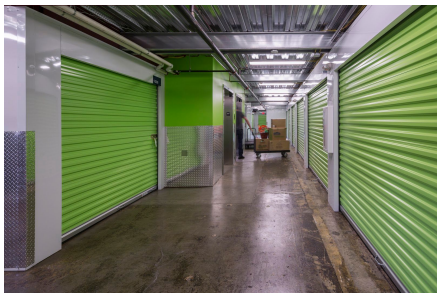
1700 Main St., #208
Washougal, WA 98671

www.patagon.net

Projects Completed (2014-Current)







STORAGE
EXIT

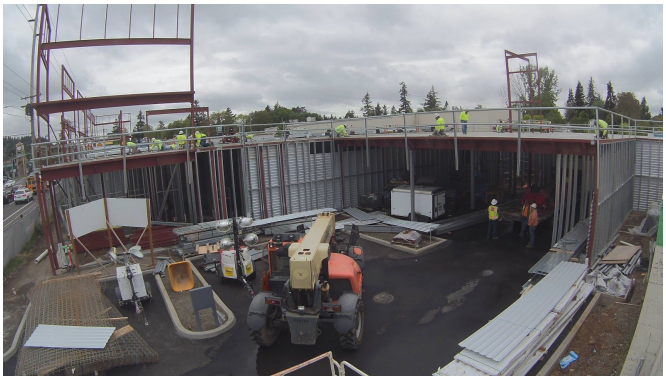
ExtraSpace Storage
OFFICE

ExtraSpace Storage

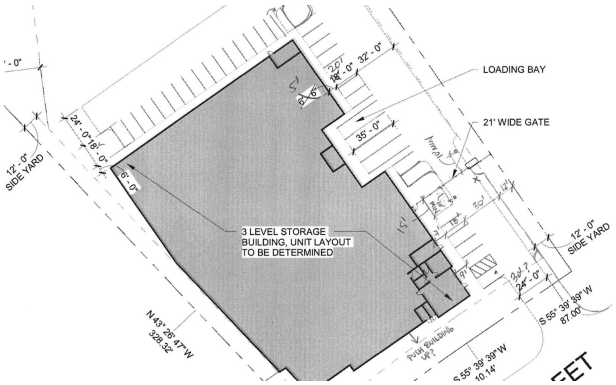
CLIMATE CONTROL

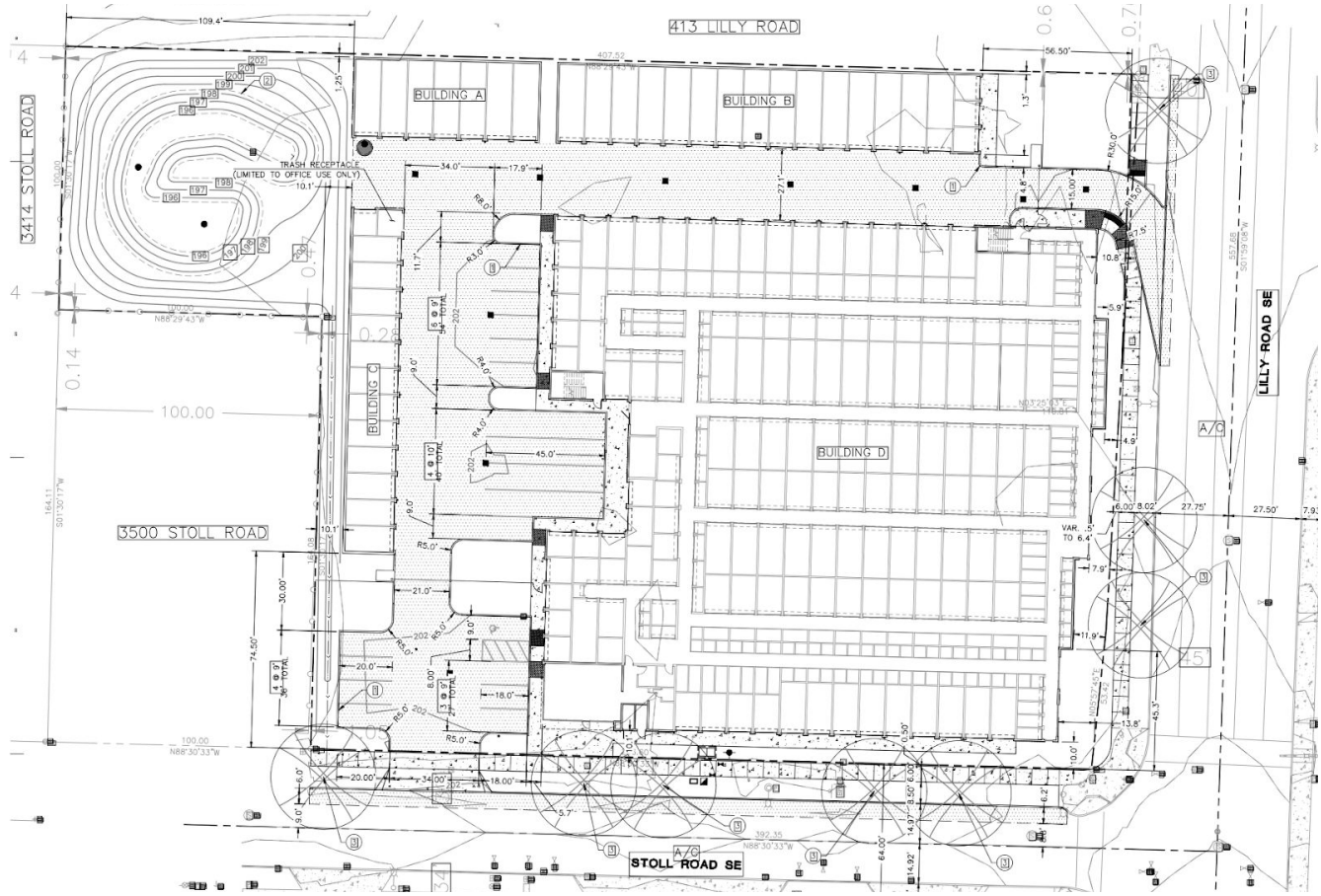
C392
C330

Projects Under Construction



Projects Forthcoming

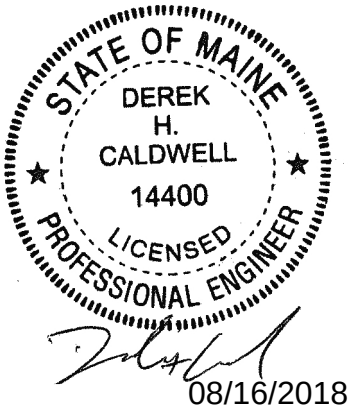




SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Memorandum



17500

To: **Jim Seymour, P.E.**

From: **Derek Caldwell, P.E., PTOE**

Date: **August 15th,2018**

Subject: **Traffic Impact Statement**
Patagon Storage
Portland, Maine

We have completed a trip generation analysis for the proposed Patagon Self Storage facility to be located at 150 Riverside Street in Portland. It is our understanding that this development is to include a 3-story 100,000 square foot self-storage facility. Presently, the site has two curb cuts on Riverside Street. This project will reconstruct the northerly entrance and close the southerly entrance. The site was formerly occupied by the Upscale Furniture and Consignment store, which closed in July of 2018. This former use contained an approximately 19,000 square foot building.

Trip generation for both the proposed development as well as the former use was calculated using the *ITE Trip Generation Manual, 10th Edition.* Land Use Code (LUC) 151 – Mini-Warehouse was used for the future self-storage facility and LUC 890 – Furniture Store for the former furniture store. Tables 1 and 2 below summarize the calculated trip generation.

Table 1 - Trip Generation
LUC – 151 – Mini-Warehouse
(100,000 SF)

Time Period	Average Rate/1,000 SF	Total Trips	Entering Trips	Exiting Trips
Weekday	1.51	151	75	76
AM Peak Hour Adjacent Street	0.10	10	6	4
PM Peak Hour Adjacent Street	0.17	17	8	9
AM Peak Hour Generator	0.20	20	10	10
PM Peak Hour Generator	0.20	20	10	10
Saturday	1.95	195	97	98
Saturday Peak Hour*	0.31	31	18	13

** Saturday Peak Hour data is based on one Study Site.*

Table 2 - Trip Generation
LUC – 890 – Furniture Store
(19,000 SF)

Time Period	Average Rate/1,000 SF	Total Trips	Entering Trips	Exiting Trips
Weekday	6.30	120	60	60
AM Peak Hour Adjacent Street	0.26	5	4	1
PM Peak Hour Adjacent Street	0.52	10	5	5
AM Peak Hour Generator	0.52	10	6	4
PM Peak Hour Generator	0.70	13	6	7
Saturday	7.15	136	68	68
Saturday Peak Hour	1.10	21	11	10

Table 3 shows the resultant net trip generation of the new development, found by the difference in values from Tables 1 and 2.

Table 3 - Net Trip Generation

Time Period	Total Trips	Entering Trips	Exiting Trips
Weekday	31	15	16
AM Peak Hour Adjacent Street	5	2	3
PM Peak Hour Adjacent Street	7	3	4
AM Peak Hour Generator	10	4	6
PM Peak Hour Generator	7	4	3
Saturday	59	29	30
Saturday Peak Hour	10	7	3

Based on the expected net trip generation of less than 25 passenger car equivalents during all peak hour periods, it is not anticipated that a scoping meeting or additional traffic analysis will be required by the City of Portland.

75 John Roberts Road – Suite 4A, South Portland, ME 04106-6963 • 207.200.2100 • Fax: 207.856.2206

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
Patagon Self Storage, LLC, 1700 Main st. suite 70 Washaugal, Washington. 801-550-6109

3. Name address, telephone number of architect
Jarod Hall, 454 N 600W Salt Lake City, Utah. 801-680-4485

4. Proposed uses of any structures [NFPA and IBC classification] :
Group S- Climate Controlled Self Storage

6. Square footage of all structures [total and per story]
Total: 101,782 SF Per Story: 33,344 SF, 33,961 SF, 34,477 SF

7. Elevation of all structures: **TBD**

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: **See Plan set**

10. Water main[s] size and location: **See Existing Conditions Plan**

11. Access to all structures [min. 2 sides]: **See Site Plan**

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

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

July 13, 2018

Dylan Stuart
Sebago Technics
75 John Roberts Road Suite 4A
South Portland, ME 04106

Re: 150 Riverside Street, PO
Ability to Serve with PWD Water

Dear Mr. Stuart:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on April 10, 2018. Based on the information provided, 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:

- The existing service lines at this site may be used by the proposed development as long as the project development team determines that they will provide adequate flow and pressure for the proposed use.Our records show that the property is currently served with a 2-inch domestic water service and a 6-inch fire service. If any of the existing services will no longer be used as a result of the development then they must be retired per PWD standards which includes shutting the corporation valve and cutting the pipe from the water main (for the 2-inch service) or removing the 6-inch gate valve and capping the tapping sleeve (for the 6-inch service).

- An approved backflow prevention device must be installed on the service line directly after the meter prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.

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 2-inch diameter copper domestic service line and a 6-inch fire service line provide water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of these services.

Water System Characteristics

According to District records, there is an 12-inch diameter ductile iron water main in Riverside Street and a public fire hydrant located approximately 200 feet from the site. The most recent static pressure reading was 79 psi on June 19, 2018.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the 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 not indicated whether 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.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Robert A. Bartels, P.E.
Senior Project Engineer

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: 3/19/2018

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

Site Address:142 & 150 Riverside street Portland Maine

Chart Block Lot Number: 267 / A / 4 & 6

Proposed Use: Climate Controlled Self Storage
Previous Use: Furniture sales and Car Storage
Existing Sanitary Flows: _____GPD
Existing Process Flows: _____GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Use and improve as necessary the existing sewer lateral on Riversite Dr.

Site Category		
	Commercial *(see part 4 below)*	x
	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: _____ Phone: _____
Owner/Developer Name: Daniel Lyman, Patagon Storage, LLC
Owner/Developer Address: 1700 Main Street. Washaugal Washington
Phone: 801-855-6109 Fax: _____ E-mail: dl@patagon.co
Engineering Consultant Name: James Seymour, Sebago Technics, LLC
Engineering Consultant Address: 75 John Roberts Rd. South Portland ME, 04106
Phone: 207-200-2083 Fax: _____ E-mail: jseymour@sebagotechnics.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: 100 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)* _____

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.

Environmental and Stormwater

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

The proposed site has been designed in accordance to City and Chapter 500 requirements to minimize the amount of stormwater leaving the site. Please see the Stormwater Management report and plan included in this submittal.

Patagon Storage
150 Riverside Street
Portland, ME

Introduction

This Stormwater Management Plan has been prepared to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan have been incorporated to suit the proposed development and to comply with applicable regulatory requirements.

The project consists of redevelopment of a two abutting parcels at 142 and 150 Riverside Street. This combined area is approximately 3.6 acres. The existing building has been recently demolished in preparation for the proposed construction of a multi-story self-storage facility, parking, and access drives.

Based upon the anticipated development, the project is subject to the Chapter 500 Basic, General, and Urban Impaired Stream standards. The proposed erosion controls, inspection and maintenance criteria, and the stormwater management systems have been designed to meet MDEP and City of Portland requirements.

Existing Conditions

Both parcels are located in the City of Portland B4 Commercial Business District. The lot for 150 Riverside is developed with a building and parking area. The lot for 142 Riverside consists of a gravel parking area that was most recently used to store vehicles for a nearby car dealership. Stormwater is collected in a few on-site catch basins and an existing detention basin. The existing detention basin is routed to the City's storm drainage infrastructure in Riverside Street through an existing 18" storm drain on the parcel that borders 150 Riverside Street to the north.

Proposed Development

The developer proposes to construct a multi-story self-storage facility with a parking area that will service the facility. The site is accessed via two existing driveways from Riverside Street. The existing entrance on the south side of the parcel will be closed and the site will be accessed via the northern entrance.

The proposed development will result in the following:

Total disturbed/developed area = 2.05 acres
Total impervious area = 1.41 acres

Regulatory Requirements

Maine Department of Environmental Protection (MDEP)

MDEP Rule Chapters 500 and 502 describe stormwater management requirements for new development projects. These rules describe performance standards divided into five major categories: Basic Standard, General Standard, Phosphorous Standard, Urban Impaired Stream Standard, and Flooding Standard. The following sections describe how this project will address these stormwater management performance standards.

Basic Standard: A project must meet basic standards if it disturbs an area greater than one (1) acre. As this development will disturb approximately 2.39 acres, it must meet the basic standard. The standard includes various erosion and sedimentation controls, inspection and maintenance procedures, and general housekeeping requirements.

General Standard: A project is subject to the general standard if it results in the creation of one (1) or more acres of impervious area or developed areas greater than five (5) acres. As this project will include approximately 1.43 acres of impervious area, it must meet the general standard. The standard requires that a minimum of 95% of all impervious areas and at least 80% of all developed areas are designed to be tributary to stormwater BMPs. However, for redevelopment projects, the required treatment is scaled based on the pollutant discharge that, if the stormwater was untreated, would result from the redevelopment project. Standard BMPs have been defined by the MDEP and are described thoroughly in their publication Stormwater Management for Maine: Best Management Practices manual, as revised May 2016.

Phosphorous Standard: A project must meet the phosphorous standards if located within a lake watershed. As this project is not tributary to a lake watershed, it is not subject to the phosphorus standard.

Urban Impaired Stream Standard: A project must meet the urban impaired stream standards if located within an urban impaired stream watershed. As this project is tributary to Capisic Brook which is an Urban Impaired Stream as defined by MDEP Chapter 502, this project is subject to the urban impaired stream standard. The standard requires that the applicant must either pay a compensation fee or mitigate project impacts by reducing or eliminating an off-site pre-development impervious stormwater source as described in 06—096 CMR 501.

Flooding Standard: A project must meet to the flooding standards if it creates impervious areas greater than three (3) acres, or developed areas greater than twenty (20) acres. This project includes approximately 1.43 acres of impervious area; however, the City of Portland Technical Manual Section II-C states that all Level III site plans are required to meet the Maine DEP Chapter 500 flooding standard.

City of Portland

In accordance with Section 5.II.D of the City of Portland Technical manual, 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 up-gradient area must be either directed away from the stormwater treatment measure or that measure must be sized to treat the runoff from the up-gradient area.

Methodology

In order to evaluate drainage characteristics as a result of the proposed development activities, a quantitative analysis was performed to determine peak runoff rates in the pre-development and post-development conditions. The evaluation was performed using the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds - Technical Release #55 (TR-55)". HydroCAD computer software was utilized to perform the calculations.

The peak runoff rates were calculated using a 24-hour duration storm event with a Type III rainfall distribution. The 24-hour duration rainfall amounts for Cumberland County area as follows:

Storm Frequency	24-hr Duration Rainfall (in.)
2-yr	3.1
10-yr	4.6
25-yr	5.8

The model incorporates design assumptions including the following:

- The minimum time of concentration (T_c) is six minutes, based upon limitations of the TR-55 model.

Quality Treatment

Stormwater runoff from the building and parking area will be routed to a grassed underdrained soil filter, and a filterra treatment system. The soil filter is located adjacent to the parking lot on the northwest side of the proposed building. This system will drain to the City's infrastructure on Riverside Street.

The treatment volume of the soil filter required is based upon water quality/channel protection volume which is equal to 1.0-inch times the subcatchment's impervious area and 0.4–inch times the subcatchment's tributary landscaped areas.

Since the proposed building will replace existing buildings and pavement areas, the redevelopment standards apply. After completing the calculations outlined in §4.C(2)(d) of Chapter 500, the ranked impact change due to redevelopment is calculated to be -1.160, requiring that 0.0% of developed area be treated. However, the minimum level of treatment required by the City of Portland Technical manual is 50% for redevelopment projects.

The attached treatment table summarizes the total impervious and developed areas for the proposed development and indicates the BMP measures proposed for treatment. The conclusion is a tabulation of the effective treatment percentages for the proposed development. The results of this tabulation areas follow:

- The post-development area requiring treatment includes approximately 1.41 acres of impervious area and a total of approximately 2.05 acres of developed area.

- The redevelopment standard requires treatment for 50% of the new impervious areas. As such, the site is required to provide treatment for a minimum of 0.71 acres. The total impervious area receiving treatment is approximately 0.85 acres or 60.09%. (This does not include an area of 0.168 acres treated impervious area that has been applied to the urban impaired stream standard.)

- The redevelopment standard requires treatment for 50% of the new developed areas. As such, the site is required to provide treatment for a minimum of 1.03 acres. The total area receiving treatment is approximately 1.62 acres or 79.09%. (This does not include an area of 0.168 acres treated impervious area that has been applied to the urban impaired stream standard.)

A plan has been prepared to show that the treatment provided on site also satisfies the urban impaired stream standard, and a table of these calculations can also be found in Attachment A of this report. The standard has been met by reverting 1.161 acres of the existing site back to landscaping, which will not be mowed more than twice per year. Thus, this area was not included as redeveloped area. Other credits were earned by treating 0.168 acres of existing roof or other impervious area, that is now treated at 100% to the MDEP standards. The project redevelopment required 0.539 credits, and 0.565 were provided. Additional credits could be obtained from over treatment provided on site, but are not needed at this time.

Peak Flow Analysis

The subcatchment areas and times of concentration of the post-development conditions vary from the pre-development conditions based on the proposed site development and grading. The following table summarizes the results of the hydrologic analysis of the project during pre-development and post-development conditions.

Stormwater Peak Discharge Summary Table									
Study Point	2-Year Storm			10-Year Storm			25-Year Storm		
	Pre (cfs)	Post (cfs)	Diff. (cfs)	Pre (cfs)	Post (cfs)	Diff. (cfs)	Pre (cfs)	Post (cfs)	Diff. (cfs)
SP1	5.24	2.02	-3.22	9.00	6.26	-2.74	12.05	7.83	-4.22

The results of the stormwater modeling at Study Point SP1 indicate that the peak rates of runoff in the post-developed condition will be less than the pre-developed condition for the 2-year, 10-year, and 25-year storm events.

Conclusions

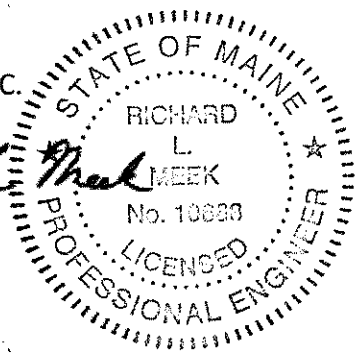
Erosion and sedimentation controls, inspection and maintenance procedures and general housekeeping requirements have been outlined to prevent unreasonable impacts on the site and to the surrounding environment.

By utilizing Best Management practices, stormwater quality treatment has been provided for at least 50% of the total impervious area and at least 50% of the total developed area. Based on the modeling data, the post-development peak rates of runoff for the 2-year, 10-year, and 25-year storm events demonstrate decreases in the peak rates of runoff when compared to the pre-development peak rates of runoff.

With the incorporation of the above referenced erosion control, treatment and detention measures, the project has been designed in conformance with the Maine Department of Environmental Protection Chapter 500 Stormwater Law and City of Portland Stormwater Management Standards. Accordingly, it is anticipated that stormwater runoff from the proposed development will not cause a significant adverse effect to off-site receiving channels or downstream properties.

Prepared by,

SEBAGO TECHNICS, INC.



Richard L. Meek
Sr. Project Engineer

January 30, 2019

Attachment A

STORMWATER QUALITY CALCULATIONS

Table 1: MDEP GENERAL STANDARD CALCULATIONS

Job #17500

AREA ID	WATERSHED SIZE (S.F.)	EXISTING ONSITE IMPERVIOUS AREA (S.F.)	NEW ONSITE IMPERVIOUS AREA (S.F.)	EXISTING ONSITE LANDSCAPED AREA (S.F.)	NEW ONSITE LANDSCAPED AREA (S.F.)	NET NEW DEVELOPED AREA (S.F.)	NET EXISTING DEVELOPED AREAS (S.F.)	TREATMENT PROVIDED?	IMPERVIOUS AREA TREATED (S.F.)	LANDSCAPED AREA TREATED* (S.F.)	DEVELOPED AREA TREATED (S.F.)	TREATMENT BMP
1	29,589	0	17,258	0	12,331	29,589	0	NO	0	0	0	NONE
2	16,927	0	16,927	0	0	16,927	0	YES	16,927	0	16,927	Filterra
3	61,150	0	27,368	18,185	15,597	42,965	18,185	YES	27,368	33,782	61,150	UDSF1
4	49,040	0	0	41,949	0	0	41,949	NO	0	0	0	NONE
TOTAL (S.F.)	**156,706**	**0**	**61,553**	**60,134**	**27,928**	**89,481**	**60,134**		**44,295**	**33,782**	**78,077**	

TOTAL NEW IMPERVIOUS AREA (S.F.)	**61,553**	**TOTAL DEVELOPED AREA (S.F.)**	**89,481**
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	**44,295**	**TOTAL DEV. AREA RECEIVING TREATMENT (S.F.)**	**78,077**
MINUS AMOUNT ALLOCATED TO URBAN IMPAIRED STREAM STANDARD	**7,306**	**MINUS AMOUNT ALLOCATED TO URBAN IMP.**	**7,306**
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	**36,989**	**TOTAL DEV. AREA RECEIVING TREATMENT (S.F.)**	**70,771**
% OF IMPERVIOUS AREA RECEIVING TREATMENT	**60.09%**	**% OF DEV. AREA RECEIVING TREATMENT**	**79.09%**

*

36,567SF of Area was converted to landscaped, and will not be mowed more than twice per year.
17345 SF of Area was converted to landscaped, and will not be mowed more than twice per year.
These numbers were put under existing, as they do not contribute to the redeveloped area.

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South Portland, Maine 04106
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JOB	17500 - Patagon		
SHEET NO.	1	OF	1
CALCULATED BY	SAH	DATE	1/28/2019
FILE NAME		PRNT DATE	1/30/2019

UNDERDRAINED SOIL FILTER

Task: Calculate water quality volume per MDEP chapter 500 regulations

References

1. Maine DEP Chapter 500, Section 4.C.(3)(b)
   a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area"
2. Maine DEP Best Management Practices Stormwater Manual, Section 7.1
   a. "surface should represent 5% of impervious area and 2% of landscaped area"

Tributary to Underdrained Filter: UDSF1

Landscaped Area	33,801.00	SF				
Impervious Area	27,368.00	SF				

Minimum Surface Area

Required (2% X Landscaped + 5%" X Impervious)

Total Landscaped Area	33,801.00	SF	Area	676.0	SF	
Total Impervious Area	27,368.00	SF	Area	1,368.4	SF	
Required Minimum Surface Area				2,044.4	SF	
Provided Surface Area				5,951.0	SF	

Treatment Volume

Required (0.4" X Landscaped + 1.0" X Impervious)

Landscaped Area	33,801.00	SF	Volume	1,126.7				
Impervious Area	27,368.00	SF	Volume	2,280.7				
Treatment Volume Required				3,407.4	CF	0.078	AF	
Provided Treatment Volume				3,484.0	CF	0.079982	AF	Elev 70-70.55

Sediment Pre-Treatment

Per Reference 2, Chapter 7.1 "Pretreatment devices shall be provided to minimize discharge of sediment to the soil filter"

Annual Sediment Load: 55 cubic feet per acre per year of sanded area

Area to be sanded:	27,368.00	SF						
Sediment Volume	35	CF						
Provided	353	CF	6	Inch Deep Forebay	with area of		705	sf

Table 2: MDEP REDEVELOPMENT STANDARD CALCULATIONS: Patagon Self Storage, LLC., Portland, Maine

Existing Areas by Pollutant Ranking (S.F.)							Proposed Areas by Pollutant Ranking (S.F.)						
0	1	2	3	4	5	SUM	0	1	2	3	4	5	SUM
6,221	7,091	48,596	94,798	0	0	156,706	60,134	13,042	56,804	26,726	0	0	156,706

Existing Areas by Pollutant Ranking (acres)							Proposed Areas by Pollutant Ranking (acres)						
0	1	2	3	4	5	SUM	0	1	2	3	4	5	SUM
0.143	0.163	1.116	2.176	0.000	0.000	3.597	1.380	0.299	1.304	0.614	0.000	0.000	3.597

Existing Weighted Average (Item A)	Proposed Weighted Average (Item B)
8.923	**4.748**

Total Development Acres (Item C)	Total Redevelopment Acres (Item D)
2.480	**1.320**

Ranked Impact Change Due to Redevelopment (Item E)
-1.160

Treatment Levels for Redevelopment Projects

Ranked Impact Change Due to Redevelopment (Item E)	Percentage of Developed Area that Must be Treated
0.0 or less	**0% (Stormwater projects)** **50% (Site projects)**
≤ 0.0 to ≥ 1.0	**60%**
> 1.0 to ≥ 2.0	**70%**
> 2.0 to ≥ 3.0	**80%**
> 3.0	**Same treatment level as for new development**

URBAN IMPAIRED STREAM CALCULATIONS
Job # 17500

Mitigation Credits Required Calculation

Note: Mitigation credits were calculated using Tables 1 and 2 of Chapter 501: Stormwater Management Compensation Fees and Mitigation Credit.

Per Table 1: General Standard Calculations

New Onsite Impervious Area =	61,553	*SF*
New Landscaped Area =	27,928	*SF*
	SF	***AC***
Proposed Non-Roof Impervious Area =	27,960	0.642
Proposed Roof Impervious Area =	33,593	0.771
Proposed Landscaped Area =	27,928	0.641

Per Table 1 of Chapter 501: Mitigation Based on Development Type

Surface Type		
Non-Roof Impervious	0.500	Credits per acre
Roof	0.200	Credits per acre
Landscaped Area	0.100	Credits per acre
New Onsite Non-Roof Impervious Area x 0.5 credits =	0.321	Credits Required
New Onsite Roof Area x 0.2 credits =	0.154	Credits Required
New Onsite Landscaped Area x 0.1 credits =	0.064	Credits Required
Total	**0.539**	**Credits Required**

URBAN IMPAIRED STREAM CALCULATIONS (continued)
Job # 17500

Mitigation Credits Earned Calculation

Per Table 2: Mitigation Credits Based on Type of Activity and Type of Development (Chapter 501)

	SF	*AC*
Eliminate "Medium Use Parking Lot", Replace with Landscaped Area =	0	0.000
Eliminate "Other Parking Lot", Replaced with Landscape Area =	50,584	1.161
Eliminate "Roof/Other Impervious", Replace with Landscaped Area =	0	0.000
Existing "Medium Use Parking Lot", Now Treated at 100% =	0	0.000
Existing "Roof/Other Impervious", Now Treated at 100% =	7,306	0.168
Existing "Roof/Other Impervious, Now Landscaped Area 100% Treated=	0	0.000
Existing Landscaped Area, Now Treated at 100% Required Volume =	0	0.000

Notes:
1. Mitigation Credits Earned Calculation Per Table 2 of Chapter 501 with BMPs at required sizing.

Per Table 2: Mitigation Credits Based on Type of Activity and Type of Development (Chapter 501)

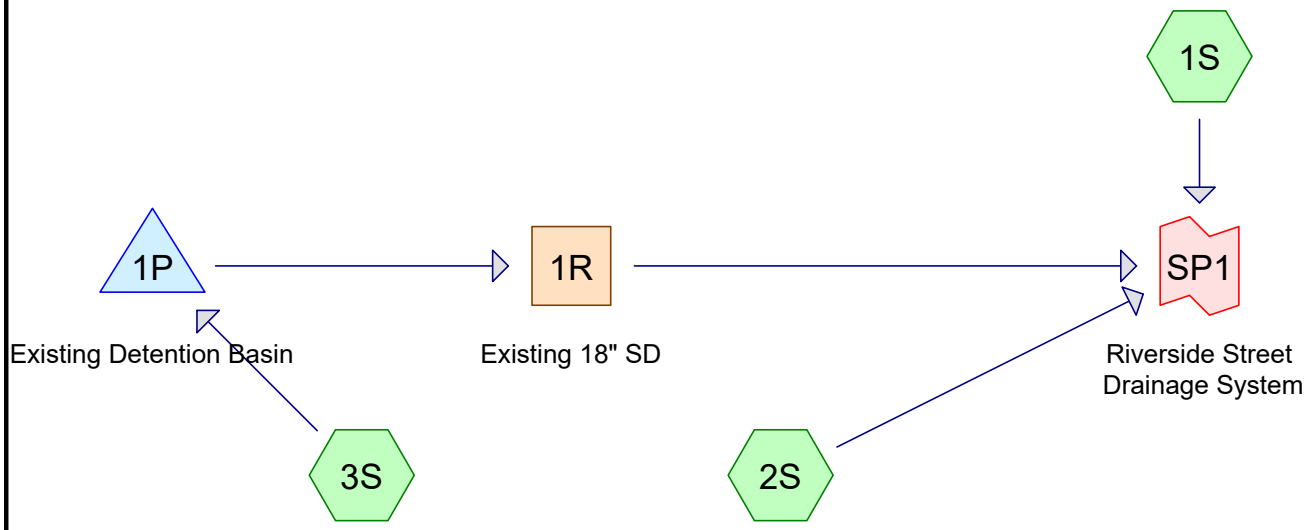
Surface Type		
Eliminate "Medium Use Parking Lot", Replace with Landscaped Area =	0.700	Credits per acre
Eliminate "Other Parking Lot", Replaced with Landscape Area =	0.400	Credits per acre
Eliminate "Roof/Other Impervious", Replace with Landscaped Area =	0.200	Credits per acre
Existing "Medium Use Parking Lot", Now Treated at 100% =	1.200	Credits per acre
Existing "Roof/Other Impervious", Now Treated at 100% =	0.600	Credits per acre
Existing Landscaped Area, Now Treated at 100% Required Volume =	0.300	Credits per acre
Medium Use Parking Lot to Landscaped x 0.7 credits=	0.000	On-Site Credits Earned
Other Parking Lot to Landscape Area x 0.4 credits =	0.464	On-Site Credits Earned
Roof/Other Impervious Area to Landscaped x 0.2 credits=	0.000	On-Site Credits Earned
Existing Medium Use Parking Lot Now Treated x 1.2 =	0.000	On-Site Credits Earned
Existing Roof/Other Impervious Now Treated x 0.6 =	0.101	On-Site Credits Earned
Existing Landscaped Area Now Treated x 0.3 credits=	0.000	On-Site Credits Earned
Total	**0.565**	**On-Site Credits Earned**

0.539 Credits Required
0.565 Credits Earned
0.026 Total Credit Balance

Attachment B

HYDROCAD OUTPUT

PRE-DEVELOPMENT
POST-DEVELOPMENT



Subcat Reach Pond Link

Routing Diagram for 17500_Predevelopment
Prepared by Sebago Technics, Inc, Printed 1/30/2019
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.427	39	>75% Grass cover, Good, HSG A (1S, 2S)
0.259	74	>75% Grass cover, Good, HSG C (2S, 3S)
2.176	98	Parking (1S, 2S, 3S)
0.163	74	Pond (3S)
0.430	98	Roofs (1S, 2S)
0.143	70	Woods, Good, HSG C (2S, 3S)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.427	HSG A	1S, 2S
0.000	HSG B	
0.402	HSG C	2S, 3S
0.000	HSG D	
2.769	Other	1S, 2S, 3S

Summary for Subcatchment 1S:

Runoff = 0.67 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	1,945	98	Parking
*	3,131	98	Roofs
	3,881	39	>75% Grass cover, Good, HSG A
	8,957	72	Weighted Average
	3,881		43.33% Pervious Area
	5,076		56.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	32	0.0266	1.19		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
0.1	20	0.1250	2.47		**Shallow Concentrated Flow, B to C** Short Grass Pasture Kv= 7.0 fps
0.6	38	0.0221	1.04		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
4.9					**Direct Entry, Direct Entry**
6.0	90	Total			

Summary for Subcatchment 2S:

Runoff = 11.37 cfs @ 12.09 hrs, Volume= 0.858 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	15,601	98	Roofs
*	63,124	98	Parking
	14,699	39	>75% Grass cover, Good, HSG A
	6,895	74	>75% Grass cover, Good, HSG C
	840	70	Woods, Good, HSG C
	101,159	88	Weighted Average
	22,434		22.18% Pervious Area
	78,725		77.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	150	0.0070	0.95		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
1.2	143	0.0102	2.05		**Shallow Concentrated Flow, B to C** Paved Kv= 20.3 fps
1.2	171	0.0050	2.45	0.85	**Pipe Channel, C to D** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013
1.0	195	0.0050	3.21	2.52	**Pipe Channel, D to E** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.2					**Direct Entry, Direct Entry**
6.2	659	Total			

Summary for Subcatchment 3S:

Runoff = 2.98 cfs @ 12.44 hrs, Volume= 0.405 af, Depth= 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	29,729	98	Parking
	4,389	74	>75% Grass cover, Good, HSG C
	5,381	70	Woods, Good, HSG C
*	7,091	74	Pond
	46,590	89	Weighted Average
	16,861		36.19% Pervious Area
	29,729		63.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.2	150	0.0069	0.08		**Sheet Flow, A to B** Grass: Dense n= 0.240 P2= 3.00"
1.8	120	0.0050	1.14		**Shallow Concentrated Flow, B to C** Unpaved Kv= 16.1 fps
33.0	270	Total			

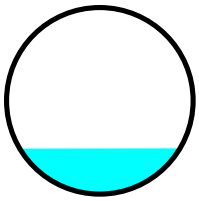
Summary for Reach 1R: Existing 18" SD

Inflow Area = 1.070 ac, 63.81% Impervious, Inflow Depth > 3.72" for 25-YEAR event
Inflow = 0.62 cfs @ 13.35 hrs, Volume= 0.331 af
Outflow = 0.62 cfs @ 13.36 hrs, Volume= 0.331 af, Atten= 0%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.84 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 0.89 fps, Avg. Travel Time= 1.9 min

Peak Storage= 34 cf @ 13.36 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 4.70 cfs

18.0" Round Pipe
n= 0.013
Length= 100.0' Slope= 0.0020 '/'
Inlet Invert= 67.25', Outlet Invert= 67.05'



Summary for Pond 1P: Existing Detention Basin

Inflow Area = 1.070 ac, 63.81% Impervious, Inflow Depth = 4.54" for 25-YEAR event
Inflow = 2.98 cfs @ 12.44 hrs, Volume= 0.405 af
Outflow = 0.62 cfs @ 13.35 hrs, Volume= 0.331 af, Atten= 79%, Lag= 54.3 min
Primary = 0.62 cfs @ 13.35 hrs, Volume= 0.331 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 68.99' @ 13.35 hrs Surf.Area= 19,761 sf Storage= 10,072 cf

Plug-Flow detention time= 360.1 min calculated for 0.331 af (82% of inflow)
Center-of-Mass det. time= 288.8 min (1,103.1 - 814.3)

Volume	Invert	Avail.Storage	Storage Description
#1	68.00'	33,213 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	511	0.0	0	0
69.00	19,883	100.0	10,197	10,197
70.00	26,149	100.0	23,016	33,213

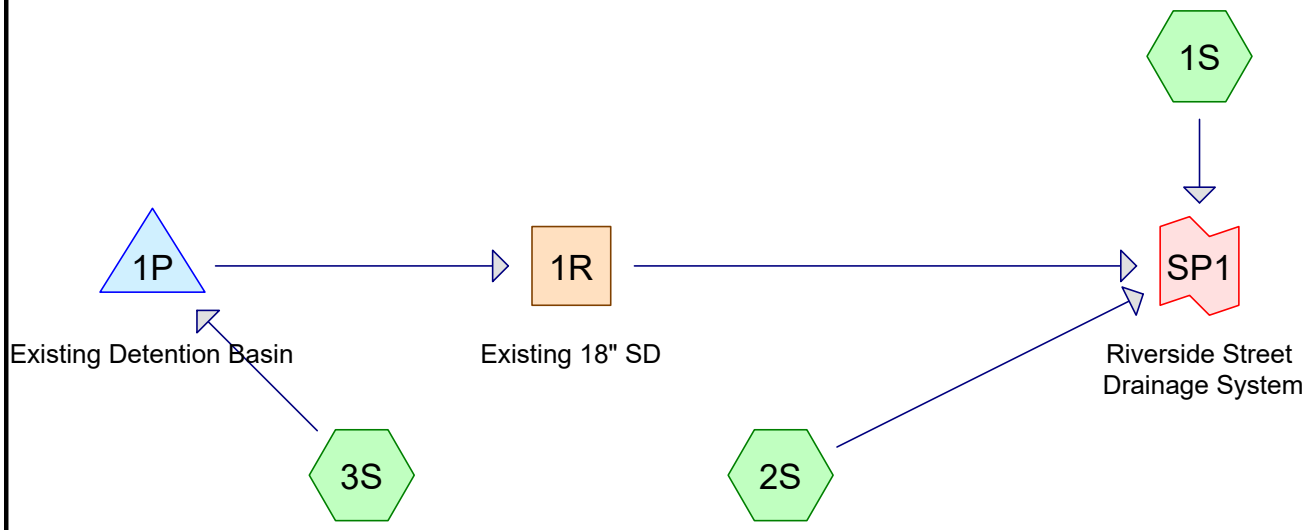
Device	Routing	Invert	Outlet Devices
#1	Primary	68.50'	**18.0" Round Culvert** L= 657.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 68.50' / 67.25' S= 0.0019 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=0.62 cfs @ 13.35 hrs HW=68.99' TW=67.62' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.62 cfs @ 1.83 fps)

Summary for Link SP1: Riverside Street Drainage System

Inflow Area = 3.597 ac, 72.45% Impervious, Inflow Depth > 4.13" for 25-YEAR event
Inflow = 12.05 cfs @ 12.09 hrs, Volume= 1.238 af
Primary = 12.05 cfs @ 12.09 hrs, Volume= 1.238 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



Subcat Reach Pond Link

Routing Diagram for 17500_Predevelopment
Prepared by Sebago Technics, Inc, Printed 1/30/2019
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.427	39	>75% Grass cover, Good, HSG A (1S, 2S)
0.259	74	>75% Grass cover, Good, HSG C (2S, 3S)
2.176	98	Parking (1S, 2S, 3S)
0.163	74	Pond (3S)
0.430	98	Roofs (1S, 2S)
0.143	70	Woods, Good, HSG C (2S, 3S)
3.597	**87**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.427	HSG A	1S, 2S
0.000	HSG B	
0.402	HSG C	2S, 3S
0.000	HSG D	
2.769	Other	1S, 2S, 3S
3.597		**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Runoff Area=8,957 sf 56.67% Impervious Runoff Depth=0.87"
Flow Length=90' Tc=6.0 min CN=72 Runoff=0.19 cfs 0.015 af

Subcatchment2S: Runoff Area=101,159 sf 77.82% Impervious Runoff Depth=1.91"
Flow Length=659' Tc=6.2 min CN=88 Runoff=5.05 cfs 0.369 af

Subcatchment3S: Runoff Area=46,590 sf 63.81% Impervious Runoff Depth=1.99"
Flow Length=270' Tc=33.0 min CN=89 Runoff=1.34 cfs 0.177 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.16' Max Vel=1.10 fps Inflow=0.11 cfs 0.105 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.11 cfs 0.105 af

Pond 1P: Existing Detention Basin Peak Elev=68.71' Storage=5,270 cf Inflow=1.34 cfs 0.177 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.11 cfs 0.105 af

Link SP1: Riverside Street Drainage System Inflow=5.24 cfs 0.489 af
Primary=5.24 cfs 0.489 af

Total Runoff Area = 3.597 ac Runoff Volume = 0.561 af Average Runoff Depth = 1.87"
27.55% Pervious = 0.991 ac 72.45% Impervious = 2.606 ac

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Runoff Area=8,957 sf 56.67% Impervious Runoff Depth=1.89"
Flow Length=90' Tc=6.0 min CN=72 Runoff=0.44 cfs 0.032 af

Subcatchment2S: Runoff Area=101,159 sf 77.82% Impervious Runoff Depth=3.29"
Flow Length=659' Tc=6.2 min CN=88 Runoff=8.56 cfs 0.637 af

Subcatchment3S: Runoff Area=46,590 sf 63.81% Impervious Runoff Depth=3.39"
Flow Length=270' Tc=33.0 min CN=89 Runoff=2.26 cfs 0.302 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.28' Max Vel=1.57 fps Inflow=0.36 cfs 0.229 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.36 cfs 0.229 af

Pond 1P: Existing Detention Basin Peak Elev=68.88' Storage=7,865 cf Inflow=2.26 cfs 0.302 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.36 cfs 0.229 af

Link SP1: Riverside Street Drainage System Inflow=9.00 cfs 0.898 af
Primary=9.00 cfs 0.898 af

Total Runoff Area = 3.597 ac Runoff Volume = 0.971 af Average Runoff Depth = 3.24"
27.55% Pervious = 0.991 ac 72.45% Impervious = 2.606 ac

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Runoff Area=8,957 sf 56.67% Impervious Runoff Depth=2.83"
Flow Length=90' Tc=6.0 min CN=72 Runoff=0.67 cfs 0.049 af

Subcatchment2S: Runoff Area=101,159 sf 77.82% Impervious Runoff Depth=4.43"
Flow Length=659' Tc=6.2 min CN=88 Runoff=11.37 cfs 0.858 af

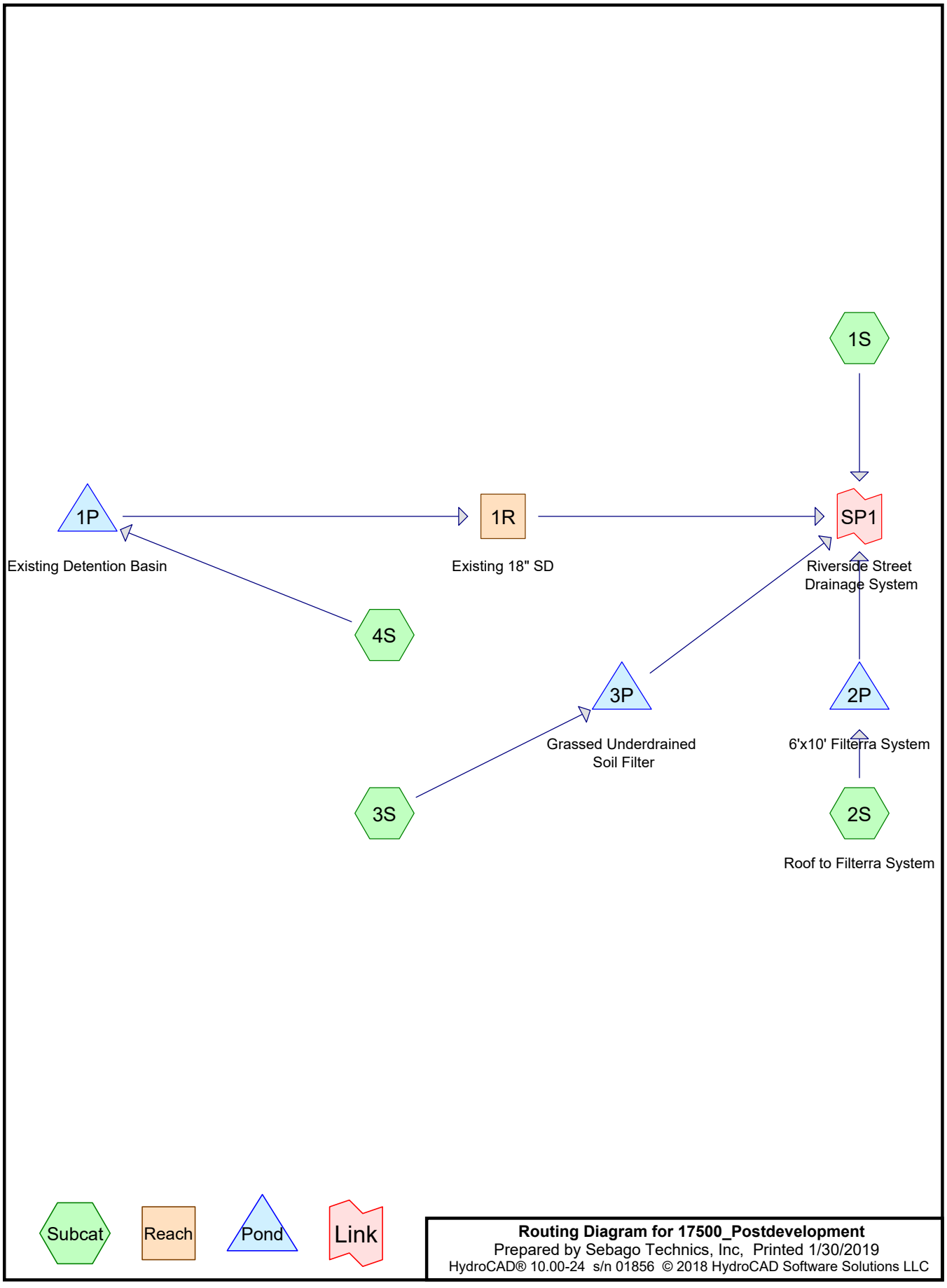
Subcatchment3S: Runoff Area=46,590 sf 63.81% Impervious Runoff Depth=4.54"
Flow Length=270' Tc=33.0 min CN=89 Runoff=2.98 cfs 0.405 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.37' Max Vel=1.84 fps Inflow=0.62 cfs 0.331 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.62 cfs 0.331 af

Pond 1P: Existing Detention Basin Peak Elev=68.99' Storage=10,072 cf Inflow=2.98 cfs 0.405 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.62 cfs 0.331 af

Link SP1: Riverside Street Drainage System Inflow=12.05 cfs 1.238 af
Primary=12.05 cfs 1.238 af

Total Runoff Area = 3.597 ac Runoff Volume = 1.311 af Average Runoff Depth = 4.37"
27.55% Pervious = 0.991 ac 72.45% Impervious = 2.606 ac



Routing Diagram for 17500_Postdevelopment
Prepared by Sebago Technics, Inc, Printed 1/30/2019
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.355	39	>75% Grass cover, Good, HSG A (1S, 3S)
0.286	74	>75% Grass cover, Good, HSG C (1S, 3S)
1.238	71	Meadow, non-grazed, HSG C (3S, 4S)
0.368	98	Parking (1S)
0.246	98	Paved parking, HSG A (3S)
0.163	74	Pond (4S)
0.389	98	Roofs (2S)
0.383	98	Roofs, HSG A (3S)
0.028	98	Walkways (1S)
0.155	70	Woods, Good, HSG C (3S, 4S)

Summary for Subcatchment 1S:

Runoff = 2.55 cfs @ 12.09 hrs, Volume= 0.182 af, Depth= 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	16,024	98	Parking
	10,518	39	>75% Grass cover, Good, HSG A
	1,813	74	>75% Grass cover, Good, HSG C
*	1,234	98	Walkways
	29,589	76	Weighted Average
	12,331		41.67% Pervious Area
	17,258		58.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0133	1.13		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
0.5	65	0.0133	2.34		**Shallow Concentrated Flow, B to C** Paved Kv= 20.3 fps
0.9	110	0.0020	2.03	1.59	**Pipe Channel, Closed Drainage** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
3.1					**Direct Entry, TC Min = 6.0 min**
6.0	275	Total			

Summary for Subcatchment 2S: Roof to Filterra System

Runoff = 2.21 cfs @ 12.08 hrs, Volume= 0.180 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
*	16,927	98	Roofs
	16,927		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc**

Summary for Subcatchment 3S:

Runoff = 6.05 cfs @ 12.09 hrs, Volume= 0.433 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

Area (sf)	CN	Description
840	70	Woods, Good, HSG C
17,345	71	Meadow, non-grazed, HSG C
10,630	74	>75% Grass cover, Good, HSG C
16,666	98	Roofs, HSG A
4,967	39	>75% Grass cover, Good, HSG A
10,702	98	Paved parking, HSG A
61,150	81	Weighted Average
33,782		55.24% Pervious Area
27,368		44.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	90	0.0270	1.47		**Sheet Flow, A to B**
					Smooth surfaces n= 0.011 P2= 3.00"
5.0					**Direct Entry, TC MIN = 6.0 MIN**
6.0	90	Total			

Summary for Subcatchment 4S:

Runoff = 1.96 cfs @ 12.47 hrs, Volume= 0.260 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YEAR Rainfall=5.80"

	Area (sf)	CN	Description
	5,932	70	Woods, Good, HSG C
	36,567	71	Meadow, non-grazed, HSG C
*	7,091	74	Pond
	49,590	71	Weighted Average
	49,590		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.2	150	0.0069	0.08		**Sheet Flow, A to B**
					Grass: Dense n= 0.240 P2= 3.00"
1.8	120	0.0050	1.14		**Shallow Concentrated Flow, B to C**
					Unpaved Kv= 16.1 fps
33.0	270	Total			

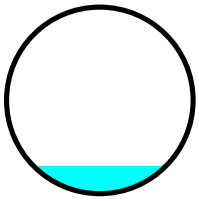
Summary for Reach 1R: Existing 18" SD

Inflow Area = 1.138 ac, 0.00% Impervious, Inflow Depth > 1.98" for 25-YEAR event
Inflow = 0.23 cfs @ 14.80 hrs, Volume= 0.188 af
Outflow = 0.23 cfs @ 14.81 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.9 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs / 2
Max. Velocity= 1.37 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 0.77 fps, Avg. Travel Time= 2.2 min

Peak Storage= 17 cf @ 14.81 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 4.70 cfs

18.0" Round Pipe
n= 0.013
Length= 100.0' Slope= 0.0020 '/'
Inlet Invert= 67.25', Outlet Invert= 67.05'



Summary for Pond 1P: Existing Detention Basin

Inflow Area = 1.138 ac, 0.00% Impervious, Inflow Depth = 2.74" for 25-YEAR event
Inflow = 1.96 cfs @ 12.47 hrs, Volume= 0.260 af
Outflow = 0.23 cfs @ 14.80 hrs, Volume= 0.188 af, Atten= 88%, Lag= 139.8 min
Primary = 0.23 cfs @ 14.80 hrs, Volume= 0.188 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs / 2
Peak Elev= 68.80' @ 14.80 hrs Surf.Area= 16,032 sf Storage= 6,627 cf

Plug-Flow detention time= 466.5 min calculated for 0.188 af (72% of inflow)
Center-of-Mass det. time= 372.1 min (1,234.7 - 862.6)

Volume	Invert	Avail.Storage	Storage Description
#1	68.00'	33,213 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
68.00	511	0.0	0	0
69.00	19,883	100.0	10,197	10,197
70.00	26,149	100.0	23,016	33,213

Device	Routing	Invert	Outlet Devices
#1	Primary	68.50'	**18.0" Round Culvert**

L= 657.0' CPP, square edge headwall, Ke= 0.500
Inlet / Outlet Invert= 68.50' / 67.25' S= 0.0019 '/' Cc= 0.900
n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=0.23 cfs @ 14.80 hrs HW=68.80' TW=67.47' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.23 cfs @ 1.36 fps)

Summary for Pond 2P: 6'x10' Filterra System

Inflow Area = 0.389 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-YEAR event
Inflow = 2.21 cfs @ 12.08 hrs, Volume= 0.180 af
Primary = 2.21 cfs @ 12.08 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs / 2

Summary for Pond 3P: Grassed Underdrained Soil Filter

Inflow Area = 1.404 ac, 44.76% Impervious, Inflow Depth = 3.70" for 25-YEAR event
Inflow = 6.05 cfs @ 12.09 hrs, Volume= 0.433 af
Outflow = 3.13 cfs @ 12.23 hrs, Volume= 0.429 af, Atten= 48%, Lag= 8.6 min
Primary = 3.13 cfs @ 12.23 hrs, Volume= 0.429 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs / 2
Peak Elev= 70.79' @ 12.23 hrs Surf.Area= 7,057 sf Storage= 5,140 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 287.7 min (1,100.7 - 812.9)

Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	10,363 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	5,950	0	0
71.00	7,350	6,650	6,650
71.50	7,500	3,713	10,363

Device	Routing	Invert	Outlet Devices
#1	Primary	67.73'	**12.0" Round Culvert** L= 325.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 67.73' / 66.90' S= 0.0026 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.83'	**6.0" Round 6" Header** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 67.83' / 67.83' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	70.55'	**7.0" x 7.0" Horiz. Orifice/Grate X 7.00 columns** X 7 rows C= 0.600 Limited to weir flow at low heads
#4	Device 2	67.83'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.13 cfs @ 12.23 hrs HW=70.79' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 3.13 cfs @ 3.99 fps)
  ├─**2=6" Header** (Passes < 0.99 cfs potential flow)
  │ └─**4=Orifice/Grate** (Passes < 0.04 cfs potential flow)
  └─**3=Orifice/Grate** (Passes < 39.34 cfs potential flow)

Summary for Link SP1: Riverside Street Drainage System

Inflow Area = 3.610 ac, 39.14% Impervious, Inflow Depth > 3.25" for 25-YEAR event
Inflow = 7.83 cfs @ 12.09 hrs, Volume= 0.979 af
Primary = 7.83 cfs @ 12.09 hrs, Volume= 0.979 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs

Time span=0.00-52.00 hrs, dt=0.02 hrs, 2601 points x 2
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: Runoff Area=29,589 sf 58.33% Impervious Runoff Depth=1.08"
Flow Length=275' Tc=6.0 min CN=76 Runoff=0.83 cfs 0.061 af

Subcatchment2S: Roof to Filterra System Runoff Area=16,927 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.17 cfs 0.093 af

Subcatchment3S: Runoff Area=61,150 sf 44.76% Impervious Runoff Depth=1.39"
Flow Length=90' Slope=0.0270 '/' Tc=6.0 min CN=81 Runoff=2.26 cfs 0.163 af

Subcatchment4S: Runoff Area=49,590 sf 0.00% Impervious Runoff Depth=0.82"
Flow Length=270' Tc=33.0 min CN=71 Runoff=0.53 cfs 0.078 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.04' Max Vel=0.48 fps Inflow=0.01 cfs 0.009 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.01 cfs 0.009 af

Pond 1P: Existing Detention Basin Peak Elev=68.56' Storage=3,298 cf Inflow=0.53 cfs 0.078 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.01 cfs 0.009 af

Pond 2P: 6'x10' Filterra System Inflow=1.17 cfs 0.093 af
Primary=1.17 cfs 0.093 af

Pond 3P: Grassed Underdrained Soil Filter Peak Elev=70.56' Storage=3,535 cf Inflow=2.26 cfs 0.163 af
Outflow=0.28 cfs 0.159 af

Link SP1: Riverside Street Drainage System Inflow=2.02 cfs 0.323 af
Primary=2.02 cfs 0.323 af

Total Runoff Area = 3.610 ac Runoff Volume = 0.395 af Average Runoff Depth = 1.31"
60.86% Pervious = 2.197 ac 39.14% Impervious = 1.413 ac

Time span=0.00-52.00 hrs, dt=0.02 hrs, 2601 points x 2
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: Runoff Area=29,589 sf 58.33% Impervious Runoff Depth=2.21"
Flow Length=275' Tc=6.0 min CN=76 Runoff=1.75 cfs 0.125 af

Subcatchment2S: Roof to Filterra System Runoff Area=16,927 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=1.74 cfs 0.141 af

Subcatchment3S: Runoff Area=61,150 sf 44.76% Impervious Runoff Depth=2.63"
Flow Length=90' Slope=0.0270 '/' Tc=6.0 min CN=81 Runoff=4.33 cfs 0.308 af

Subcatchment4S: Runoff Area=49,590 sf 0.00% Impervious Runoff Depth=1.82"
Flow Length=270' Tc=33.0 min CN=71 Runoff=1.28 cfs 0.173 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.15' Max Vel=1.06 fps Inflow=0.10 cfs 0.101 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.10 cfs 0.101 af

Pond 1P: Existing Detention Basin Peak Elev=68.70' Storage=5,084 cf Inflow=1.28 cfs 0.173 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.10 cfs 0.101 af

Pond 2P: 6'x10' Filterra System Inflow=1.74 cfs 0.141 af
Primary=1.74 cfs 0.141 af

Pond 3P: Grassed Underdrained Soil Filter Peak Elev=70.61' Storage=3,914 cf Inflow=4.33 cfs 0.308 af
Outflow=3.03 cfs 0.304 af

Link SP1: Riverside Street Drainage System Inflow=6.26 cfs 0.672 af
Primary=6.26 cfs 0.672 af

Total Runoff Area = 3.610 ac Runoff Volume = 0.747 af Average Runoff Depth = 2.48"
60.86% Pervious = 2.197 ac 39.14% Impervious = 1.413 ac

Time span=0.00-52.00 hrs, dt=0.02 hrs, 2601 points x 2
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: Runoff Area=29,589 sf 58.33% Impervious Runoff Depth=3.21"
Flow Length=275' Tc=6.0 min CN=76 Runoff=2.55 cfs 0.182 af

Subcatchment2S: Roof to Filterra System Runoff Area=16,927 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=2.21 cfs 0.180 af

Subcatchment3S: Runoff Area=61,150 sf 44.76% Impervious Runoff Depth=3.70"
Flow Length=90' Slope=0.0270 '/' Tc=6.0 min CN=81 Runoff=6.05 cfs 0.433 af

Subcatchment4S: Runoff Area=49,590 sf 0.00% Impervious Runoff Depth=2.74"
Flow Length=270' Tc=33.0 min CN=71 Runoff=1.96 cfs 0.260 af

Reach 1R: Existing 18" SD Avg. Flow Depth=0.22' Max Vel=1.37 fps Inflow=0.23 cfs 0.188 af
18.0" Round Pipe n=0.013 L=100.0' S=0.0020 '/' Capacity=4.70 cfs Outflow=0.23 cfs 0.188 af

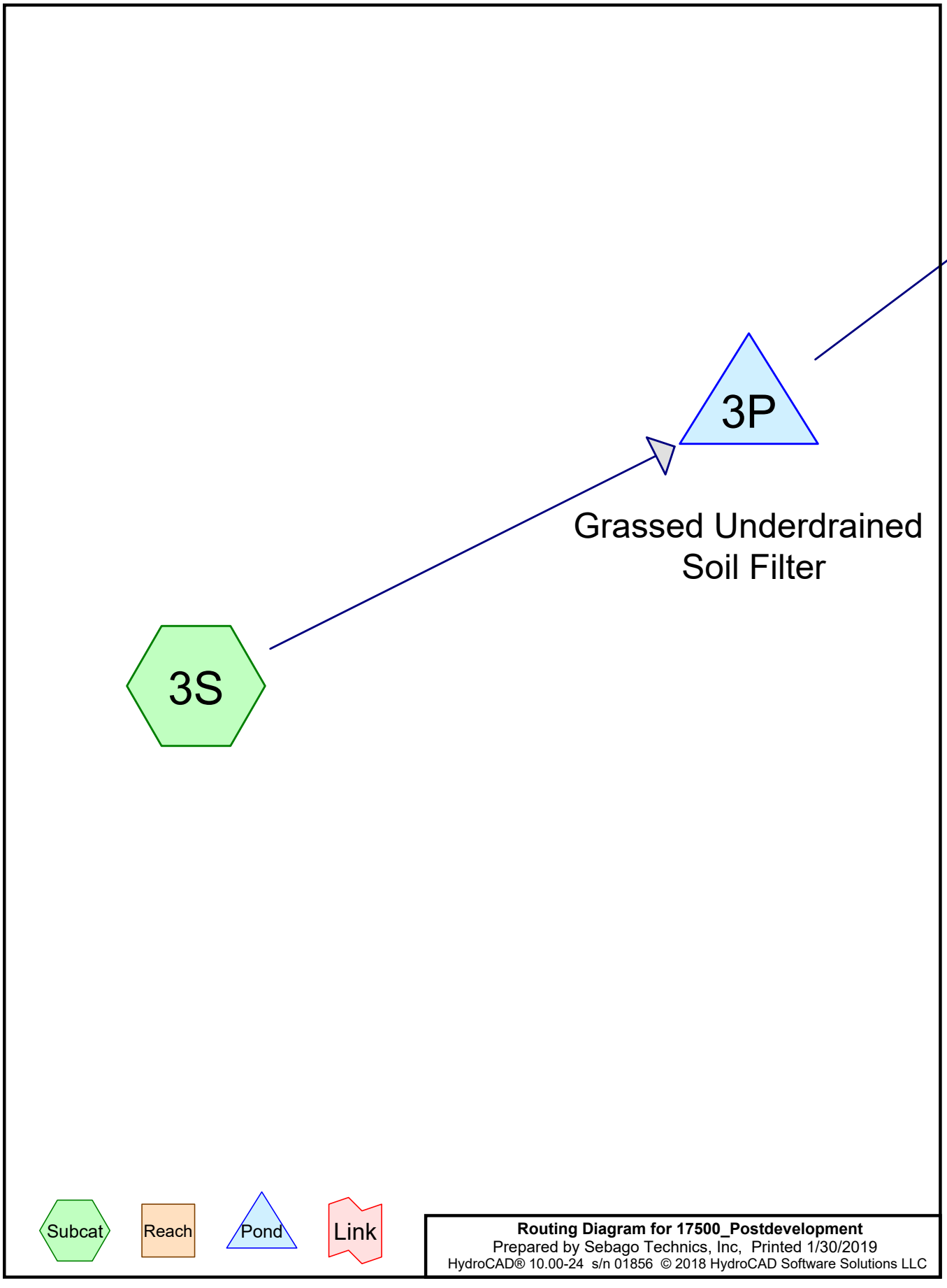
Pond 1P: Existing Detention Basin Peak Elev=68.80' Storage=6,627 cf Inflow=1.96 cfs 0.260 af
18.0" Round Culvert n=0.013 L=657.0' S=0.0019 '/' Outflow=0.23 cfs 0.188 af

Pond 2P: 6'x10' Filterra System Inflow=2.21 cfs 0.180 af
Primary=2.21 cfs 0.180 af

Pond 3P: Grassed Underdrained Soil Filter Peak Elev=70.79' Storage=5,140 cf Inflow=6.05 cfs 0.433 af
Outflow=3.13 cfs 0.429 af

Link SP1: Riverside Street Drainage System Inflow=7.83 cfs 0.979 af
Primary=7.83 cfs 0.979 af

Total Runoff Area = 3.610 ac Runoff Volume = 1.055 af Average Runoff Depth = 3.51"
60.86% Pervious = 2.197 ac 39.14% Impervious = 1.413 ac



Routing Diagram for 17500_Postdevelopment
Prepared by Sebago Technics, Inc, Printed 1/30/2019
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.114	39	>75% Grass cover, Good, HSG A (3S)
0.244	74	>75% Grass cover, Good, HSG C (3S)
0.398	71	Meadow, non-grazed, HSG C (3S)
0.246	98	Paved parking, HSG A (3S)
0.383	98	Roofs, HSG A (3S)
0.019	70	Woods, Good, HSG C (3S)
1.404	**81**	**TOTAL AREA**

Time span=0.00-52.00 hrs, dt=0.02 hrs, 2601 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment3S: Runoff Area=61,150 sf 44.76% Impervious Runoff Depth=0.73"
Flow Length=90' Slope=0.0270 '/' Tc=6.0 min CN=81 Runoff=1.15 cfs 0.086 af

Pond 3P: Grassed Underdrained Soil Filter Peak Elev=70.38' Storage=2,377 cf Inflow=1.15 cfs 0.086 af
Outflow=0.03 cfs 0.086 af

Total Runoff Area = 1.404 ac Runoff Volume = 0.086 af Average Runoff Depth = 0.73"
55.24% Pervious = 0.776 ac 44.76% Impervious = 0.628 ac

Summary for Subcatchment 3S:

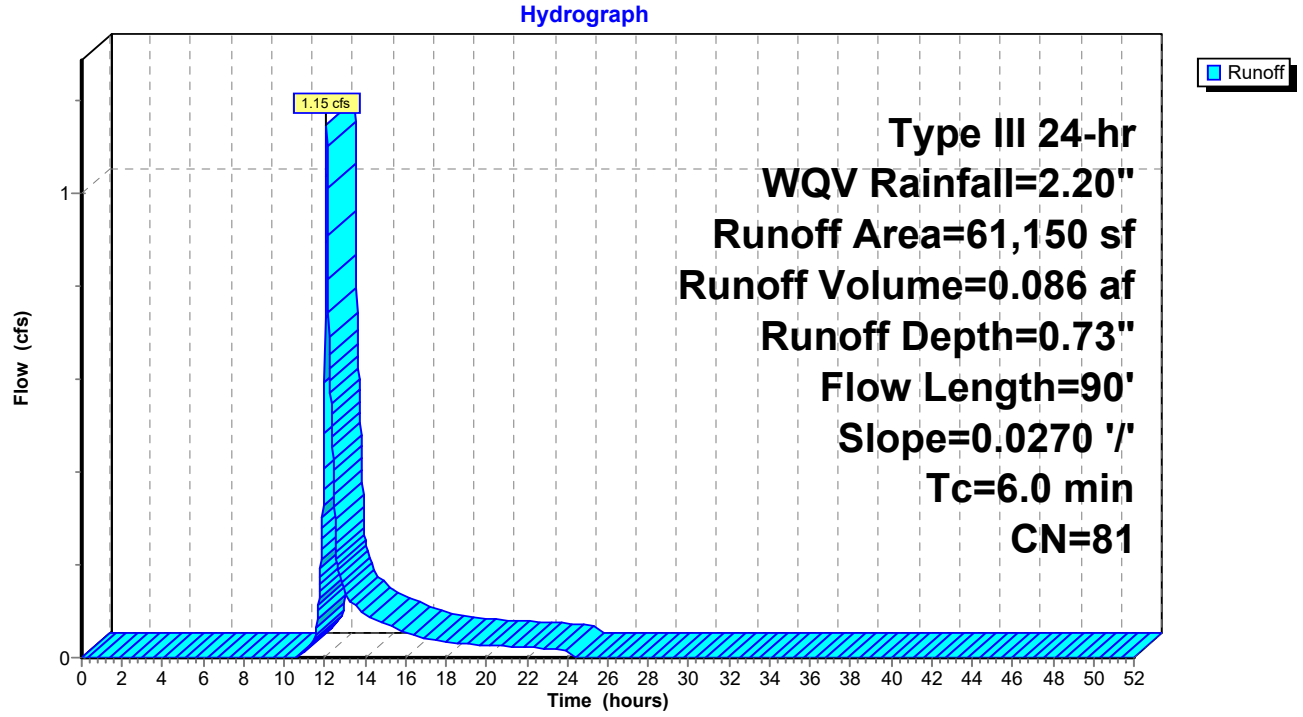
Runoff = 1.15 cfs @ 12.10 hrs, Volume= 0.086 af, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs
Type III 24-hr WQV Rainfall=2.20"

Area (sf)	CN	Description
840	70	Woods, Good, HSG C
17,345	71	Meadow, non-grazed, HSG C
10,630	74	>75% Grass cover, Good, HSG C
16,666	98	Roofs, HSG A
4,967	39	>75% Grass cover, Good, HSG A
10,702	98	Paved parking, HSG A
61,150	81	Weighted Average
33,782		55.24% Pervious Area
27,368		44.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	90	0.0270	1.47		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
5.0					**Direct Entry, TC MIN = 6.0 MIN**
6.0	90	Total			

Subcatchment 3S:



Summary for Pond 3P: Grassed Underdrained Soil Filter

Inflow Area = 1.404 ac, 44.76% Impervious, Inflow Depth = 0.73" for WQV event
Inflow = 1.15 cfs @ 12.10 hrs, Volume= 0.086 af
Outflow = 0.03 cfs @ 17.91 hrs, Volume= 0.086 af, Atten= 97%, Lag= 348.8 min
Primary = 0.03 cfs @ 17.91 hrs, Volume= 0.086 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-52.00 hrs, dt= 0.02 hrs / 2
Peak Elev= 70.38' @ 17.91 hrs Surf.Area= 6,485 sf Storage= 2,377 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 745.7 min (1,605.9 - 860.2)

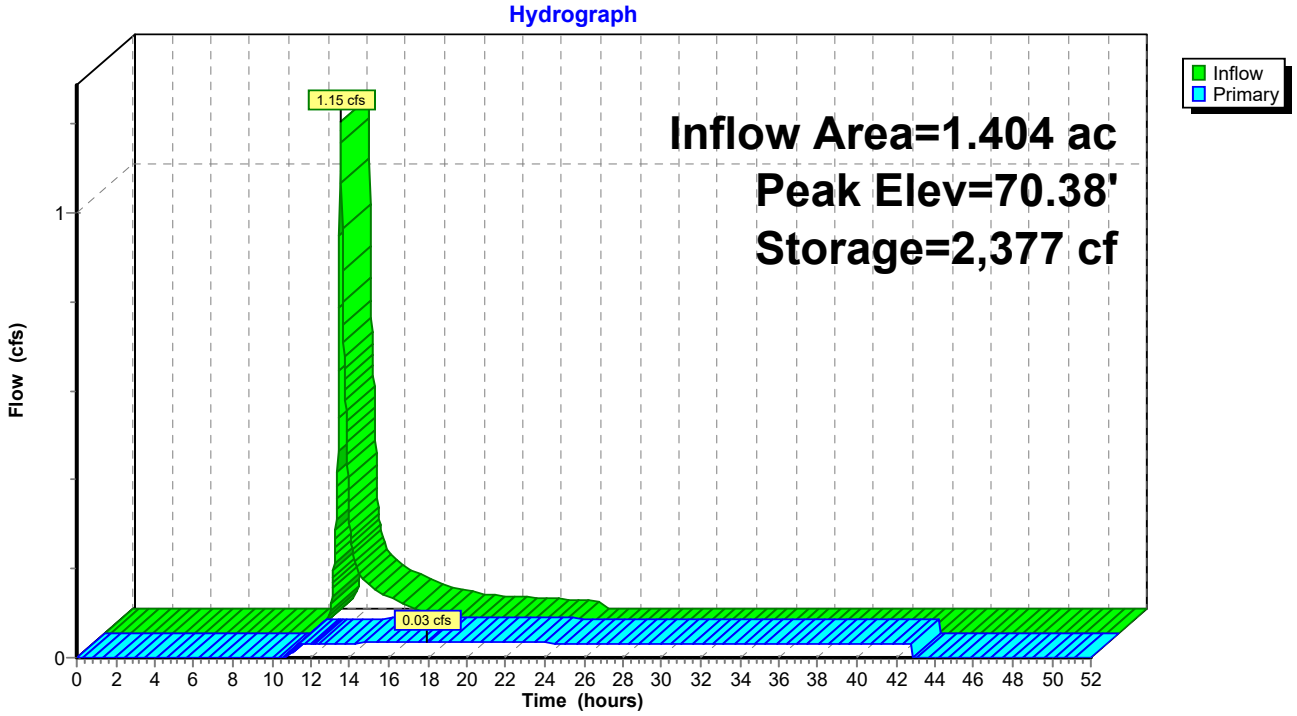
Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	10,363 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	5,950	0	0
71.00	7,350	6,650	6,650
71.50	7,500	3,713	10,363

Device	Routing	Invert	Outlet Devices
#1	Primary	67.73'	**12.0" Round Culvert** L= 325.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 67.73' / 66.90' S= 0.0026 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	67.83'	**6.0" Round 6" Header** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 67.83' / 67.83' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	70.55'	**7.0" x 7.0" Horiz. Orifice/Grate X 7.00 columns** X 7 rows C= 0.600 Limited to weir flow at low heads
#4	Device 2	67.83'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.03 cfs @ 17.91 hrs HW=70.38' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.03 cfs of 2.90 cfs potential flow)
  - **2=6" Header** (Passes 0.03 cfs of 0.90 cfs potential flow)
    - **4=Orifice/Grate** (Orifice Controls 0.03 cfs @ 7.64 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: Grassed Underdrained Soil Filter



Attachment C

INSPECTION, MAINTENANCE, AND HOUSEKEEPING

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

Patagon Storage
Portland, Maine

Introduction

The developer responsible for the proposed project is Patagon Storage, LLC. The developer's address is 1700 Main Street, Suite 70 Washaugal, Washington. After construction, the driveway area will be maintained by the developer. The owner of the proposed project will be responsible for the maintenance of all stormwater management structures, and the keeping of records and maintenance logbook. Records of all inspections and maintenance work accomplished must be kept on file and retained for a minimum 5-year time span. The maintenance logbook will be made available to the Maine Department of Environmental Protection (MDEP) upon request. At a minimum, the appropriate and relevant activities for each of the stormwater management systems will be performed on the prescribed schedule.

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in this Inspection, Maintenance, and Housekeeping Plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional details on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the MDEP.

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven (7) calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three (3) years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

   A. <u>Sediment Barriers:</u>

   - Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
   - If the fabric on the silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
   - Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
   - Filter berms shall be reshaped as needed.
   - Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

   B. <u>Riprap Materials:</u>

   - Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.

- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.

- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

D. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.

- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.

- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.

- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

E. Level Lip Spreaders and Ditch Turnouts:

- The level spreader pool should be inspected after rainfall events for sediment accumulation and debris that may reduce its capacity. Sediment and debris buildup should be removed once the volume of the pool has been reduced by 25%.

- The level lip must be constructed so that runoff flows slowly over the lip to a sheet flow through the receiving buffer. Repair or reconstruction of the level lip is required when flow from the spreader becomes channelized.

- Do not store snow removed from the street and/or parking lot within the area of a level spreader.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.

- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.

- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill Prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater Protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive Sediment and Dust: Actions must be taken to insure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and Other Materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench Dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

After Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection, maintenance, and housekeeping procedures outlined in this section. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in all applicable permits, shall conduct the inspections.

2. **Specific Inspection, Maintenance, and Housekeeping Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.

   A. Vegetated Areas:

   - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.

   - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

   B. Ditches, Swales, and Other Open Channels:

   - Inspect ditches, swales and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.

   - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.

   - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.

   - If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.

   C. Culverts:

   - Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.

- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.

- Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Catch Basins/Outlet Control Structures:

- Inspect and, if required, clean-out basins at least once a year, preferably in early spring.

- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

E. Level Lip Spreaders, Rip-Rap Outfalls and Ditch Turnouts:

- The level spreader pool should be inspected after significant rainfall events for sediment accumulation and debris that may reduce its capacity. Sediment and debris buildup should be removed once the volume of the pool has been reduced by 25%.

- The level lip must be constructed so that runoff flows slowly over the lip to a sheet flow through the receiving buffer. Repair or reconstruction of the level lip is required when flow from the spreader becomes channelized.

- Do not store snow removed from the street and/or parking lot within the area of a level spreader.

F. Winter Sanding

- Clear accumulation of winter sand along roadways at least once a year, preferably in the spring.

- Accumulations on pavement may be removed by pavement sweeping.

- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

G. Underdrained Soil Filter:

- The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 24 hours.
- The top several inches of the filter shall be replaced with fresh material

when water ponds on the surface of the bed for more than 72 hours.

- Sediment and plant debris should be removed from the pretreatment structure (sediment forebay) at least annually.
- The filter bed vegetations shall be mowed once or twice per year to a grass height no less than six (6) inches.
- Fertilization of the under drained filter area should be avoided unless absolutely necessary to establish vegetation.
- Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary.
- Inspect embankment for erosion, settling, and structural failure

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained. 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 controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included as Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. **Recertification:** A certification of the following shall be submitted to the Maine Department of Environmental Protection (MDEP) within three months of the expiration of each five year interval from the date of issuance of MDEP permits.

   A. Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

   B. Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.

   C. The Inspection, Maintenance, and Housekeeping Plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the MDEP, and the maintenance log is being maintained.

5. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a

component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Form

MAINTENANCE LOG

Patagon Storage
Portland, Maine
Attachment 1

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for Patagon Storage. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the MDEP. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect Slopes			
	Replant Bare Areas			
	Check after Major Storms			
Ditches and Swales	Inspect after major rainfall event producing greater than 3" of rain in 2 hours.			
	Repair erosion or damage immediately.			
Culverts	Inspect culverts monthly or after rainfall of >1"			
	Clean culverts when sediment occupies more than 20% of pipe diameter			
	Repair any erosion at inlet and outlet pipes			
	Replace displaced riprap at least once a year			
	Remove vegetation growing through riprap at least once a year			
Catch Basins/ Outlet Control Structures	Inspect and cleanout basins at least annually, (Spring)			
Level Spreader, Rip-Rap Outfalls and Ditch Turnouts	Inspect after significant rainfall events for sediment accumulation			
	If volume of pool is reduced by 25%, must remove sediment and debris			
Level Spreader and Ditch Turnouts	Repair or reconstruct the riprap if flow from the spreader becomes channelized			

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
	No snow storage is allowed in the level lip spreader			
Winter Sanding	Clean annually (Spring)			
	Remove sand and sediment from roadway shoulders			
Underdrained Detention Basin	Inspect inlet and outlet for blockage and debris			
	Inspect for erosion, destabilization or side slopes and other structural failure			
	Mowed			
	Inspect periodically during wet weather conditions			
	Check for sediment build up			
	Ensure proper function			

Submitted by Swaney Lighting			
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	**Catalog Number:** LNC2-12L-4K-070-3-U-BL Notes:	**Type:** B SLA18-38148

LNC2 SERIES

Cat.#

Job | Type

HUBBELL Outdoor Lighting

Approvals

SPECIFICATIONS

The small sized LNC2 is designed for perimeter illumination for safety, security and identification. No uplight and prismatic lenses offer neighbor friendly lighting at typical mounting heights of 8-15'. Units have protective polyester finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide up to 85% energy savings when compared to traditional light sources with little to no maintenance.

Construction:
Rugged die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments.

Electrical:
- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option in 12L-070 configuration
- Minimum operating temperature is -40°C/-40°F (excludes 12L-035 and P15 configurations)
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP66
- 10kA surge protector

LED(s) CCT:
- 3000K CCT nominal , 4000K CCT nominal, 5000K CCT nominal (70 CRI)
- 9, 12 and 18 LED configurations available see pages 2 and 3 for electrical and photometric details

Optical:
Zero uplight distributions using individual acrylic LED optics provide IES type II, III and IV distributions. Optional (CS) acrylic diffuser available for reduced glare. Prismatic refractor lens provides ~10% uplight for increased vertical FC and forward light projection ideal for security lighting.

Lumen Maintenance:
L96 at 60,000hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:
Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box). Designed for direct j-box mount. Optional 1/2" conduit hubs available (standard for sensor, SiteSync and battery versions).

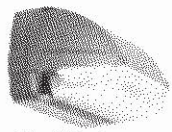
Options/Controls:
- Universal button photocontrol
- Occupancy sensor options available for complete on/off and dimming control
- SiteSync pre-commissioned wireless controls (with or without sensor)
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Dual Driver and Dual Power Feed option for 18L-070 versions

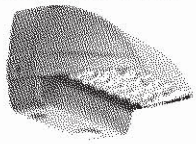
Listings:
- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Made-to-order versions are IP-65 rated

Warranty:
Five year limited warranty (for more information visit: https://www.hubbell.com/hubbelllighting/en/warranty

PRODUCT IMAGE(S)

Standard 9, 12, and 18L Version*

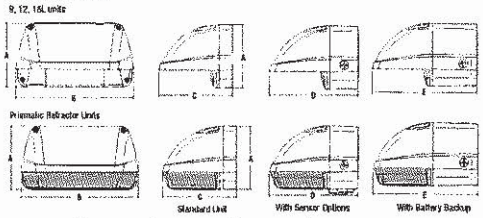

Prismatic Version


Surface Conduit Hubs, Sensor & SiteSync Version

Battery Backup Version

*Shown with CS acrylic diffuser

DIMENSIONS



A	B	C	D	E
5.54"	10.16"	6.33"	7.64"	9.10"
40.7 mm	258 mm	160.7 mm	194 mm	231 mm

BASE MODEL 7.0 lbs / 3.2 kg
PC SENSOR 7.5 lbs / 3.4 kg • **BBU MODELS** 9.5 lbs / 4.3 kg

SHIPPING INFORMATION (Stock)

Catalog Number	G.W.(kg)/ CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC2-12LU	14.3 (6.5)	14.5 (37)	11.4 (29)	8.4 (21.5)	2
LNC2-18LU	14.8 (6.7)	14.9 (38)	11.4 (29)	8.4 (21.5)	2

CERTIFICATIONS/LISTINGS

C US | Turtle Friendly | *3000K and warmer CCTs only

ORDERING INFORMATION – ORDERING EXAMPLE: LNC2-12L-4K-070-3-U-DB-PCU-EH-CS

LNC2 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
- LNC2 Small LitePak LNC2

LED SELECTION
- 9L 9 LEDs
- 12L 12 LEDs
- 18L 18 LEDs
- P15 15w Prismatic Refractor
- P25 25w Prismatic Refractor
- P35 35w Prismatic Refractor

CCT/CRI
- 3K 3000K, 70 CRI
- 4K 4000K, 70 CRI
- 5K 5000K, 70 CRI
- AM Amber (350mA only)

DRIVE CURRENT
- 070 700mA
- 035 350mA (12L & 18L only)

IES DISTRIBUTION
- 2[1] IES Type II
- 3[1] IES Type III
- 4[1] IES Type IV
- FT Forward Throw (Prismatic Refractor only)

VOLTAGE
- U 120V-277V
- 1 120V
- 2 208V
- 3 240V
- 4 277V
- 5[8] 480V
- F[8] 347V

MOUNTING
- Leave Blank for down position
- NV[2] Inverted

FINISH
- DB Dark Bronze Textured
- BL Black Textured
- GYS Gray Smooth
- PS Platinum Silver Smooth
- WH White Textured
- CC Custom Color

CONTROL OPTIONS
- SCP[4,5] Occupancy Sensor Programmable (Dim)
- PCU Universal Button Photocontrol
- SWP[6] SiteSync Pre-Commision
- SWPM SiteSync Pre-Commision w/ OCC Sensor

SPECIFY SCP HEIGHT
- 8F Up to 8ft mount height
- 20F Up to 20ft mount height

OPTIONS
- EH[3] Battery Backup Unit with Heater (-30°C)
- E[3] Battery Backup Unit (0°C)
- F[3] Fuse & Fuse-holder (not available with Battery Backup)
- CS Comfort Shield (N/A with Prismatic Refractor)
- 2DR Dual Driver (18L - 700mA only)
- 2PF Dual Power Feed (18L - 700mA only)
- CH Surface Conduit Hubs

1 IES distributions only available with 9L, 12L, and 18L versions
2 Not available when occupancy sensor, battery backup or prismatic refractor options
3 Must specify voltage (120 or 277 only for E & EH)
4 Must order minimum of one remote control to program dimming settings. 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only
5 PCU option not applicable, included in sensor
6 18L - 700mA versions only. Not available with 2DR or 2PF options. Must specify group and zone information at time of order
7 Specify time delay, dimming level and mounting height
8 12L - 700mA version 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.
© 2017 HUBBELL OUTDOOR LIGHTING, All Rights Reserved • For more information visit our website: www.hubbelloutdoor.com • Printed in USA August 7, 2018 10:08 AM LNC2-SPEC

Submitted by Swaney Lighting			
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	**Catalog Number:** LNC2-12L-4K-070-3-U-BL Notes:	**Type:** **B** SLA18-38148

STOCK ORDERING INFORMATION

Catalog Number	System Watts	Delivered Lumens	Distribution	Voltage	CCT	# Drivers/ Current	Weight lbs. (kg)	Finish	Options
LNC2-12LU-4K-3-1	29w	2,662	3	120-277V	4000K	1@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-12LU-5K-3-1	29w	2,868	3	120-277V	5000K	1@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-12LU-5K-3-1-PC-U	29w	2,868	3	120-277V	5000K	1@700mA	7.0 (13.3)	Dark Bronze	Photocell*
LNC2-18LU-4K-3-1	42w	3,806	3	120-277V	4000K	2@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-18LU-5K-3-1	42w	4,106	3	120-277V	5000K	2@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-18LU-5K-3-1-PC-U	42w	4,106	3	120-277V	5000K	2@700mA	7.0 (13.3)	Dark Bronze	Photocell*
LNC2-P35-4K-PCU	37w	4,025	FT	120-277V	4000K	1@900mA	7.0 (13.3)	Dark Bronze	Photocell
LNC2-P35-PCU	37w	4,108	FT	120-277V	5000K	1@900mA	7.0 (13.3)	Dark Bronze	Photocell

*Frosted acrylic comfort shield/lens included with unit

REPLACEMENT PART/ACCESSORIES

CATALOG NUMBER	DESCRIPTION
LNC2-CS	Frosted acrylic comfort shield/lens, reduces glare and improves uniformity with only 15% lumen reduction
SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control fixtures

*Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only

PERFORMANCE DATA
Standard 9, 12 and 18L Versions

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
				LUMENS	LPW¹	B	U	G	LUMENS	LPW¹	B	U	G	LUMENS	LPW¹	B	U	G
9	700mA	21W	2	2,083	97	1	0	1	2,072	97	1	0	1	1,927	90	1	0	1
			3	1,972	92	0	0	1	1,962	92	0	0	1	1,825	85	0	0	1
			4	2,097	98	0	0	1	2,087	98	0	0	1	1,941	91	0	0	1
12	350mA	14W	2	1,513	110	0	0	1	1,506	109	0	0	1	1,440	104	0	0	1
			3	1,433	104	0	0	1	1,426	103	0	0	1	1,364	99	0	0	1
			4	1,524	110	0	0	1	1,543	112	0	0	1	1,476	107	0	0	1
	700mA	29W	2	2,777	97	1	0	1	2,763	97	1	0	1	2,570	90	1	0	1
			3	2,629	92	1	0	1	2,616	91	1	0	1	2,433	85	1	0	1
			4	2,797	98	1	0	1	2,783	97	1	0	1	2,588	90	1	0	1
18	350mA	21W	2	2,270	107	1	0	1	2,259	106	1	0	1	2,074	97	1	0	1
			3	2,149	101	0	0	1	2,138	100	0	0	1	1,963	92	0	0	1
			4	2,286	107	0	0	1	2,275	107	0	0	1	2,125	100	0	0	1
	700mA	43W	2	4,261	99	1	0	1	4,240	98	1	0	1	3,943	91	1	0	1
			3	4,033	93	1	0	1	4,014	93	1	0	1	3,733	86	1	0	1
			4	4,290	99	1	0	1	4,270	99	1	0	1	3,971	92	1	0	1

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application. LNC2-12L battery mode produces 1,546 initial lumens. Meets UL924 90 minute discharge pattern.

PERFORMANCE DATA
Prismatic Refractor

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
				LUMENS	LPW¹	B	U	G	LUMENS	LPW¹	B	U	G	LUMENS	LPW¹	B	U	G
1	350mA	13W	FT	1,741	132	0	3	2	1,706	129	0	3	2	1,648	125	0	3	2
	600mA	25W		2,929	117	1	3	2	2,806	112	1	3	2	2,773	111	1	3	2
	900mA	37W		4,108	112	1	3	3	4,025	110	1	3	3	3,889	106	1	3	3

PROJECTED LUMEN MAINTENANCE

Standard 9, 12 and 18L Versions

Ambient Temp.	OPERATING HOURS 0	25,000	50,000	TM-21-11¹ L96 60,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.95	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)
Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

Prismatic Refractor

Ambient Temp.	OPERATING HOURS 0	25,000	50,000	TM-21-11¹ L96 60,000	100,000	L70 (hours)
25°C / 77°F	1.00	0.94	0.89	0.87	0.80	>160,000
40°C / 104°F	0.99	0.93	0.88	0.86	0.78	>150,000

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ELECTRICAL DATA

Standard 9, 12 and 18L Versions

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
9	700mA	120	0.18	21
		277	0.08	21
12	350mA	120	0.12	14
		277	0.05	14
	700mA	120	0.24	29
		277	0.10	29
		347	0.08	29
		480	0.06	29
18	350mA	120	0.18	21
		277	0.08	21
	700mA	120	0.36	43
		277	0.16	43

Prismatic Refractor

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
1	350mA	120	0.11	13
		277	0.05	13
	600mA	120	0.21	25
		277	0.09	25
	900mA	120	0.31	37
		277	0.13	37

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

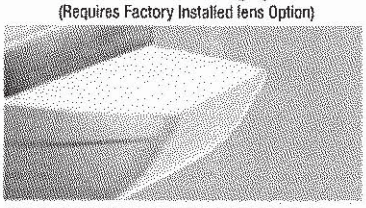
Standard 9, 12, 18L and Prismatic Versions

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.99
50°C	122°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

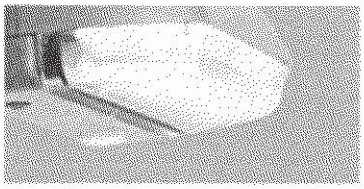
NV - Inverted Mounting Options

(Requires Factory Installed lens Option)



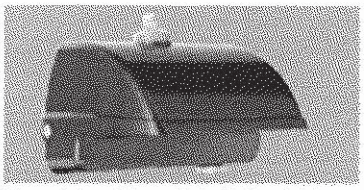
Inverted mounting capabilities for uplighting applications. Specially designed frosted acrylic diffuser option softens output, improves uniformity and protects LED lenses.

SCP - Programmable Occupancy Sensor



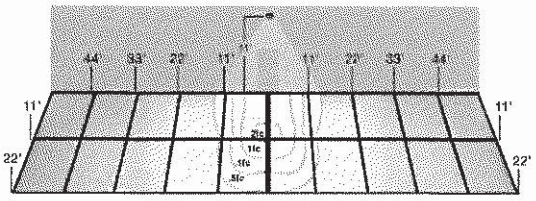
Sensor offers greater control and energy savings with SCP programmable sensor with adjustable delay and dimming levels (Factory default is 10%) Visit: http://www.hubbelllighting.com/solutions/controls/ for control application information

SWP & SWPM - SiteSync™



When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project locations Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/proudcts/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

LNC2 – BATTERY BACK UP



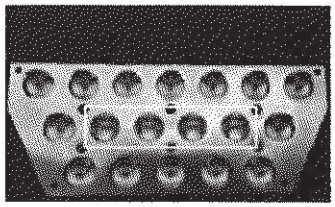
11' Mounting Height

Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions and mounting height of 11'.

Diagrams for illustration purposes only, please consult factory for application layout.

Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging. FH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C

E & EH EMERGENCY BATTERY BACKUP



Standard versions utilize 9, 12 or 18 High Power LEDs to generate 1,600 - 4,200 lumens in Normal Mode and use 4 LEDs for up to 700 lumens in Emergency Mode. Prismatic refractor versions utilize 1 COB LED to generate approximatly 900 lumens in emergency mode.

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Submitted by Swaney Lighting			
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	**Catalog Number:** LNC2-12L-4K-070-3-U-BL Notes:	**Type:** **B** SLA18-38148

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	CL1-A-60LU-4K-3-BL Notes:	**D SGL** SLA18-38148

CIMARRON LED

Cat.#		HUBBELL Outdoor Lighting
Job	Type	Approvals

SPECIFICATIONS

Construction:
- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft²
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:
- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- Auto optics designed for front row 1A and interior rows 2A (see distribution under ordering and page 2)
- CCT: 3000K (80 CRI), 4000K (70 CRI), 5000K (70 CRI), and turtle friendly Amber LED options

Electrical:
- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection – 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 4)

Controls:
- Drivers are 0-10V dimming standard. Photocell, occupancy sensor and wireless controls available for complete on/off and dimming control

Lumen maintenance:
- L90 at 60,000 hours (Projected per IESNA TM-21-11)

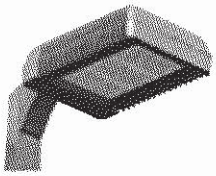
Installation:
- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

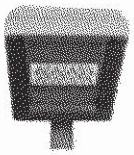
Finish:
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

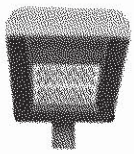
Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

Listings:
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: http://www.designlights.org/QPL
- IDA approved • IP65

PRODUCT IMAGE(S)

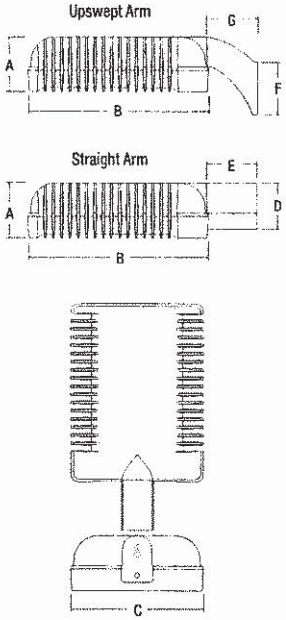

90 LED 3/4 VIEW


30 LED


60 LED

90 LED

DIMENSIONS



A	B	C	D	E	F	G
6 3/4" 171mm	21 3/4" 552mm	16" 406mm	6 5/8" 168mm	6 5/16" 160mm	5 5/8" 143mm	6 1/8" 155mm

CERTIFICATIONS/LISTINGS

c SP us · DLC · Turtle Friendly · IDA

*3000K and warmer CCTs only

ORDERING INFORMATION SEE NEXT PAGE

HUBBELL Outdoor Lighting
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HUBBELL Lighting

ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

CL1 - [ ] - [ ] [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
- **CL1** Cimarron LED

NO. OF LEDS
- **90L** 90 High brightness LEDs
- **60L** 60 High brightness LEDs
- **30L** 30 High brightness LEDs

VOLTAGE
- **U**[1] Universal 120V-277V, 50/60 Hz
- **1** 120V
- **2** 208V
- **3** 240V
- **4** 277V
- **5** 480V, 60 Hz
- **F** 347V, 60 Hz
- **E**[4] 220V, 50 Hz

CCT
- **3K** 3000K
- **4K** 4000K
- **5K** 5000K
- **AM**[4] Amber (590 nm available for "Turtle Friendly" applications (consult factory)

DRIVE CURRENT
- Leave blank for 700mA (standard)
- **035** 350mA Amber CCT only
- **105** 1050 mA (Not for use with 30L)

OPTIONS
- **BC**[2] Backlight control
- **CD** Continuous dimming
- **WB** Wall bracket
- **RPA3** 3" Round pole adapter
- **RPA4** 4" Round pole adapter
- **RPA5** 5" Round pole adapter
- **RPA6** 6" Round pole adapter
- **F(X)**[3] Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, F-347V)
- **VG** Vandal guard
- **7PR** Photocell receptacle (7-pin ANSI C136.41—2013 receptacle for use with standard Twist-Lock® photo controls, shorting caps, and ANSI C136.41 external wireless control devices. Select SCL option to add occupancy sensing capability when using with compatible external wireless devices.

MOUNTING
- **A** Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)
- **AD** Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations)
- **MAF** Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm

COLOR
- **DB** Dark Bronze
- **BL** Black
- **WH** White
- **GR** Gray
- **PS** Platinum Silver
- **CC** Custom Color

DISTRIBUTION
- **2** Type II
- **3** Type III
- **4** Type IV
- **5M** Type V Medium
- **5S** Type V Short
- **5W** Type V Wide
- **2L** Type II Rotated 90° left
- **3L** Type III Rotated 90° left
- **4L** Type IV Rotated 90° left
- **2R** Type II Rotated 90° right
- **3R** Type III Rotated 90° right
- **4R** Type IV Rotated 90° right
- **1A** Auto Front Row Type I
- **1AR** Auto Front Row Type I Rotated 90° right
- **1AL** Auto Front Row Type I Rotated 90° left
- **2A** Auto Front Row Type II
- **2AR** Auto Front Row Type II Rotated 90° right
- **2AL** Auto Front Row Type II Rotated 90° left

PIR MOTION/OCCUPANCY CONTROL OPTIONS
- **SCO_F**[5,7,8] On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)
- **SCL_F**[5,7,9] Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.
- **SCP_F**[5,6,7,9] Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance)
- **SWP**[10,11] SiteSync Pre-Commission
- **SWPM**[6,10,11] SiteSync Pre-Commission w/ Sensor

WIRELESS CONTROL OPTIONS
- **WIR**[6] wiSCAPE Fixture Module, in-fixture relay for wireless lighting control
- **WIRSC**[6,8] wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

Notes:
1 - Fuse option not available with universal voltage
2 - Select F3 fusing option for 220V
3 - Recommended for Type III and IV distributions only
4 - Available in 350mA drive current only Type IV, 5M
5 - 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, must order minimum of one SCP-REMOTE control to program dimming settings (see accessories)
6 - Not available with AD arm
7 - Not available with WIR or WIRSC
8 - Not available with SCO, SCL, or SCP
9 - Specify mounting height. 8 = 8' or less, 40 = 9' to 40'
10 - Specify group and zone. See SiteSync product page www.hubbelllighting.com/controls/SiteSync for more details
11 - Not available in 90L-700mA or 1050mA versions

Accessories and Services (Ordered Separately)

Catalog Number	Description
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with pre-loaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXDFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

SiteSync 7-Pin Module

SW7PR

- SiteSync Features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Available on all products that have a 7-Pin receptacl
- Does not interface with occupancy sensors

SiteSync

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HUBBELL Lighting

Submitted by Swaney Lighting	Job Name:	Catalog Number:	Type:
	Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	CL1-A-60LU-4K-3-BL Notes:	D SGL SLA18-38148

ENERGY SAVING DATA

#LEDS	DRIVE CURRENT	SYSTEM WATTS 120-277V	SYSTEM WATTS 347-480V	DIST. TYPE	5K (5000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G	4K (4000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G	3K (3000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G
30	700 mA	70W	80W	1A	8244	118	1	0	1	8162	117	1	0	1	6775	97	1	0	1
				2A	8202	117	1	0	1	8121	116	1	0	1	6740	96	1	0	1
				2	7715	110	2	0	3	7639	109	2	0	2	6340	91	2	0	2
				3	7712	110	2	0	2	7635	109	2	0	2	6371	91	1	0	2
				4	7803	111	1	0	2	7726	110	1	0	2	6412	92	1	0	2
				5S	8374	120	3	0	0	8291	118	3	0	0	6882	98	3	0	0
				5M	7940	113	3	0	1	7862	112	3	0	1	6525	93	3	0	1
				5W	7667	110	3	0	2	7591	108	3	0	2	6301	90	3	0	2
60	700 mA	135W	150W	1A	16171	120	1	0	2	16011	119	1	0	1	13289	98	1	0	1
				2A	16088	119	1	0	2	15929	118	1	0	2	13221	98	1	0	2
				2	15134	112	3	0	3	14984	111	3	0	3	12437	92	3	0	3
				3	15127	112	3	0	3	14977	111	3	0	3	12498	93	2	0	3
				4	15306	113	2	0	3	15154	112	2	0	3	12578	93	2	0	3
				5S	16426	122	4	0	0	16263	120	4	0	0	13498	100	4	0	0
				5M	15575	115	4	0	2	15421	114	4	0	2	12799	95	3	0	2
				5W	15040	111	4	0	3	14891	110	4	0	3	12360	92	4	0	3
60	1050 mA	220W	235W	1A	21139	96	2	0	2	20929	95	2	0	2	17371	79	2	0	2
				2A	21030	96	2	0	2	20822	95	2	0	2	17282	79	2	0	2
				2	19783	90	4	0	5	19587	89	3	0	5	16257	74	3	0	5
				3	19774	90	3	0	4	19578	89	3	0	4	16250	74	3	0	4
				4	20007	91	3	0	5	19809	90	3	0	5	16442	75	3	0	5
				5S	21471	98	5	0	0	21259	97	5	0	0	17645	80	5	0	0
				5M	20359	93	5	0	3	20158	92	5	0	3	16731	76	5	0	3
				5W	19660	89	5	0	4	19465	88	5	0	4	16156	73	5	0	4
90	700 mA	205W	225W	1A	23781	116	2	0	2	23546	115	2	0	2	19543	95	2	0	2
				2A	23659	115	2	0	2	23425	114	2	0	2	19443	95	2	0	2
				2	22255	109	3	0	4	22035	107	3	0	4	18289	89	3	0	4
				3	22248	109	3	0	4	22026	107	3	0	4	18379	90	3	0	3
				4	22509	110	3	0	4	22286	109	3	0	4	18497	90	2	0	4
				5S	24156	118	5	0	0	23916	117	5	0	0	19851	97	4	0	0
				5M	22905	112	4	0	2	22678	111	4	0	2	18823	92	4	0	2
				5W	22117	108	5	0	3	21899	107	5	0	3	18176	89	5	0	3
90	1050 mA	325W	350W	1A	31708	98	2	0	2	31394	97	2	0	2	26057	80	2	0	2
				2A	31545	97	2	0	2	31233	96	2	0	2	25923	80	2	0	2
				2	29674	91	4	0	5	29380	90	3	0	5	24385	75	3	0	4
				3	29661	91	3	0	4	29367	90	3	0	4	24505	75	3	0	4
				4	30011	92	3	0	5	29714	91	3	0	5	24663	76	3	0	4
				5S	32207	99	5	0	0	31888	98	5	0	0	25467	81	5	0	0
				5M	30539	94	5	0	3	30237	93	5	0	3	25097	77	4	0	2
				5W	29490	91	5	0	4	29198	90	5	0	4	24234	75	5	0	4

Amber LUMENS	Amber LPW¹	Amber B	Amber U	Amber G	Drive Current	SYSTEM WATTS 120-277V	#LEDs
2488		0	0	1	350 mA	135W	60
2533		2	0	1			
3558		1	0	1	350 mA	205W	90
3596		2	0	1			

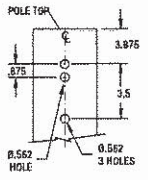
ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
CR-RPA3-XX¹	Round pole adapter for straight arm (3¼ - 3¾")
CR-RPA4-XX¹	Round pole adapter for straight arm (3⅞ - 4½")
CR-RPA5-XX¹	Round pole adapter for straight arm (5")
CR-RPA6-XX¹	Round pole adapter for straight arm (6")
CRD-RPA2-XX¹	Round pole adapter for upswept arm (2¾ - 3⅛")
CRD-RPA3-XX¹	Round pole adapter for upswept arm (3¼ - 3¾")
CRD-RPA4-XX¹	Round pole adapter for upswept arm (3⅞ - 4½")
CRD-RPA5-XX¹	Round pole adapter for upswept arm (5")
CRD-RPA6-XX¹	Round pole adapter for upswept arm (6")
WB-AREA-XX¹	Wall bracket
TPLB-XX¹	Twin parallel luminaire bracket
MAF-CL-XX³	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

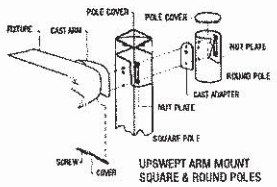
Catalog Number	Description
SCP-REMOTE⁺	Remote control for SCP option. Order at least one per project to program and control.
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
93052458	20KA surge protection with an end of life LED indicator

* When ordering SiteSync at least one of these two interface options must be ordered per project.
\+ If needed, an additional Bridge Node can be ordered.

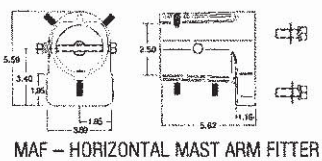
1 - Replace XX with color choice, eg.: DB for Dark Bronze
2 - When ordering poles, specify Pole Drill Pattern #2
3 - Fixture must include standard 6" arm



#2 DRILL PATTERN FOR POLES



UPSWEPT ARM MOUNT
SQUARE & ROUND POLES



MAF – HORIZONTAL MAST ARM FITTER

HUBBELL Outdoor Lighting
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HUBBELL Lighting

MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX[1]	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX[1]	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX[1]	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

1 Replace XX with color choice, eg.: DB for Dark Bronze
2 Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX

ARM-CL-K-S-XX

TENON TOP POLE BRACKET ACCESSORIES

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

Catalog Number	Description
SETA2-XX[1]	Square pole tenon adapter (4 at 90 degrees)
RETA2-XX[1]	Round pole tenon adapter (4 at 90 degrees)
TETA-XX[1]	Hexagonal pole tenon adapter (3 at 120 degrees)

1 Replace XX with color choice, eg.: DB for Dark Bronze

PHOTOCONTROL EQUIPMENT

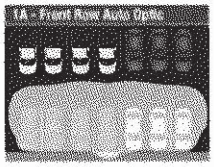
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

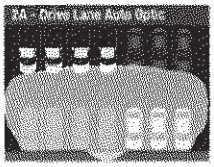
AUTOMOTIVE DEALERSHIP OPTICS

For Automotive Dealership applications Spaulding Lighting has developed two optics designed for enhanced and proper lighting of the auto dealership merchandise and the front row 1A and interior rows 2A (See CL1 distribution information for details)

Optic 1A
- Maximum illumination on front row display
- Maximum pole spacing

Optic 2A
- Excellent front row illumination and drive lane
- Optimal uniformity for drive lane and interior rows

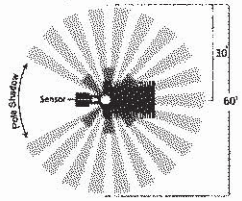


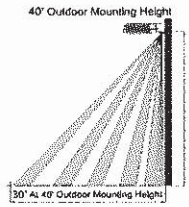


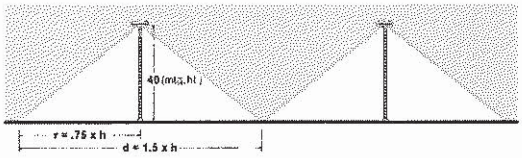
MOTION CONTROLS

- Start up delay from initial motion detection to fixture illumination is approximately 1-2 seconds
- Vehicle detection is possible however less reliable than human detection; Vehicle detection is dependent upon the following: rate of speed, mounting height of luminaire and vehicle temperature

SCP - Designed for intermediate coverage area

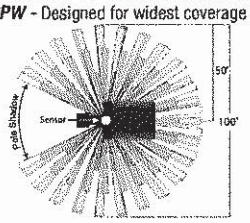


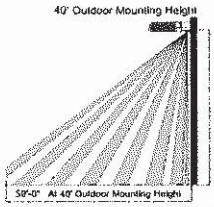


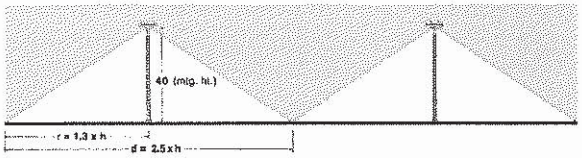


Note: Extreme heat or cold temperatures may limit detection.

SCPW - Designed for widest coverage area







Note: Extreme heat or cold temperatures may limit detection.

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20µs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life

Pulse Rating (8 x 20 µSec)	
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I_n	10KA	5KA

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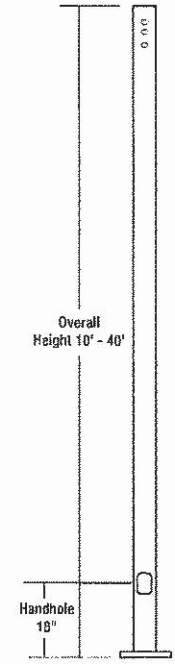
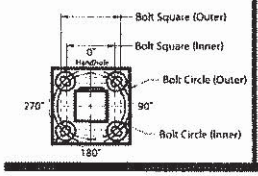
Submitted by Swaney Lighting	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	Catalog Number: SSSH20-40A-1-S2-BL Notes:	Type: D SGL SLA18-38148

SSS-H SERIES POLES
SQUARE STRAIGHT STEEL

Cat.#		HUBBELL Outdoor Lighting
Job	Type	Approvals





APPLICATIONS

- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

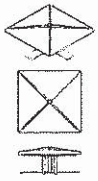
CONSTRUCTION

- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.23" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

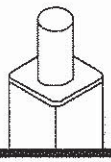
FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in seven standard colors; Custom colors available; RAL number preferable; Internal protective coating available

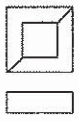
POLE CAP



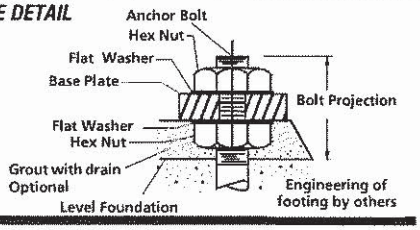
TENON



BASE COVER



BASE DETAIL



ORDERING INFORMATION

Reference page 2 for available configurations

ORDERING EXAMPLE:

SSS-H - 25 - 40 - A/B/C - 2L - S2 - DB - UL

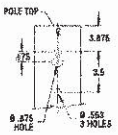
SERIES	HEIGHT	SHAFT	THICKNESS
SSS-H Square Straight Steel Pole Hubbell Outdoor	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix
	20'	40	A

MOUNTING

- 1 Single arm mount
- 2 Two fixtures at 180°
- 2L Two fixtures at 90°
- 3T Three fixtures at 90°
- 4 Four fixtures at 90°
- TA Tenon (2.38" OD x 4" Tall)
- TB Tenon (2.88" OD x 4" Tall)
- TC Tenon (3.5" OD x 6" Tall)
- TR[1] Removable Tenon (2.375 x 4.25)
- OT Open Top (includes pole cap)

DRILL PATTERN

- S2 #2 2 bolt 3.5" pattern



#2 DRILL PATTERN

FINISH

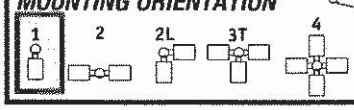
- DB Dark Bronze Textured
- BL Black Textured
- WH White Textured
- GR Gray Textured
- PS Platinum Silver Smooth
- CC Custom Color

OPTIONS

- HSC Internal Coating (Hubbell Seal)
- GFI[2] 20 Amp GFCI Receptacle and Cover
- EHH[2] Extra Handhole
- C05[2] .5" Coupling
- C07[2] .75" Coupling
- C20[2] 2" Coupling
- MPB[2] Mid-pole Luminaire Bracket
- VM2 2nd mode vibration damper
- LAB Less Anchor Bolts
- UL UL Certified

MOUNTING ORIENTATION

Denotes handhole location



***ACCESSORIES*- Order Separately**

Catalog Number	Description
VM1[3]	1st mode vibration damper
VM2SXX	2nd mode vibration damper

1 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "TR" notation. Example: **SSS-H-25-40-A-1-S2-TR-DB**
2 Specify option location using logic found on page 2 **(Option Orientation)**
3 VM1 recommended on poles 20' and taller with EPA of less than 1.

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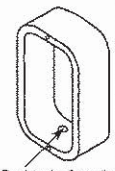
ORDERING INFORMATION Cont.

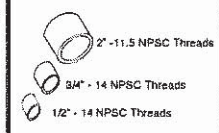
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters									
SSS-H-10-40-A-XX-XX	10	3.0	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	77
SSS-H-12-40-A-XX-XX	12	3.7	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	90
SSS-H-14-40-A-XX-XX	14	4.3	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	103
SSS-H-16-40-A-XX-XX	16	4.9	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	116
SSS-H-18-40-A-XX-XX	18	5.5	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	129
SSS-H-20-40-A-XX-XX	20	6.1	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	142
SSS-H-25-40-A-XX-XX	25	7.6	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	175
SSS-H-14-40-B-XX-XX	14	4.3	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	152
SSS-H-16-40-B-XX-XX	16	4.9	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	171
SSS-H-18-40-B-XX-XX	18	5.5	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	190
SSS-H-20-40-B-XX-XX	20	6.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	209
SSS-H-25-40-B-XX-XX	25	7.6	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	257
SSS-H-30-40-B-XX-XX	30	9.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	304
SSS-H-16-50-B-XX-XX	16	4.9	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	219
SSS-H-18-50-B-XX-XX	18	5.5	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	243
SSS-H-20-50-B-XX-XX	20	6.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	267
SSS-H-25-50-B-XX-XX	25	7.6	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	327
SSS-H-30-50-B-XX-XX	30	9.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	387
SSS-H-25-50-C-XX-XX	25	7.6	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	427
SSS-H-30-50-C-XX-XX	30	9.1	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	507
SSS-H-20-60-B-XX-XX	20	6.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	329
SSS-H-25-60-B-XX-XX	25	7.6	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	404
SSS-H-30-60-B-XX-XX	30	9.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	479
SSS-H-35-60-B-XX-XX	35	10.7	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	554
SSS-H-40-60-B-XX-XX	40	12.2	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	629
SSS-H-30-60-C-XX-XX	30	9.1	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	614
SSS-H-35-60-C-XX-XX	35	10.7	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	712
SSS-H-40-60-C-XX-XX	40	12.2	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	809

NOTE Factory supplied template must be used when setting anchor bolts. Hubbell Lighting will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

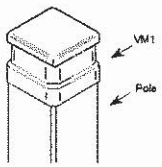
EHH - EXTRA HANDHOLE



C05 - C07 - C20 - COUPLING



VM1 - VIBRATION DAMPER 1ST MODE



Field installed Pole Top damper designed to reduce pole top deflection or sway. VM1 is recommended for pole systems 25' and taller with a total EPA of 1.0 or less.

VM2 - VIBRATION DAMPER 2ND MODE

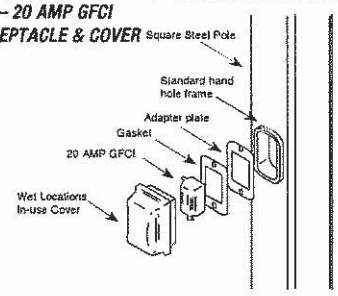
Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

VM2SXX - VIBRATION DAMPER 2ND MODE

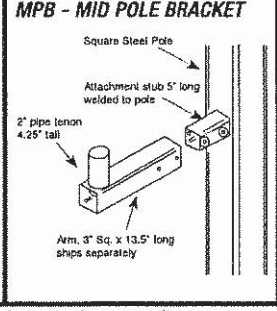
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI – 20 AMP GFCI RECEPTACLE & COVER

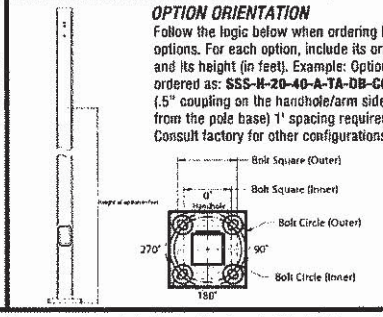


MPB - MID POLE BRACKET



OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option C07 should be ordered as: **SSS-H-20-40-A-TA-DB-C07-0-15** (.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base) 1' spacing required between option. Consult factory for other configurations.



For more information about pole vibration and vibration dampers, please consult http://cdn.hubbelloutdoor.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HLO0022.pdf
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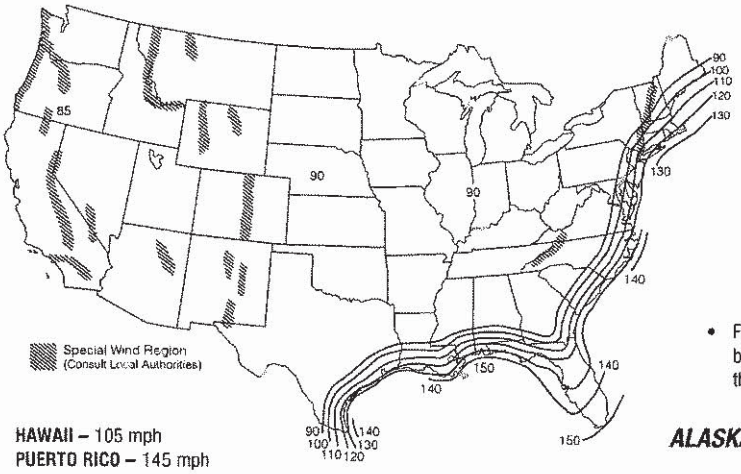
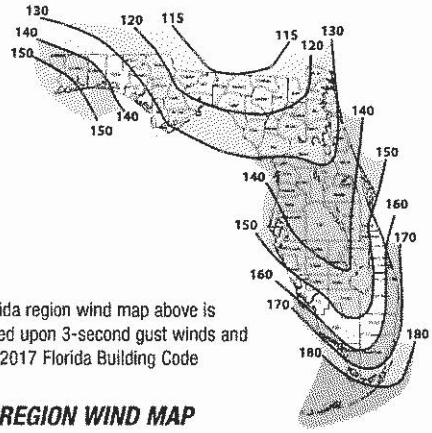
Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	SSSH20-40A-1-S2-BL Notes:	**D SGL** SLA18-38148

ASCE7-05 WIND MAP



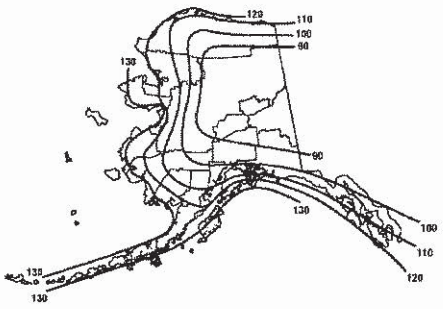
HAWAII – 105 mph
PUERTO RICO – 145 mph

FLORIDA REGION WIND MAP



- Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code

ALASKA REGION WIND MAP



ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)										
Catalog Number	85	90	100	105	110	120	130	140	145	150
SSS-H-10-40-A	25.0	25.0	25.0	22.8	20.6	17.0	14.2	11.9	11.0	10.1
SSS-H-12-40-A	25.0	25.0	20.0	18.0	16.1	13.2	10.8	8.9	8.1	7.4
SSS-H-14-40-A	23.1	20.4	16.1	14.3	12.8	10.2	8.2	6.6	5.9	5.3
SSS-H-16-40-A	19.0	16.7	13.0	11.5	10.1	7.9	6.2	4.7	4.1	3.6
SSS-H-18-40-A	15.6	13.6	10.0	9.0	7.8	5.9	4.4	3.1	2.6	2.1
SSS-H-20-40-A	12.7	10.9	7.9	6.9	5.9	4.2	2.8	1.7	1.3	0.9
SSS-H-25-40-A	7.3	5.9	3.8	2.9	2.1	0.8	NR	NR	NR	NR
SSS-H-14-40-B	25.0	25.0	23.3	20.8	18.6	15.1	12.3	10.2	9.2	8.4
SSS-H-16-40-B	25.0	24.9	19.4	17.3	15.4	12.3	9.9	8.0	7.2	6.4
SSS-H-18-40-B	24.0	20.8	16.1	14.2	12.5	9.8	7.7	6.1	5.3	4.7
SSS-H-20-40-B	20.2	17.5	13.2	11.6	10.1	7.7	5.9	4.4	3.8	3.2
SSS-H-25-40-B	12.8	11.0	7.9	6.7	5.5	3.7	2.3	1.2	0.7	NR
SSS-H-30-40-B	8.0	6.6	4.1	3.1	2.2	0.6	NR	NR	NR	NR
SSS-H-16-50-B	25.0	25.0	25.0	25.0	24.8	20.1	16.5	13.6	12.3	11.2
SSS-H-18-50-B	25.0	25.0	25.0	22.9	20.4	16.4	13.2	10.7	9.6	8.6
SSS-H-20-50-B	25.0	25.0	21.3	18.9	16.7	13.2	10.4	8.1	7.2	6.3
SSS-H-25-50-B	20.7	17.8	13.3	11.5	9.8	7.2	5.0	3.3	2.6	1.9
SSS-H-30-50-B	13.5	11.3	7.7	6.2	4.9	2.8	1.1	NR	NR	NR
SSS-H-25-50-C	25.0	25.0	19.4	17.1	15.1	11.7	9.0	6.9	6.0	5.1
SSS-H-30-50-C	20.1	17.3	12.7	10.9	9.3	6.6	4.5	2.8	2.1	1.4
SSS-H-20-60-B	25.0	25.0	25.0	25.0	25.0	20.2	16.1	12.9	11.5	10.3
SSS-H-25-60-B	25.0	25.0	20.6	18.0	15.6	11.8	8.7	6.2	5.2	4.2
SSS-H-30-60-B	21.4	18.1	12.9	10.7	8.8	5.7	3.3	1.3	NR	NR
SSS-H-35-60-B	14.0	11.3	6.9	5.2	3.6	1.0	NR	NR	NR	NR
SSS-H-40-60-B	8.1	5.8	2.2	nr	NR	NR	NR	NR	NR	NR
SSS-H-30-60-C	24.3	20.5	14.6	12.2	10.2	6.8	4.2	2.2	1.3	0.5
SSS-H-35-60-C	16.6	13.5	8.6	6.6	4.9	2.1	NR	NR	NR	NR
SSS-H-40-60-C	10.6	7.9	3.7	2.1	0.6	NR	NR	NR	NR	NR

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)								
Catalog Number	115	120	130	140	150	160	170	180
SSS-H-10-40-A	25.0	25.0	25.0	25.0	21.4	18.4	15.9	13.9
SSS-H-12-40-A	25.0	25.0	23.6	19.8	16.7	14.2	12.1	10.4
SSS-H-14-40-A	25.0	23.1	19.0	15.7	13.1	10.9	99.1	7.6
SSS-H-16-40-A	20.8	18.7	15.2	12.3	10.1	8.2	6.7	5.4
SSS-H-18-40-A	16.6	15.0	11.9	9.4	7.5	5.9	4.5	3.4
SSS-H-20-40-A	13.6	11.9	9.2	7.1	5.3	3.9	2.7	1.7
SSS-H-25-40-A	7.4	6.2	4.1	2.5	1.1	NR	NR	NR
SSS-H-14-40-B	25.0	23.6	19.4	16.1	13.4	11.2	9.4	7.8
SSS-H-16-40-B	21.4	19.2	15.6	12.7	10.4	8.5	6.9	5.6
SSS-H-18-40-B	17.2	15.4	12.2	9.7	7.7	6.1	4.7	3.6
SSS-H-20-40-B	13.9	12.3	9.5	7.3	5.5	4.1	2.9	1.9
SSS-H-25-40-B	7.7	6.4	4.3	2.6	1.3	NR	NR	NR
SSS-H-30-40-B	3.2	2.1	NR	NR	NR	NR	NR	NR
SSS-H-16-50-B	25.0	25.0	25.0	25.0	25.0	21.4	18.2	15.5
SSS-H-18-50-B	25.0	25.0	25.0	24.4	20.4	17.0	14.2	11.9
SSS-H-20-50-B	25.0	25.0	24.4	19.9	16.3	13.4	11.0	8.9
SSS-H-25-50-B	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-H-30-50-B	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-H-25-50-C	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-H-30-50-C	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-H-20-60-B	25.0	25.0	25.0	21.9	17.8	14.5	11.7	9.4
SSS-H-25-60-B	23.8	20.9	16.1	12.3	9.2	6.6	4.5	2.8
SSS-H-30-60-B	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-H-35-60-B	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-H-40-60-B	1.8	NR	NR	NR	NR	NR	NR	NR
SSS-H-30-60-C	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-H-35-60-C	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-H-40-60-C	1.8	NR	NR	NR	NR	NR	NR	NR

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NOTES

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations. http://cdn.hubbelloutdoor.com/content/dam/hubbell-outdoor/literature_library/Pole_Wind_Induced_Fiber_HLO0022.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

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Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	CL1-A-60LU-4K-3-BL Notes:	**D DBL** SLA18-38148

CIMARRON LED

Cat.#		HUBBELL Outdoor Lighting
Job	Type	Approvals

SPECIFICATIONS

Construction:
- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft²
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:
- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- Auto optics designed for front row 1A and interior rows 2A (see distribution under ordering and page 2)
- CCT: 3000K (80 CRI), 4000K (70 CRI), 5000K (70 CRI), and turtle friendly Amber LED options

Electrical:
- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection – 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 4)

Controls:
- Drivers are 0-10V dimming standard. Photocell, occupancy sensor and wireless controls available for complete on/off and dimming control

Lumen maintenance:
- L90 at 60,000 hours (Projected per IESNA TM-21-11)

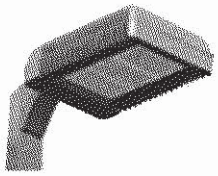
Installation:
- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

Finish:
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

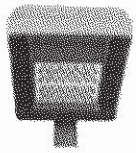
Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

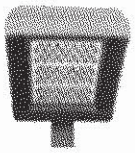
Listings:
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: http://www.designlights.org/QPL
- IDA approved • IP65

PRODUCT IMAGE(S)

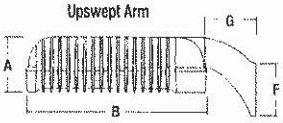

90 LED 3/4 VIEW

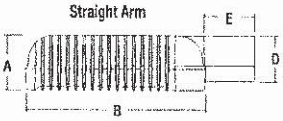
30 LED

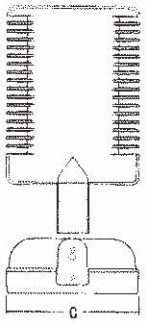

60 LED


90 LED

DIMENSIONS







A	B	C	D	E	F	G
6 3/4" 171mm	21 3/4" 552mm	16" 406mm	6 5/8" 168mm	6 5/16" 160mm	5 5/8" 143mm	6 1/8" 155mm

CERTIFICATIONS/LISTINGS

*3000K and warmer CCTs only

ORDERING INFORMATION SEE NEXT PAGE

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CL1LED-SPEC August 7, 2018 9:45 AM

ORDERING INFORMATION

ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

CL1 - ____ - ____ ____ - ____ - ____ - ____ - ____ - ____

SERIES
- CL1 Cimarron LED

NO. OF LEDS
- 90L 90 High brightness LEDs
- 60L 60 High brightness LEDs
- 30L 30 High brightness LEDs

MOUNTING
- A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)
- AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations)
- MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm

VOLTAGE
- U[1] Universal 120V-277V, 50/60 Hz
- 1 120V
- 2 208V
- 3 240V
- 4 277V
- 5 480V, 60 Hz
- F 347V, 60 Hz
- E[4] 220V, 50 Hz

CCT
- 3K 3000K
- 4K 4000K
- 5K 5000K
- AM[4] Amber (590 nm available for "Turtle Friendly" applications (consult factory)

DRIVE CURRENT
- Leave blank for 700mA (standard)
- 035 350mA Amber CCT only
- 105 1050 mA (Not for use with 30L)

COLOR
- DB Dark Bronze
- BL Black
- WH White
- GR Gray
- PS Platinum Silver
- CC Custom Color

DISTRIBUTION
- 2 Type II
- 3 Type III
- 4 Type IV
- 5M Type V Medium
- 5S Type V Short
- 5W Type V Wide
- 2L Type II Rotated 90° left
- 3L Type III Rotated 90° left
- 4L Type IV Rotated 90° left
- 2R Type II Rotated 90° right
- 3R Type III Rotated 90° right
- 4R Type IV Rotated 90° right
- 1A Auto Front Row Type I
- 1AR Auto Front Row Type I Rotated 90° right
- 1AL Auto Front Row Type I Rotated 90° left
- 2A Auto Front Row Type II
- 2AR Auto Front Row Type II Rotated 90° right
- 2AL Auto Front Row Type II Rotated 90° left

OPTIONS
- BC[3] Backlight control
- CD Continuous dimming
- WB Wall bracket
- RPA3 3" Round pole adapter
- RPA4 4" Round pole adapter
- RPA5 5" Round pole adapter
- RPA6 6" Round pole adapter
- F(X)[2] Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, F-347V)
- VG Vandal guard
- 7PR Photocell receptacle (7-pin ANSI C136.41—2013 receptacle for use with standard Twist-Lock® photo controls, shorting caps, and ANSI C136.41 external wireless control devices. Select SCL option to add occupancy sensing capability when using with compatible external wireless devices.

PIR MOTION/OCCUPANCY CONTROL OPTIONS
- SCO_F[5,7,9] On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)
- SCL_F[5,7,9] Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.
- SCP_F[5,6,7,9] Programmable dimming control (line voltage device not for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance)
- SWP[10,11] SiteSync Pre-Commission
- SWPM[9,10,11] SiteSync Pre-Commission w/ Sensor

WIRELESS CONTROL OPTIONS
- WIR[8] wiSCAPE Fixture Module, in-fixture relay for wireless lighting control
- WIRSC[5,8] wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

Notes:
1 - Fuse option not available with universal voltage
2 - Select F3 fusing option for 220V
3 - Recommended for Type III and IV distributions only
4 - Available in 350mA drive current only Type IV, 5M
5 - 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, must order minimum of one SCP-REMOTE control to program dimming settings (see accessories)
6 - Not available with AD arm
7 - Not available with WIR or WIRSC
8 - Not available with SCO, SCL, or SCP
9 - Specify mounting height, 8 = 8' or less, 40 = 9' to 40'
10 - Specify group and zone. See SiteSync product page www.hubbelllighting.com/controls/SiteSync for more details
11 - Not available in 90L-700mA or 1050mA versions

Accessories and Services (Ordered Separately)

Catalog Number	Description
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with pre-loaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrols.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

SiteSync 7-Pin Module

SW7PR

- SiteSync Features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Available on all products that have a 7-Pin receptacl
- Does not interface with occupancy sensors

SiteSync

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HUBBELL Lighting

Submitted by Swaney Lighting			
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	**Catalog Number:** CL1-A-60LU-4K-3-BL Notes:	**Type:** **D DBL** SLA18-38148

ENERGY SAVING DATA

#LEDS	DRIVE CURRENT	SYSTEM WATTS 120-277V	SYSTEM WATTS 347-480V	DIST. TYPE	5K (5000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G	4K (4000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G	3K (3000K nominal, 70 CRI) LUMENS	LPW¹	B	U	G
30	700 mA	70W	80W	1A	8244	118	1	0	1	8162	117	1	0	1	6775	97	1	0	1
				2A	8202	117	1	0	1	8121	116	1	0	1	6740	96	1	0	1
				2	7715	110	2	0	3	7639	109	2	0	2	6340	91	2	0	2
				3	7712	110	2	0	2	7635	109	2	0	2	6371	91	1	0	2
				4	7803	111	1	0	2	7726	110	1	0	2	6412	92	1	0	2
				5S	8374	120	3	0	0	8291	118	3	0	0	6882	98	3	0	0
				5M	7940	113	3	0	1	7862	112	3	0	1	6525	93	3	0	1
				5W	7667	110	3	0	2	7591	108	3	0	2	6301	90	3	0	2
60	700 mA	135W	150W	1A	16171	120	1	0	2	16011	119	1	0	1	13289	98	1	0	1
				2A	16068	119	1	0	2	15929	118	1	0	2	13221	98	1	0	2
				2	15134	112	3	0	3	14984	111	3	0	3	12437	92	3	0	3
				3	15127	112	3	0	3	14977	111	3	0	3	12498	93	2	0	3
				4	15306	113	2	0	3	15154	112	2	0	3	12578	93	2	0	3
				5S	16426	122	4	0	0	16263	120	4	0	0	13498	100	4	0	0
				5M	15575	115	4	0	2	15421	114	4	0	2	12799	95	3	0	2
				5W	15040	111	4	0	3	14891	110	4	0	3	12360	92	4	0	3
60	1050 mA	220W	235W	1A	21139	96	2	0	2	20929	95	2	0	2	17371	79	2	0	2
				2A	21030	96	2	0	2	20822	95	2	0	2	17282	79	2	0	2
				2	19783	90	4	0	5	19587	89	3	0	5	16257	74	3	0	5
				3	19774	90	3	0	4	19578	89	3	0	4	16250	74	3	0	4
				4	20007	91	3	0	5	19809	90	3	0	5	16442	75	3	0	5
				5S	21471	98	5	0	0	21259	97	5	0	0	17645	80	5	0	0
				5M	20359	93	5	0	3	20158	92	5	0	3	16731	76	5	0	3
				5W	19660	89	5	0	4	19465	88	5	0	4	16156	73	5	0	4
90	700 mA	205W	225W	1A	23781	116	2	0	2	23546	115	2	0	2	19543	95	2	0	2
				2A	23659	115	2	0	2	23425	114	2	0	2	19443	95	2	0	2
				2	22255	109	3	0	4	22035	107	3	0	4	18289	89	3	0	4
				3	22246	109	3	0	4	22026	107	3	0	4	18379	90	3	0	3
				4	22509	110	3	0	4	22286	109	3	0	4	18497	90	2	0	4
				5S	24156	118	5	0	0	23916	117	5	0	0	19851	97	4	0	0
				5M	22905	112	4	0	2	22678	111	4	0	2	18823	92	4	0	2
				5W	22117	108	5	0	3	21899	107	5	0	3	18176	89	5	0	3
90	1050 mA	325W	350W	1A	31708	98	2	0	2	31394	97	2	0	2	26057	80	2	0	2
				2A	31545	97	2	0	2	31233	96	2	0	2	25923	80	2	0	2
				2	29674	91	4	0	5	29380	90	3	0	5	24385	75	3	0	4
				3	29661	91	3	0	4	29367	90	3	0	4	24505	75	3	0	4
				4	30011	92	3	0	5	29714	91	3	0	5	24663	76	3	0	4
				5S	32207	99	5	0	0	31888	98	5	0	0	26467	81	5	0	0
				5M	30539	94	5	0	3	30237	93	5	0	3	25097	77	4	0	2
				5W	29490	91	5	0	4	29198	90	5	0	4	24234	75	5	0	4

Amber LUMENS	Amber LPW¹	Amber B	Amber U	Amber G	Drive Current	SYSTEM WATTS 120-277V	#LEDs
					350 mA	135W	60
2488		0	0	1			
2533		2	0	1			
					350 mA	205W	90
3558		1	0	1			
3596		2	0	1			

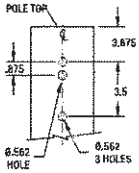
ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
CR-RPA3-XX¹	Round pole adapter for straight arm (3¼ - 3¾")
CR-RPA4-XX¹	Round pole adapter for straight arm (3⅞ - 4½")
CR-RPA5-XX¹	Round pole adapter for straight arm (5")
CR-RPA6-XX¹	Round pole adapter for straight arm (6")
CRD-RPA2-XX¹	Round pole adapter for upswept arm (2¾ - 3⅛")
CRD-RPA3-XX¹	Round pole adapter for upswept arm (3¼ - 3¾")
CRD-RPA4-XX¹	Round pole adapter for upswept arm (3⅞ - 4½")
CRD-RPA5-XX¹	Round pole adapter for upswept arm (5")
CRD-RPA6-XX¹	Round pole adapter for upswept arm (6")
WB-AREA-XX¹	Wall bracket
TPLB-XX¹	Twin parallel luminaire bracket
MAF-CL-XX³	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

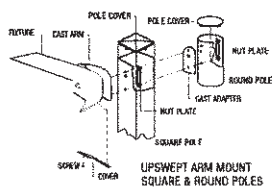
Catalog Number	Description
SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control.
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
93052458	20KA surge protection with an end of life LED indicator

1 - Replace XX with color choice, eg.: DB for Dark Bronze
2 - When ordering poles, specify Pole Drill Pattern #2
3 - Fixture must include standard 6" arm

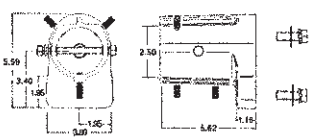
* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.



#2 DRILL PATTERN FOR POLES



UPSWEPT ARM MOUNT
SQUARE & ROUND POLES



MAF – HORIZONTAL MAST ARM FITTER

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MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX[1]	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX[1]	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX[1]	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

1 Replace XX with color choice, eg.: DB for Dark Bronze
2 Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX

ARM-CL-K-S-XX

TENON TOP POLE BRACKET ACCESSORIES

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

Catalog Number	Description
SETA2-XX[1]	Square pole tenon adapter (4 at 90 degrees)
RETA2-XX[1]	Round pole tenon adapter (4 at 90 degrees)
TETA-XX[1]	Hexagonal pole tenon adapter (3 at 120 degrees)

1 Replace XX with color choice, eg.: DB for Dark Bronze

PHOTOCONTROL EQUIPMENT

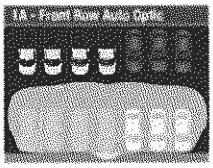
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

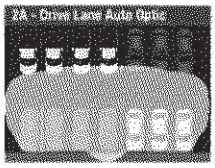
AUTOMOTIVE DEALERSHIP OPTICS

For Automotive Dealership applications Spaulding Lighting has developed two optics designed for enhanced and proper lighting of the auto dealership merchandise and the front row 1A and interior rows 2A (See CL1 distribution information for details)

Optic 1A
- Maximum illumination on front row display
- Maximum pole spacing

Optic 2A
- Excellent front row illumination and drive lane
- Optimal uniformity for drive lane and interior rows

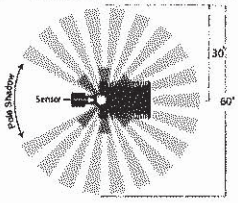


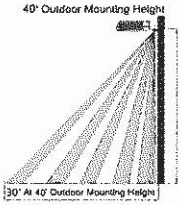


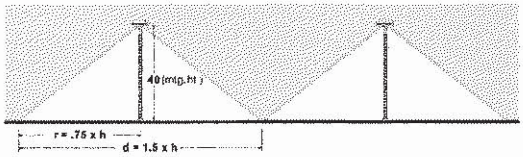
MOTION CONTROLS

- Start up delay from initial motion detection to fixture illumination is approximately 1-2 seconds
- Vehicle detection is possible however less reliable than human detection; Vehicle detection is dependent upon the following: rate of speed, mounting height of luminaire and vehicle temperature

SCP - Designed for intermediate coverage area

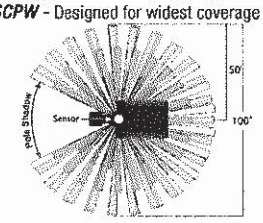


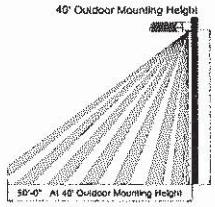


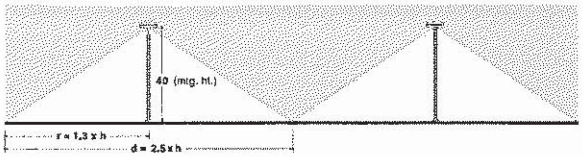


Note: Extreme heat or cold temperatures may limit detection.

SCPW - Designed for widest coverage area







Note: Extreme heat or cold temperatures may limit detection.

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20µs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator – Green LED is unlit at end of life

Pulse Rating (8 x 20 µSec)	
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I_n	10KA	5KA

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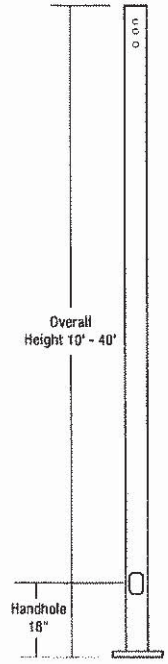
Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: Messalonskee Track and Turf Field Distributor: NEEDHAM BR51 (BANGOR)	SSSH20-40A-2-S2-BL Notes:	**D DBL** SLA16-38148

SSS-H SERIES POLES
SQUARE STRAIGHT STEEL

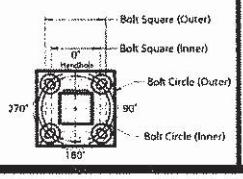
Cat.#		HUBBELL Outdoor Lighting
Job	Type	Approvals



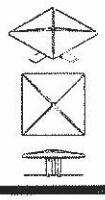
APPLICATIONS
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION
- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.23" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

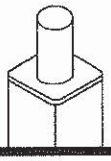
FINISH
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in seven standard colors; Custom colors available; RAL number preferable; Internal protective coating available



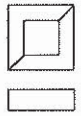
POLE CAP



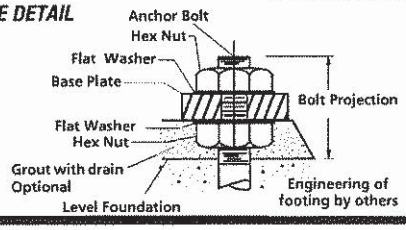
TENON



BASE COVER



BASE DETAIL



ORDERING INFORMATION

Reference page 2 for available configurations

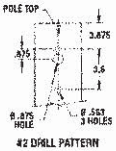
ORDERING EXAMPLE:

SSS-H - 25 - 40 - A/B/C - 2L - S2 - DB - UL

SERIES	HEIGHT	SHAFT	THICKNESS
SSS-H Square Straight Steel Pole Hubbell Outdoor	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix
	20'	40	A

MOUNTING
- 1 Single arm mount
- 2 Two fixtures at 180°
- 2L Two fixtures at 90°
- 3T Three fixtures at 90°
- 4 Four fixtures at 90°
- TA Tenon (2.38" OD x 4" Tall)
- TB Tenon (2.88" OD x 4" Tall)
- TC Tenon (3.5" OD x 6" Tall)
- TR[1] Removable Tenon (2.375 x 4.25)
- OT Open Top (includes pole cap)

DRILL PATTERN
- S2 #2 2 bolt 3.5" pattern



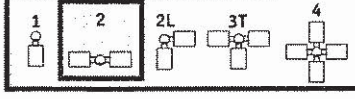
#2 DRILL PATTERN

FINISH
- DB Dark Bronze Textured
- BL Black Textured
- WH White Textured
- GR Gray Textured
- PS Platinum Silver Smooth
- CC Custom Color

OPTIONS
- HSC Internal Coating (Hubbell Seal)
- GFI[2] 20 Amp GFCI Receptacle and Cover
- EHH[2] Extra Handhole
- C05[2] .5" Coupling
- C07[2] .75" Coupling
- C20[2] 2" Coupling
- MPB[3] Mid-pole Luminaire Bracket
- VM2 2nd mode vibration damper
- LAB Less Anchor Bolts
- UL UL Certified

MOUNTING ORIENTATION

Denotes handhole location



***ACCESSORIES*- Order Separately**

Catalog Number	Description
VM1[3]	1st mode vibration damper
VM2SXX	2nd mode vibration damper

1 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "TR" notation. Example: **SSS-H-25-40-A-1-S2-TR-DB**
2 Specify option location using logic found on page 2 **(Option Orientation)**
3 VM1 recommended on poles 20' and taller with EPA of less than 1.

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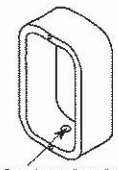
ORDERING INFORMATION Cont.

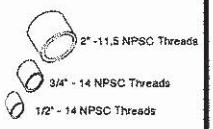
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters									
SSS-H-10-40-A-XX-XX	10	3.0	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	77
SSS-H-12-40-A-XX-XX	12	3.7	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	90
SSS-H-14-40-A-XX-XX	14	4.3	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	103
SSS-H-16-40-A-XX-XX	16	4.9	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	116
SSS-H-18-40-A-XX-XX	18	5.5	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	129
SSS-H-20-40-A-XX-XX	20	6.1	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	142
SSS-H-25-40-A-XX-XX	25	7.6	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	175
SSS-H-14-40-B-XX-XX	14	4.3	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	152
SSS-H-16-40-B-XX-XX	16	4.9	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	171
SSS-H-18-40-B-XX-XX	18	5.5	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	190
SSS-H-20-40-B-XX-XX	20	6.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	209
SSS-H-25-40-B-XX-XX	25	7.6	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	257
SSS-H-30-40-B-XX-XX	30	9.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	304
SSS-H-16-50-B-XX-XX	16	4.9	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	219
SSS-H-18-50-B-XX-XX	18	5.5	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	243
SSS-H-20-50-B-XX-XX	20	6.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	267
SSS-H-25-50-B-XX-XX	25	7.6	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	327
SSS-H-30-50-B-XX-XX	30	9.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	387
SSS-H-25-50-C-XX-XX	25	7.6	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	427
SSS-H-30-50-C-XX-XX	30	9.1	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	507
SSS-H-20-60-B-XX-XX	20	6.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	329
SSS-H-25-60-B-XX-XX	25	7.6	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	404
SSS-H-30-60-B-XX-XX	30	9.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	479
SSS-H-35-60-B-XX-XX	35	10.7	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	554
SSS-H-40-60-B-XX-XX	40	12.2	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	629
SSS-H-30-60-C-XX-XX	30	9.1	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	614
SSS-H-35-60-C-XX-XX	35	10.7	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	712
SSS-H-40-60-C-XX-XX	40	12.2	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	809

NOTE Factory supplied template must be used when setting anchor bolts. Hubbell Lighting will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

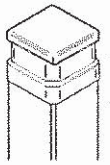
EHH - EXTRA HANDHOLE



C05 - C07 - C20 - COUPLING



VM1 - VIBRATION DAMPER 1ST MODE



Field installed Pole Top damper designed to reduce pole top deflection or sway. VM1 is recommended for pole systems 25' and taller with a total EPA of 1.0 or less.

VM2 - VIBRATION DAMPER 2ND MODE

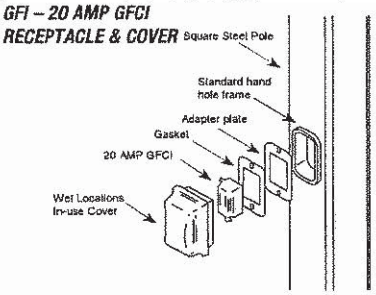
Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

VM2SXX - VIBRATION DAMPER 2ND MODE

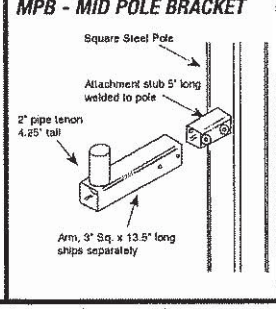
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI – 20 AMP GFCI RECEPTACLE & COVER

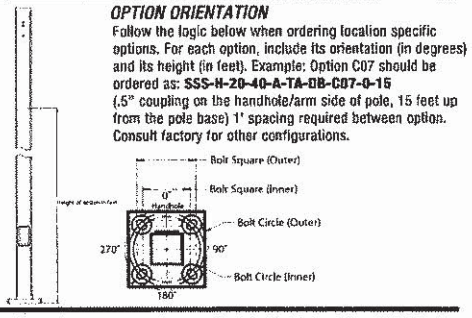


MPB - MID POLE BRACKET



OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option C07 should be ordered as: **SSS-H-20-40-A-TA-DB-C07-0-15** (.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base) 1' spacing required between option. Consult factory for other configurations.



For more information about pole vibration and vibration dampers, please consult http://cdn.hubbelloutdoor.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HLOB022.pdf
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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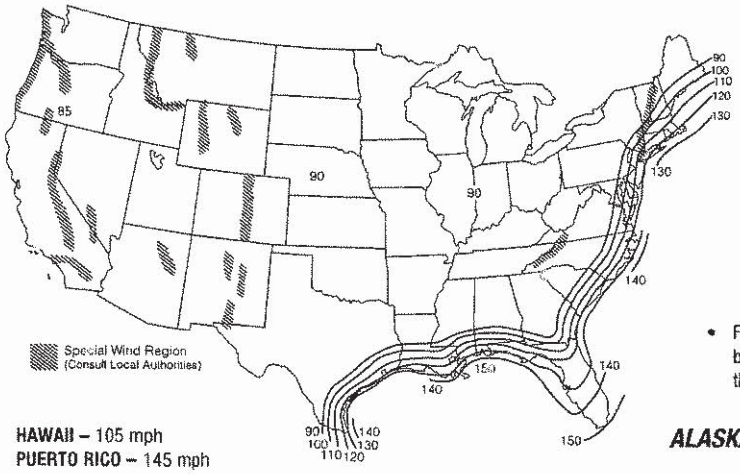
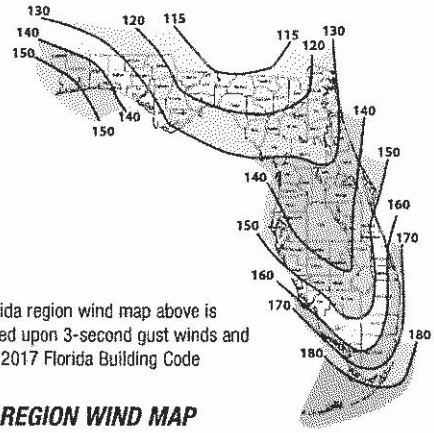
ASCE7-05 WIND MAP



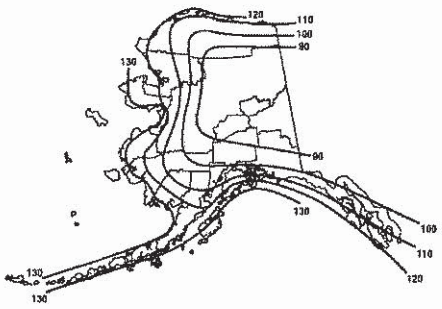
HAWAII – 105 mph
PUERTO RICO – 145 mph

FLORIDA REGION WIND MAP



- Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code

ALASKA REGION WIND MAP



ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)										
Catalog Number	85	90	100	105	110	120	130	140	145	150
SSS-H-10-40-A	25.0	25.0	25.0	22.8	20.6	17.0	14.2	11.9	11.0	10.1
SSS-H-12-40-A	25.0	25.0	20.0	18.0	16.1	13.2	10.8	8.9	8.1	7.4
SSS-H-14-40-A	23.1	20.4	16.1	14.3	12.8	10.2	8.2	6.6	5.9	5.3
SSS-H-16-40-A	19.0	16.7	13.0	11.5	10.1	7.9	6.2	4.7	4.1	3.6
SSS-H-18-40-A	15.6	13.6	10.0	9.0	7.8	5.9	4.4	3.1	2.6	2.1
SSS-H-20-40-A	12.7	10.9	7.9	6.9	5.9	4.2	2.8	1.7	1.3	0.9
SSS-H-25-40-A	7.3	5.9	3.8	2.9	2.1	0.8	NR	NR	NR	NR
SSS-H-14-40-B	25.0	25.0	23.3	20.8	18.6	15.1	12.3	10.2	9.2	8.4
SSS-H-16-40-B	25.0	24.9	19.4	17.3	15.4	12.3	9.9	8.0	7.2	6.4
SSS-H-18-40-B	24.0	20.8	16.1	14.2	12.5	9.8	7.7	6.1	5.3	4.7
SSS-H-20-40-B	20.2	17.5	13.2	11.8	10.1	7.7	5.9	4.4	3.8	3.2
SSS-H-25-40-B	12.8	11.0	7.9	6.7	5.5	3.7	2.3	1.2	0.7	NR
SSS-H-30-40-B	8.0	6.6	4.1	3.1	2.2	0.8	NR	NR	NR	NR
SSS-H-16-50-B	25.0	25.0	25.0	25.0	24.6	20.1	16.5	13.6	12.3	11.2
SSS-H-18-50-B	25.0	25.0	25.0	22.9	20.4	16.4	13.2	10.7	9.6	8.6
SSS-H-20-50-B	25.0	25.0	21.3	18.9	16.7	13.2	10.4	8.1	7.2	6.3
SSS-H-25-50-B	20.7	17.8	13.3	11.5	9.8	7.2	5.0	3.3	2.6	1.9
SSS-H-30-50-B	13.5	11.3	7.7	6.2	4.9	2.8	1.1	NR	NR	NR
SSS-H-25-50-C	25.0	25.0	19.4	17.1	15.1	11.7	9.0	6.9	6.0	5.1
SSS-H-30-50-C	20.1	17.3	12.7	10.9	9.3	6.5	4.5	2.8	2.1	1.4
SSS-H-20-60-B	25.0	25.0	25.0	25.0	25.0	20.2	16.1	12.9	11.5	10.3
SSS-H-25-60-B	25.0	25.0	20.6	18.0	15.6	11.8	8.7	6.2	5.2	4.2
SSS-H-30-60-B	21.4	18.1	12.9	10.7	8.8	5.7	3.3	1.3	NR	NR
SSS-H-35-60-B	14.0	11.3	6.9	5.2	3.6	1.0	NR	NR	NR	NR
SSS-H-40-60-B	8.1	5.8	2.2	nr	NR	NR	NR	NR	NR	NR
SSS-H-30-60-C	24.3	20.5	14.6	12.2	10.2	6.8	4.2	2.2	1.3	0.5
SSS-H-35-60-C	16.6	13.5	8.6	6.6	4.9	2.1	NR	NR	NR	NR
SSS-H-40-60-C	10.6	7.9	3.7	2.1	0.6	NR	NR	NR	NR	NR

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)								
Catalog Number	115	120	130	140	150	160	170	180
SSS-H-10-40-A	25.0	25.0	25.0	25.0	21.4	18.4	15.9	13.9
SSS-H-12-40-A	25.0	25.0	23.6	19.8	16.7	14.2	12.1	10.4
SSS-H-14-40-A	25.0	23.1	19.0	15.7	13.1	10.9	99.1	7.6
SSS-H-16-40-A	20.8	18.7	15.2	12.3	10.1	8.2	6.7	5.4
SSS-H-18-40-A	16.8	15.0	11.9	9.4	7.5	5.9	4.5	3.4
SSS-H-20-40-A	13.6	11.9	9.2	7.1	5.3	3.9	2.7	1.7
SSS-H-25-40-A	7.4	6.2	4.1	2.5	1.1	NR	NR	NR
SSS-H-14-40-B	25.0	23.6	18.4	16.1	13.4	11.2	9.4	7.8
SSS-H-16-40-B	21.4	19.2	15.6	12.7	10.4	8.5	6.9	5.6
SSS-H-18-40-B	17.2	15.4	12.2	9.7	7.7	6.1	4.7	3.6
SSS-H-20-40-B	13.9	12.3	9.5	7.3	5.5	4.1	2.9	1.9
SSS-H-25-40-B	7.7	6.4	4.3	2.6	1.3	NR	NR	NR
SSS-H-30-40-B	3.2	2.1	NR	NR	NR	NR	NR	NR
SSS-H-16-50-B	25.0	25.0	25.0	25.0	25.0	21.4	18.2	15.5
SSS-H-18-50-B	25.0	25.0	25.0	24.4	20.4	17.0	14.2	11.9
SSS-H-20-50-B	25.0	25.0	24.4	19.9	16.3	13.4	11.0	8.9
SSS-H-25-50-B	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-H-30-50-B	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-H-25-50-C	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-H-30-50-C	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-H-20-60-B	25.0	25.0	25.0	21.9	17.8	14.5	11.7	9.4
SSS-H-25-60-B	23.8	20.9	16.1	12.3	9.2	6.6	4.5	2.8
SSS-H-30-60-B	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-H-35-60-B	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-H-40-60-B	1.8	NR	NR	NR	NR	NR	NR	NR
SSS-H-30-60-C	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-H-35-60-C	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-H-40-60-C	1.8	NR	NR	NR	NR	NR	NR	NR

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NOTES

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations. http://pdn.hubbelllighting.com/content/pdn/literature/brochure_files/Pole_Wind_Induced_Flyer_HLO0621.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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Transportation Analysis – Traffic Impact (14-526 (a) 1)

Provisions have been made at the site to allow for the safe circulation of vehicles and pedestrians within the site. Please see the site plan for additional information.

A trip generation analysis of the existing and proposed use was competed for the site. Please see the traffic memo by Sebago Technics dated August 15, 2018.

Access and Circulation (14-526 (a) 2 a)

(i) The development provides safe and reasonable access and internal circulation for the entire site for all users of the site and complies with the standards set forth in Section 1 of the Technical Manual. Please see the site plan.

(ii) The points of access and egress have been located to avoid conflicts with the existing turning movements and traffic flows. Please see the site plan.

(iii) Not applicable. There are no drive-up features associated with this project.

Loading and Servicing (14-526 (a) 2 b)

(i) It is not anticipated that the site will be serviced by delivery or other service vehicles, however the development has been designed for vehicles typically associated with the use of self-storage facilities.

Sidewalks (14-526 (a) 2 c)

(i) The development has been designed with the appropriate sidewalk and curb layout. Please see the site plan.

(ii) Not applicable. There is no existing sidewalk to be utilized for this project.

(iii) Not applicable. The internal sidewalk is not directly connected to the existing public sidewalk. The proposed project involves the construction of a self-storage facility and it is anticipated that the site will be access by motor vehicle or bicycle, not pedestrians.

Public Transit (14-526 (a) 3)

There is no public transportation that services the subject site. The closest bus routes run on Brighton Avenue and to Shaw's Supermarket, south of the subject site.

Off-Street Parking: Vehicle & Motorcycle/Scooter (14-526 (a) 4 a and c)

a. The proposed project exceeds the parking requirements for the zone and development size. The parking spaces have been designed in accordance with City Regulations and the parking surface will be a paved surface. Please see the site plan.
c. The proposed parking lot has been designed to accommodate motorcycle and scooter parking. Please see the site plan.

Bicycle Parking (14-526 (a) 4 b)

The proposed design provides for adequate bicycle parking for the site. Please see the site plan.

Snow Storage (14-526 (a) 4 d)

(i) Snow storage areas are delineated on the site plan.

(ii) The proposed snow storage areas will not encroach on areas designated to meet minimum parking requirements or pedestrian walkways. They are not located in areas that will interfere with the storm water management plan of the site.

Traffic Demand Management (TDM) (14-526 (a) 5)

Not applicable.

Environmental and Landscape Features

Preservation of significant Natural Features (14-526 (b) 1)

Not Applicable. The proposed project site is a previously developed lot in a highly developed area. The site does not contain any significant natural features, there is minimal tree cover, and no wetlands.

Landscaping and Landscape Preservation (14-526 (b) 2 a)

(i) There is limited tree cove on the proposed project site. Existing trees have been incorporated into the landscape plan when possible. Please see the Landscape plan.

(ii) No trees with a 10-inch DBH or greater within the setback are to be impacted. Please see the Landscape plan.

(iii) Vegetation will be protected during construction in accordance with tree preservation standards listed in Section 4 of the Technical Manual.

(iv) No waivers for vegetation are sought.

(v) Not Applicable. The proposed project site is not located in the Shoreland Zone.

Site Landscaping (14-526 (b) 2 b)

The proposed project has been designed in accordance to the requirements of the City Ordinance. Please see the Landscape Plan for specific information on the planting plan.

Parking Lot Landscaping (14-526 (b) 2 b ii)

Landscaped islands in the parking lots have been provided. Please see the Landscape Plan for more detailed information.

Street Trees (14-526 (b) 2 b iii)

The proposed planting plan was designed in accordance to the specifications of Section 4 of the City's Technical Manual. Please see the Landscape Plan for more detailed information.

Environmental and Stormwater

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

The proposed site has been designed in accordance to City and Chapter 500 requirements to minimize the amount of stormwater leaving the site. Please see the Stormwater Management report and plan included in this submittal.

Consistency with City Master Plans (14-526 (c) 1)

The proposed development is consistent with the City Master Plan. The proposed development is located on a previously developed parcel in an area with existing services. The development will not result in any additional burdens to the City's resources, nor the unnecessary decrease of undeveloped parcels. The proposed use is consistent with the surrounding area.

Public Safety and Fire Prevention (14-526 (c) 2)

a. Crime Prevention - The proposed facility has been designed with planting that will complement the site but will not provide concealment for illegal activities. The parking area is well lit and the access drive is gated. Please see the plan set.

b. There is adequate access to the site for emergency vehicles. Please see the plan set.

c. The site has been designed to be consistent with the standards of the City of Portland Technical Manual. Please see the plan set.

Please see the attached Fire Checklist.

Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)

a. The development will no overburden sanitary sewers and storm drains, water lines, or other public infrastructure and utilities. Please see the attached capacity letters.

b. Electrical service has been designed to be underground.

c. All proposed sanitary sewers, storm drains, water lines or other utilities meet the provisions of the City Technical manual.

d. The proposed development will connect to an existing sewer line.

e. All proposed sanitary sewer and stormwater utilities are designed to City standards.

f. Given the nature of the facility no on-site dumpsters or solid waste removal is provided. Any required waste removal will be the responsibility of those persons renting storage units and will be part of their lease agreement. There is a small office proposed, any waste generated will be minimal and will be hauled off site by a private service.

Massing, Ventilations and Wind Impact (14-526 (d) 1)

a. The bulk and height of the proposed building will not result in health or safety problems from a reduction in ventilation to abutting structures. Please see the site plan.
b. The bulk, location, and height of the proposed building will not minimize the value or utility of the neighboring buildings. The proposed develop is in keeping with the neighborhood. Please see the plan set.
c. The HVAC venting mechanisms have not been sited on the plan as the appropriately sized system has not yet been determined. The building will be constructed with the all venting systems directed away from public spaces and residential properties.

Shadows (14-526 (d) 2)

Not applicable. There are no open public spaces surrounding the property.

Snow and Ice Loading (14-526 (d) 3)

The building will be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.

View Corridors (14-526 (d) 4)

Not applicable. The proposed development is not in a view corridor.

Historic Resources (14-526 (d) 5)

The proposed development will not impact nor is it in close proximity of any historic resources.

Exterior Lighting (14-526 (d) 6)

Included with this section please find the lighting product cutsheets. Please see the plan set for the lighting plan.

Noise and Vibration (14-526 (d) 7)

Not Applicable. There is no equipment associated with the proposed use that would result in the generation of noise or vibrations.

Signage and Wayfinding (14-526 (d) 8)

Please see the plan set for signage information.

Zone Related Design Standards (14-526 (d) 5)

Not Applicable. There are no specific design standards associated with the zone of the subject site.

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

January 22, 2019
17500

Christian Roadman – Planner
City of Portland
389 Congress Street
4th Floor
Portland, ME 04101

Patagon Self Storage – Portland, Maine
Response to Lauren Swett – Third Party Review Comments

Dear Christian:

This letter and the enclosed revised plans are provided in response to the latest review comments regarding the review of the Patagon Self Storage facility proposed at 150 Riverside Street in Portland, Maine. We received a several questions and comments from Thomas Errico PE regarding traffic concerns, as well as from Lauren Swett, PE from Woodard & Curran regarding stormwater management and third party review concerns. Please find responses to these comments below.

From Tom Errico:

1. The Applicant has conducted a trip generation estimate and the project is not expected to generate a significant number of new vehicle trips. I concur that the project will not have a significant impact on area vehicle traffic operations. A traffic impact study is not required.

   Response: *We concur as well.*

2. Given traffic conditions on Riverside Street, the Applicant is proposing to restrict site movements to right in/out only. I am concerned about the geometric layout of the driveway and making illegal movements difficult. It is recommended that the driveway configuration be modified to achieve the objective of restricted movements.

   Response: *We modified he entrance now that we have an understand to realign curbing there and at the existing entrance on the Burger King side of the frontage. We have turned the right curbing and island to allow for larger vehicle radius and mimicked what was done in frnt of Burger King to cross the sidewalk at grade and curb the island to restric any possible left turn out.*

3. A sidewalk connection to the building from the Riverside Street sidewalk should be provided.

   Response: *We have added a connection from the building sidewalk to the street sidewalk.*

4. An esplanade separating the sidewalk from the roadway (similar condition exist to the north), should be considered.

   Response: *We met with both Tom Errico and Keith Gray from Public Works and agreed to relocate the sidewalk to provide and esplanade and we will be allowed to close the curb at the southernmost entrance and rework our primary entrance and island. We have shown the pavement cut 1 foot into the roadway, but is actually still outside the painted travel way. As a result we will not impact the travel road conditions with new curb installs, and provide the city the esplanade it desires but was not completed in the recent work associated with the state intersection improvements. Additionally we will complete the sidewalk connection that was also left unconnected with the previous state project. That sidewalk piece will extend about 35 feet to the north of our entrance and offsite. As a result the City is offering to waive the moratorium conditions of complete street overlay and excessive fees.*

5. The Applicant has noted pavement moratorium restrictions and this issue will need to be coordinated with DPW.

   Response: *Please see discussion above.*

6. The Applicant has provided a Construction Management Plan. Greater detail is required as it related to lane closures on Riverside Street and sidewalk closure.

   Response: *We have included the street cut line along the frontage to indicate the limits of construction along the sections where curb is to be set or reset.*

7. It is my understanding that the parking lot design will be revised. I would note that parking stall size and aisle width under the current layout requires formal waiver requests.

   Response: *We have eliminated a large expanse of parking in the rear, and have tightened up aisles to be 24 ft in width. Additionally we have indicated an enclosed dumpster with turnaround, and realigned the parking in the rear. We do not feel any waivers would be required.*

From Lauren Swett:

1. The “decorative stone spreader” detail refers to a “focal point inlet structure”; the Applicant should clarify where this “decorative stone spreader” detail applies and what is meant by the “focal point inlet structure”.

   Response: *The above reference has been removed from the plan set. We are no longer utilizing focal points for stormwater treatment.*

2. A stormwater maintenance agreement with the City of Portland will be required.

Response: *We agree with the statement and would prefer that this be included as a potential condition to be executed prior to the issuance of building permits.*

3. Several storm drains are proposed with less than 1.5-feet of cover; precast drainage structures typically require at least 1.5-feet of cover in order to drill the holes for the storm drain inlets/outlets. The Applicant should verify that the precast drainage structures can be constructed as designed. Additionally, the Applicant should clarify what provisions have been made for frost conditions for storm drain pipes with less than three feet of cover. We are prepared to insulate those pipes with less than 2 feet of cover to reduce freezing impact concerns.

   Response: *The existing drainage infrastructure in and around the project area have very minimal slopes and cover due adjacent elevations and soil restrictions. We have made changes to the design to best improve the drainage within our limit of work.*

4. The plans should specify proposed locations and details for catch basin inlet protection measures.

   Response: *The plans will specify the use of inlet protection within paved areas, as depicted on the erosion control notes and details sheet of this plan set.*

5. The plans indicate that several existing drainage structures will be abandoned or reused as part of the project, but it is unclear where existing drainage structures flow to or from and what purpose they serve or whether they will conflict with the proposed infrastructure. The Applicant should clarify and field verify components of the system as necessary. We note the following specific structures: (1) Existing DMH 1241 is shown with only one pipe inlet/outlet, and it is unclear whether the existing drainage system associated with the structure will conflict with the proposed drainage system; (2) There is an existing catch basin that has not been field verified and does not show any inlets or outlets; it is unclear whether this catch basin will be abandoned or demolished or whether the existing drainage system associated with the structure will conflict with the proposed drainage system; (3) CB 1086 will be modified by plugging the existing inlet and installing new inlets and outlets, with the new outlet connecting to an existing storm drain that is also not shown on the plans; (4) The Grading and Utility Plan indicates that existing CB 1435 should be abandoned; however, the catch basin is located within the proposed parking lot area, which will be re-graded. The Applicant should clarify how this structure will be abandoned.

Response: *Additional information has been provided on the plans from plan research as well as additional survey information used to identify drainage conveyance along Riverside street.*

6. The Inspection, Maintenance, and Housekeeping Plan should include provisions for the requirements of Chapter 32 of the City of Portland Code of Ordinances and maintenance requirements associated with the Cultech chamber system.

Response: *The Cul-tech system is not longer proposed. However, and inspection, maintenance and housekeeping plan shall be provided for all other stormwater best management practices.*

7. The Applicant is proposing a buffer to provide stormwater treatment; per Chapter 5 of Volume III of the MaineDEP Stormwater BMP Manual. Based on NRCS web soil survey data, the proposed buffer is located within Hydrologic Soil Group C/D; soils that in their natural condition are in group D are assigned to dual classes. Meadow buffers are not allowed on Hydrologic Soil Group D soils. A forested buffer is allowed if the D soils in a buffer are not wetland soils. In addition, the buffer sizing calculations indicate that insufficient berm length will be provided. The proposed meadow buffer is not suitable for use unless the Applicant has a soil investigation completed to provide verification that soil conditions are adequate to meet DEP requirements, or provides documentation that the DEP finds the location to be suitable. If a buffer is to be used, it must be protected from disturbance by deed restrictions and covenants, and the Inspection, Maintenance, and Housekeeping Plan should include provisions for the maintenance criteria specified in the BMP manual.

Response: *This buffer is no longer proposed. The rear parking lot has been removed from the scope of work and this buffer is no longer necessary. Other stormwater treatment is proposed.*

8. The Applicant submitted a Wastewater Capacity Application in March of 2018; the response confirming ability to serve the proposed development should be submitted upon receipt.

Response: *The capacity to serve letter will be submitted upon receipt.*

9. The HydroCAD model indicates that the roof runoff from the new building will discharge directly to the Riverside Street drainage system, but the plans do not appear to specify a roof drain system; the Applicant should clarify how roof runoff from the new building will be collected and discharged from the site.

Response: *The roof drainage will be discharged through a number of interior downspouts, and ultimately connecting to the existing closed drainage system along Riverside street. The northern half of the proposed building will be collected and conveyed to a 6' x 10' filterra system for treatment. The southern building will connect to a proposed drain manhole. This work is detailed on the grading and utility sheet 5 of the plan set. Further detailing of the filterra system can be found on our plan details.*

10. The Applicant is proposing several FocalPoint systems to provide stormwater treatment; per the MaineDEP Approval Letter for FocalPoint systems dated February 2, 2017, the following comments should be addressed:
    1. A HydroCAD model must demonstrate that the entire volume of a 0.95 inch Type III 24-hr storm is treated prior to activation of the bypass/overflow; a HydroCAD report demonstrating this should be provided. A HydroCAD report should also be provided demonstrating that the Cultech chamber system has been appropriately sized for the 1-year storm event.
    2. 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 must be placed in-line with a subsurface chamber-based treatment row approved by the Department such that both the treated discharge and the bypass discharge from the FocalPoint system drain to the treatment row; FocalPoint-1 drains to FocalPoint-2 rather than its own treatment row.
    4. It does not appear that sufficient storage will be provided for the required water quality volume downstream of the FocalPoint and treatment row.

Response: *Focal points are no longer proposed as stormwater treatment. In lieu of the focal points, a grassed underdrained soil filter and a 6'x10' filterra system will be utilized. A spreadsheet summary sheet has been attached with the report for review showing how we have met the Urban Stream standards for the redeveloped site treatment and necessary storage and estimated compensation fees.*

11. The project is located within the Capisic Brook Watershed, which is identified as an Urban Impaired Stream by the Maine DEP. Section 5 of the City of Portland Technical Manual requires that all development within the Capisic Brook watershed, except single and two family homes, comply with the Urban Impaired Stream Standard pursuant to MaineDEP Chapter 500 Rules. To meet the Urban Impaired Stream standard, the Applicant must either pay a compensation fee or mitigate project impacts by treating, reducing, or eliminating an off-site or on-site pre-development impervious stormwater source.

Response: *The proposed project is redevelopment. We are required to treat 50% of developed area to meet the standard. The MDEP Stormwater BMP manual states that "Any portion of a project in which impervious area pre-dates the Stormwater Management Law is replaced is not required to meet the urban impaired stream standard for that area." A urban impaired calculation plan sheet is included with these responses to depict theses areas and will also included all other associated urban calculations to determine any fee requirements.*

12. The Applicant should note that the new sidewalk proposed along Riverside Street should comply with the City's Standard Bituminous Sidewalk detail (Figure I-12 of the City's Technical Manual). The details should be revised accordingly for work within the Right-of-Way.

Response: *A note will be added to the plans to indicate conformance with the City's Technical Design Manual, as well as sidewalk details have been updated to comply with City requirements.*

13. The HydroCAD model should be revised as necessary to address the following comments to confirm that the Flooding Standard will be met: (1) The Pre-Development Watershed Map shows the Time of Concentration Path for Subcatchment 2S going through the existing building; the Time of Concentration should be adjusted to go around the building; (2) The dimensions and elevations utilized to model the storage, the elevations of the outlets, and the size of the overflow drains associated with the FocalPoint systems do not appear to agree with the dimensional data provided on the plan detail sheet; the Applicant should revise as necessary to ensure that the model and the plans are consistent; (3) It appears that the HydroCAD model is accounting for storage within the FocalPoint filter media; this is not typical and should be removed.

Response: *The pre-development and post- development stormwater models have been updated to reflect project changes, as part of this we believe all of these concerns have been met.*

14. The Applicant has indicated on the submission checklist that evidence of state or federal approvals do not apply to the project; however, the project will disturb over an acre and as such will require a Construction General Permit from the MaineDEP. A copy of the authorization to proceed under the Construction General Permit should be provided to the City upon receipt.

Response: *Ok, agreed. The authorization to proceed will be provided upon receipt.*

15. The existing conditions plan shows a sewer line along the northern portion of the parcel; however, this sewer line is not shown on the proposed grading and utility plan and it is not specified for removal or abandonment. The Applicant should clarify the intent for the existing sewer line and verify whether it will conflict with proposed storm drain infrastructure.

Response: *Additional information has been provided on the plans. The existing sewer line (not used) was installed for a previous approved project of more than 25 years prior that was never built. The sewer infrastructure will be removed within the limit of work.*

16. The Applicant is proposing to connect to existing CB 1433, which appears to be located within the City Right-of-Way. Storm drain pipes are not permitted to be connected into City of Portland catch basins per the City of Portland Technical Manual, Section 2.7.8. The Applicant should propose an alternate means of storm drain connection or work with DPS to determine if the proposed approach is acceptable.

Response: *All existing storm drainage infrastructure is located within the right of way to Riverside Street. We will need to coordinate these connections, but will not disturbed beyond the curb line. This was agreed to be acceptable to close the existing curb cut, and does not further impact the moratorium.*

Finally, we did revise landscaping slightly to accommodate any changes to utilities and or drainage alterations. The applicant has also requested that a 6 foot black vinyl coated chain link fence be installed around the developments perimeter to provide better security. We added some low wattage lights on the buildings south side for security with low level wall pack lighting

to discourage vagrancy and allow security at night along the unlit side yard. As part of the rear parking configuration some pole lighting was removed.

We are hopeful that this information sufficiently addresses the proposed questions Please feel free to contact our office at 207-200-2100 if you have further questions or require additional information.

SEBAGO TECHNICS, Inc.

James R. Seymour
Sr. Project Manager

Cc: Daniel Lyman-Patagon Storage.

SAH/llg
Enc.

November 9, 2018

Proposed Self-Storage Facility – Patagon Storage, LLC, 150 Riverside Street, Portland

Dear Neighbors and Interested Parties:

Please join us for a neighborhood meeting to discuss plans for a proposed new self-storage facility for Patagon Storage, LLC, to be located at 150 Riverside Street.

Meeting Location:	**Ramada Plaza Portland, The Loft Room (third floor)** **155 Riverside Street, Portland**
Meeting Date:	**November 20, 2018**
Meeting Time:	**5 P.M.**

The City requires that property owners within proximity to the proposed development and residents of an "interested parties list" provided by the City, 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.

We look forward to meeting with you to discuss the proposed project in person. If you have any questions, please call the site design Project Manager, James Seymour, P.E. at Sebago Technics, Inc., (207) 200-2083.

Patagon Storage, LLC
Proposed Indoor Self Storage Building
150 Riverside Street, Portland, Maine

List in Attendance

Neighborhood Meeting
November 20, 2018

Ownership/Representatives Present:	Company/ Phone #
JAMES SEYMOUR, P.E.	SEBAGO TECHNICS INC. 200-2083

Abutter(s) Name	Address / E-MAIL OR PHONE *

* OPTIONAL

SEBAGO TECHNICS

PROJECT NOTES

PROJECT NUMBER: 17500 **DATE:** Nov. 20, 2018

PROJECT: PATAGON SELF STORAGE

CLIENT: PATAGON SELF STORAGE LLC

BETWEEN: J. SEYMOUR

AND:

SUBJECT: NEIGHBORHOOD MEETING
150 RIVERSIDE ST. PORTLAND

DISCUSSION: PROPOSED SITE PLAN FOR SELF STORAGE BLD.

HELD @ THE LOFT ROOM @ RAMADA PLAZA
155 RIVERSIDE ST. PORTLAND

ARRIVED @ 4:50 PM

LEFT @ 5:50

NO ATTENDEES SHOWED!

11/20/18

SEBAGO TECHNICS
75 John Roberts Road, Suite 1A
South Portland, ME 04106
(207) 200-2100

Portland, Maine Yes. Life's good here.

Christopher C. Branch, P.E.
Director of Public Works

Date: February 6, 2019

Re: Wastewater Capacity Authorization

Address: 150 Riverside Street
Applicant: Daniel Lyman, Patagon Storage LLC

Planner: Christian Roadman

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Employees at place of employment with no showers	PWD Records			50
Proposed flow				
Warehouse	1 Unit	1	100 GPD or 12 GPD/Employee	100
			Net Change	**+ 50**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition and Portland Water District Water Records				

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

Bradley A. Roland, P.E.
Senior Project Engineer

Life Storage
Life Storage

Life Storage
Life Storage

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

February 18, 2019
17500

Christian Roadman – Planner
City of Portland
389 Congress Street
4th Floor
Portland, ME 04101

Patagon Self Storage – Portland, Maine
Response to Lauren Swett – Third Party Review Comments

Dear Christian:

This letter and the enclosed revised plans are provided in response to the latest review comments regarding the review of the Patagon Self Storage facility proposed at 150 Riverside Street in Portland, Maine. We received Potential conditions listed below as well as several questions and comments from Lauren Swett, PE from Woodard & Curran regarding stormwater management and third-party review concerns. Please find responses to these comments below.

CONDITIONS WHICH MUST BE MET PRIOR TO SUBMITTAL OF A BUILDING PERMIT APPLICATION:

1. The applicant shall provide a revised construction management plan for review and approval by the Planning Authority and the City's consulting traffic engineer.

2. The applicant shall provide adequate documentation of a Construction General Permit from the Maine Department of Environmental Protection.

3. The applicant shall provide an updated landscape plan addressing the necessary revisions and submissions detailed in Attachment 4 (J Tarling Comments 1-25-19), for review and approval by the Planning Authority and the City Arborist.

4. The applicant shall provide updated documents addressing the necessary revisions and submissions detailed in Attachment 3 (L Swett Comments 2-4-19), for review and approval by the Planning Authority and the City's consulting civil engineer.

5. The applicant shall provide confirmation of wastewater capacity by the Department of Public Works.

6. The applicant shall submit a revised lighting plan in conformance with the City's Technical Manual, for review and approval by the Planning Authority.

CONDITION WHICH MUST BE MET PRIOR TO ISSUANCE OF A BUILDING PERMIT APPLICATION:

7. The applicant shall submit a stormwater maintenance agreement with the City of Portland for review and approval by the Planning Authority and Corporation Counsel.

CONSTRUCTION CONDITION:

8. The applicant shall back-fill the granite curb in concrete and minimize that cut into the pavement (the curb should be installed with six inches or less of pavement disturbance).

From Staff camments:

1. We are working with the prospective Site Contractor on making a final site Construction Management Plan. A plan was submitted with the original packet but we did not see comments relating to that plan, but will work with staff following approvals, and during construction to provide a safe zone for working near public ways and pedestrians.
2. We will file for a Maine Construction General Permit as soon as we have confirmation of the approval from the Planning Board.
3. We have revised the site plan to contain the added species of plantings as requested by Jeff Tarling–City Arborist, along the rear of the parking lot and stormwater treatment basin areas
4. **Comments from Lauren Swett:**

I. Some additional clarification on the stormwater calculations is required. The Applicant's General Standard calculation table indicated that there is no existing on-site impervious area; however, based on the existing condition plans and narrative discussions there is existing on-site impervious area.

Also, note that the City's Redevelopment standard requires treatment of 50% of non-roof redeveloped impervious surface. Please verify the treatment is meeting this standard.

Response: *The MDEP General Standard Calculation Table is looking at the proposed condition, and looking at what is remaining on site after construction. All existing impervious area will either be replaced/redeveloped or removed. Therefore, this calculation is showing that of all the impervious area remaining on the site, it is all included in the developed area calculation. This is not saying that there was not any impervious area prior to redevelopment.*

The City's redevelopment standard is triggered when "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 5,000sf 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." While the redevelopment standard is triggered by the addition of more than 5,000 sf of non-roof impervious area – the treatment can be provided for any redeveloped impervious area (non-roof is not specified here).

II. Please provide design calculations for the sizing of the proposed Filterra tree box filter.
Response: *The Filterra tree box filter was sized based on the contributing area as indicated in the manufacturer's details and recommendations. We can provide a copy of these guidelines.*

III. Per Maine DEP standards, and underdrained soil filter should not have greater than 3,000 square feet in area. This is due to the inability to adequately maintain such a large filter area.

Response: *According to the Maine DEP Stormwater Management Design Manual, Chapter 7.1 Grassed Underdrained Soil Filters the requirements under basin size state "The filter area should not exceed 3,000 square feet OR have more than 2.5 acres of sub watershed draining to the structure." The standard does generally state that larger basins are difficult to construct and maintain, it does not say that they are unable. While this basin is slightly over the 3,000-sf surface area, there is much less than 2.3 acres contributing to the treatment area (1.35 acres). Therefore, we meet the basin sizing requirements, because you have to meet one OR the other, not both. The basin was reduced as much as possible to provide treatment with the height restraints on-site. A shallow treatment pond was necessary to meet volume requirements. Had we had more elevation we could have reduced it further.*

IV. Additional clarification is required on the grading along the eastern side of the grassed underdrained soil filter. It is unclear how runoff from the pavement will enter the filter area.

Response: *Additional spot grades will be added for clarification. There is a sediment forebay that the runoff will enter first, and then will spill over into the treatment area.*

V. Please provide additional information on the existing grades along the southwestern corner of the property boundary at the pipeline easement. The HydroCAD model indicates that the peak elevation of stormwater in the underdrained soil filter during the 25-year storm is 70.79. Confirm that drainage will not leave the property during this storm event, either by confirming existing spot grades or grading the property corner to ensure stormwater remains within the site.

Response: *Additional grading and spot grades will be added for clarification to ensure stormwater remains within the site at this location.*

VI. The plans should specify proposed locations and details for catch basin inlet protection measures. Applicant has referred to their erosion control notes and details; however, no detail for a typical inlet protection device has been provided.

Response: *The standard inlet protection detail will be added to be included in the detail sheets.*

VII. The Inspection, Maintenance, and Housekeeping Plan should include provisions for the requirements of Chapter 32 of the City of Portland Code of Ordinances and maintenance requirements associated with the Filterra treatment system that has now been proposed.

Response: *The provisions for the Filterra system will be added to the IM&H plan.*

VIII. A stormwater maintenance agreement with the City of Portland will be required. The Applicant has requested that this be a condition of approval prior to issuance of building permits. We agree with this request.

Response: *The applicant is reviewing the agreement requirements and is working to have it ready for review following approval of the project. Therefore we still wish for it to be a condition of the approval.*

5. We submitted a request for Wastewater Capacity review to the City's Public Services Department and are awaiting response. Upon receipt we will forward to the Planner.
6. We are working with Swaney Lighting for providing an updated photometric plan which we hope to have by the weeks end and prior to the Planning Board meeting. We are hoping that this will be submitted and reviewed prior to the Public Hearing meeting date to remove this as a potential condition.
7. The applicant is reviewing the template language of the Stormwater Maintenance Agreement with the City. Upon approval of the plan, the applicant will submit the document for legal counsel review and execution with the City. We suggest keeping this as a condition.
8. The Granite Curb note for limiting the constriction disturbance in the street section to no more than 6 inches will be included on the grading and utility sheet with the added note as requested.

We are hopeful that this information sufficiently addresses the proposed questions. We are hopeful to eliminate many of the listed condition prior to the new meeting date of February 26th. Please feel free to contact us if you have further questions or require additional information.

SEBAGO TECHNICS, Inc.

James R. Seymour
Sr. Project Manager

Cc: Daniel Lyman-Patagon Storage.

SAH/llg
Enc.

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

Patagon Storage
Portland, Maine

Introduction

The developer responsible for the proposed project is Patagon Storage, LLC. The developer's address is 1700 Main Street, Suite 70 Washaugal, Washington. After construction, the driveway area will be maintained by the developer. The owner of the proposed project will be responsible for the maintenance of all stormwater management structures, and the keeping of records and maintenance logbook. Records of all inspections and maintenance work accomplished must be kept on file and retained for a minimum 5-year time span. The maintenance logbook will be made available to the Maine Department of Environmental Protection (MDEP) upon request. At a minimum, the appropriate and relevant activities for each of the stormwater management systems will be performed on the prescribed schedule.

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in this Inspection, Maintenance, and Housekeeping Plan are provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional details on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the MDEP.

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven (7) calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three (3) years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

   A. <u>Sediment Barriers:</u>

   - Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
   - If the fabric on the silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
   - Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
   - Filter berms shall be reshaped as needed.
   - Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

   B. <u>Riprap Materials:</u>

   - Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.

- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.

- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

D. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.

- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.

- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.

- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

E. Level Lip Spreaders and Ditch Turnouts:

- The level spreader pool should be inspected after rainfall events for sediment accumulation and debris that may reduce its capacity. Sediment and debris buildup should be removed once the volume of the pool has been reduced by 25%.

- The level lip must be constructed so that runoff flows slowly over the lip to a sheet flow through the receiving buffer. Repair or reconstruction of the level lip is required when flow from the spreader becomes channelized.

- Do not store snow removed from the street and/or parking lot within the area of a level spreader.

F. Stabilized Temporary Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.

- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.

- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill Prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater Protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive Sediment and Dust: Actions must be taken to insure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and Other Materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench Dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

After Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection, maintenance, and housekeeping procedures outlined in this section. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in all applicable permits, shall conduct the inspections.

2. **Specific Inspection, Maintenance, and Housekeeping Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.

   A. Vegetated Areas:

   - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.

   - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

   B. Ditches, Swales, and Other Open Channels:

   - Inspect ditches, swales and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow, and repair any erosion of the ditch lining.

   - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.

   - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.

   - If the ditch has a riprap lining, replace riprap in areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged.

   C. Culverts:

   - Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.

- Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.

- Inspect and repair any erosion damage at the culvert's inlet and outlet.

D. Catch Basins/Outlet Control Structures:

- Inspect and, if required, clean-out basins at least once a year, preferably in early spring.

- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

E. Level Lip Spreaders, Rip-Rap Outfalls and Ditch Turnouts:

- The level spreader pool should be inspected after significant rainfall events for sediment accumulation and debris that may reduce its capacity. Sediment and debris buildup should be removed once the volume of the pool has been reduced by 25%.

- The level lip must be constructed so that runoff flows slowly over the lip to a sheet flow through the receiving buffer. Repair or reconstruction of the level lip is required when flow from the spreader becomes channelized.

- Do not store snow removed from the street and/or parking lot within the area of a level spreader.

F. Winter Sanding

- Clear accumulation of winter sand along roadways at least once a year, preferably in the spring.

- Accumulations on pavement may be removed by pavement sweeping.

- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

G. Underdrained Soil Filter:

- The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 24 hours.
- The top several inches of the filter shall be replaced with fresh material

when water ponds on the surface of the bed for more than 72 hours.

- Sediment and plant debris should be removed from the pretreatment structure (sediment forebay) at least annually.
- The filter bed vegetations shall be mowed once or twice per year to a grass height no less than six (6) inches.
- Fertilization of the under drained filter area should be avoided unless absolutely necessary to establish vegetation.
- Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary.
- Inspect embankment for erosion, settling, and structural failure

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained. 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 controls. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to the appropriate regulatory agency upon request. A sample "Stormwater Inspection and Maintenance Form" has been included as Attachment 1 of this Inspection, Maintenance, and Housekeeping Plan.

4. **Recertification:** A certification of the following shall be submitted to the Maine Department of Environmental Protection (MDEP) within three months of the expiration of each five year interval from the date of issuance of MDEP permits.

   A. Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

   B. Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.

   C. The Inspection, Maintenance, and Housekeeping Plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the MDEP, and the maintenance log is being maintained.

5. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a

component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Form

MAINTENANCE LOG

Patagon Storage
Portland, Maine
Attachment 1

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for Patagon Storage. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the MDEP. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Vegetated Areas	Inspect Slopes			
	Replant Bare Areas			
	Check after Major Storms			
Ditches and Swales	Inspect after major rainfall event producing greater than 3" of rain in 2 hours.			
	Repair erosion or damage immediately.			
Culverts	Inspect culverts monthly or after rainfall of >1"			
	Clean culverts when sediment occupies more than 20% of pipe diameter			
	Repair any erosion at inlet and outlet pipes			
	Replace displaced riprap at least once a year			
	Remove vegetation growing through riprap at least once a year			
Catch Basins/ Outlet Control Structures	Inspect and cleanout basins at least annually, (Spring)			
Level Spreader, Rip-Rap Outfalls and Ditch Turnouts	Inspect after significant rainfall events for sediment accumulation			
	If volume of pool is reduced by 25%, must remove sediment and debris			
Level Spreader and Ditch Turnouts	Repair or reconstruct the riprap if flow from the spreader becomes channelized			

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
	No snow storage is allowed in the level lip spreader			
Winter Sanding	Clean annually (Spring)			
	Remove sand and sediment from roadway shoulders			
Underdrained Detention Basin	Inspect inlet and outlet for blockage and debris			
	Inspect for erosion, destabilization or side slopes and other structural failure			
	Mowed			
	Inspect periodically during wet weather conditions			
	Check for sediment build up			
	Ensure proper function			

PATAGON STORAGE

150 RIVERSIDE STREET
PORTLAND, MAINE

APPLICANT:

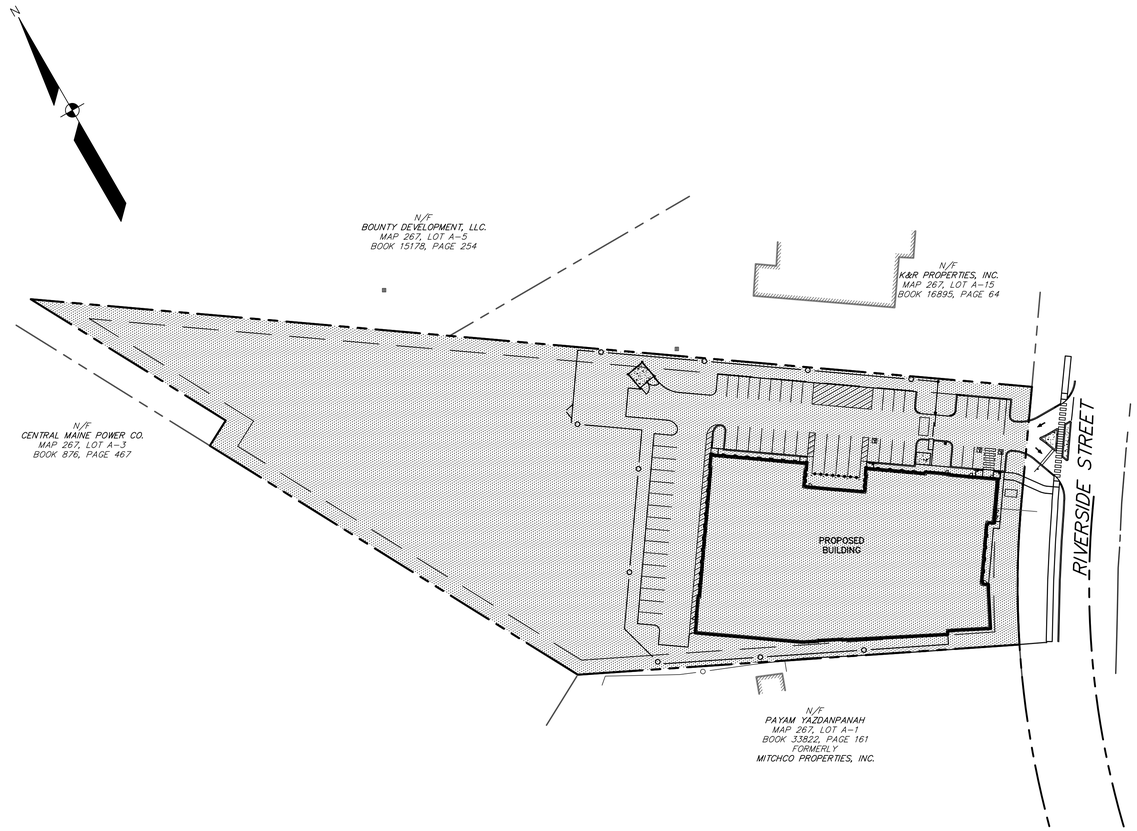
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

ENGINEER/SURVEYOR/
LANDSCAPE ARCHITECT:

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

ARCHITECT:

di'velapt
454 N 600 W, SLC, UT 84116
e: howdy@divelept.com
p: 801-680-4485
w: www.divelept.com



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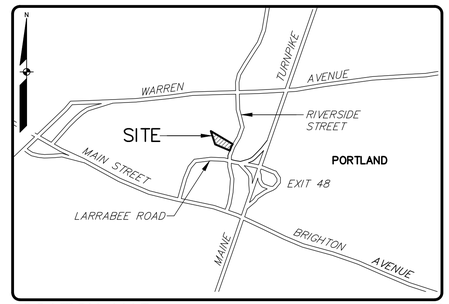

LOCATION MAP NTS

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS SURVEY
3	DEMOLITION PLAN
4	SITE PLAN
5	GRADING AND UTILITY PLAN
6	LANDSCAPE PLAN
7	EROSION CONTROL NOTES
8	DETAILS
9	DETAILS

REVISED THROUGH 01-30-19

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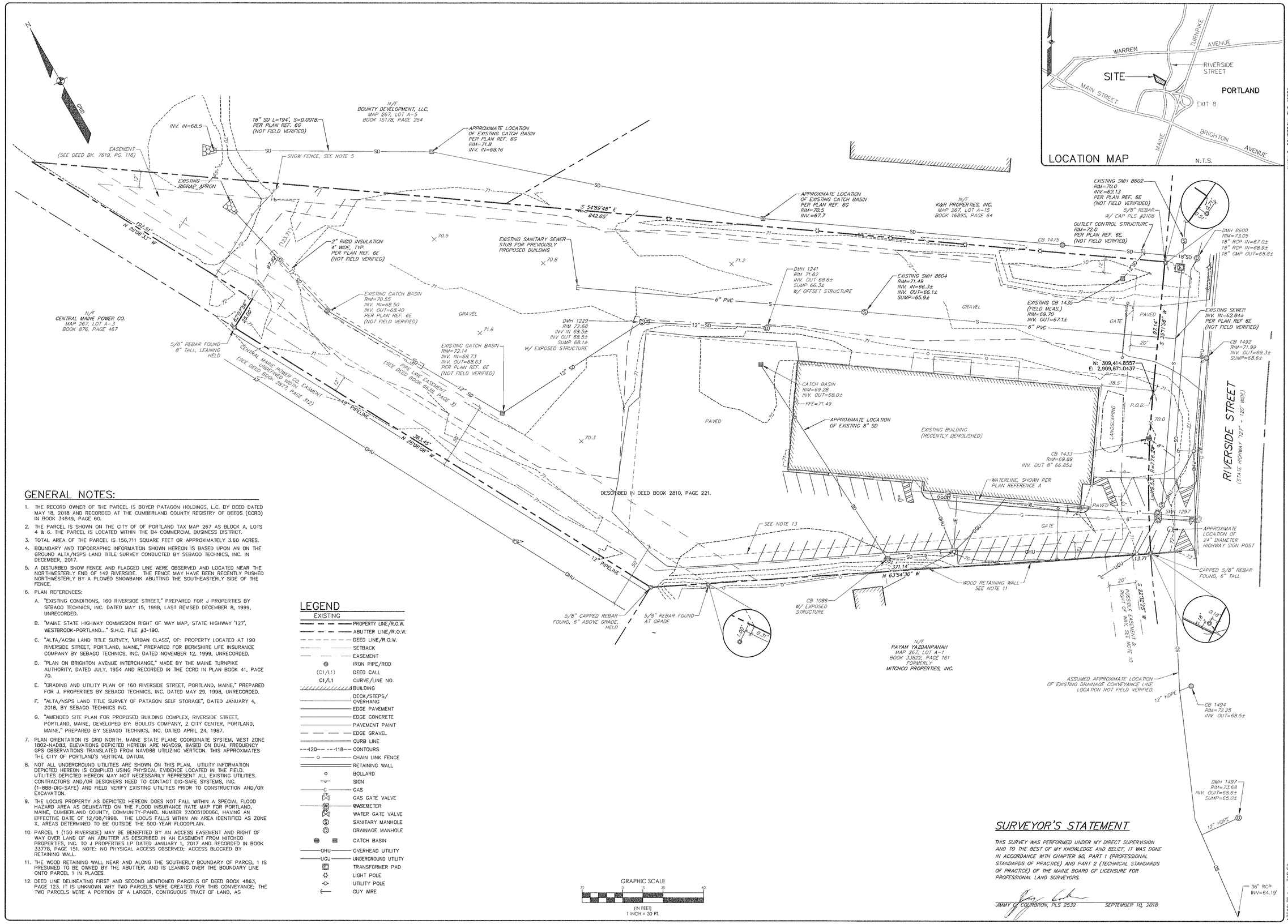


GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS BOYER PATAGON HOLDINGS, L.C. BY DEED DATED MAY 18, 2018 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34849, PAGE 60.
2. THE PARCEL IS SHOWN ON THE CITY OF OF PORTLAND TAX MAP 267 AS BLOCK A, LOTS 4 & 6. THE PARCEL IS LOCATED WITHIN THE B4 COMMERCIAL BUSINESS DISTRICT.
3. TOTAL AREA OF THE PARCEL IS 156,711 SQUARE FEET OR APPROXIMATELY 3.60 ACRES.
4. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND ALTA/NSPS LAND TITLE SURVEY CONDUCTED BY SEBAGO TECHNICS, INC. IN DECEMBER, 2017.
5. A DISTURBED SNOW FENCE AND FLAGGED LINE WERE OBSERVED AND LOCATED NEAR THE NORTHWESTERLY END OF 142 RIVERSIDE. THE FENCE MAY HAVE BEEN RECENTLY PUSHED NORTHWESTERLY BY A PLOWED SNOWBANK ABUTTING THE SOUTHEASTERLY SIDE OF THE FENCE.
6. PLAN REFERENCES:
   - A. "EXISTING CONDITIONS, 160 RIVERSIDE STREET," PREPARED FOR J PROPERTIES BY SEBAGO TECHNICS, INC. DATED MAY 15, 1998, LAST REVISED DECEMBER 8, 1999, UNRECORDED.
   - B. "MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY '127', WESTBROOK-PORTLAND..." S.H.C. FILE #3-190.
   - C. "ALTA/ACSM LAND TITLE SURVEY, 'URBAN CLASS', OF: PROPERTY LOCATED AT 190 RIVERSIDE STREET, PORTLAND, MAINE," PREPARED FOR BERKSHIRE LIFE INSURANCE COMPANY BY SEBAGO TECHNICS, INC. DATED NOVEMBER 12, 1999, UNRECORDED.
   - D. "PLAN ON BRIGHTON AVENUE INTERCHANGE," MADE BY THE MAINE TURNPIKE AUTHORITY, DATED JULY, 1954 AND RECORDED IN THE CCRD IN PLAN BOOK 41, PAGE 70.
   - E. "GRADING AND UTILITY PLAN OF 160 RIVERSIDE STREET, PORTLAND, MAINE," PREPARED FOR J. PROPERTIES BY SEBAGO TECHNICS, INC. DATED MAY 29, 1998, UNRECORDED.
   - F. "ALTA/NSPS LAND TITLE SURVEY OF PATAGON SELF STORAGE", DATED JANUARY 4, 2018, BY SEBAGO TECHNICS INC.
   - G. "AMENDED SITE PLAN FOR PROPOSED BUILDING COMPLEX, RIVERSIDE STREET, PORTLAND, MAINE, DEVELOPED BY: BOULOS COMPANY, 2 CITY CENTER, PORTLAND, MAINE," PREPARED BY SEBAGO TECHNICS, INC. DATED APRIL 24, 1987.
7. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29, BASED ON DUAL FREQUENCY GPS OBSERVATIONS TRANSLATED FROM NAVD88 UTILIZING VERTCON. THIS APPROXIMATES THE CITY OF PORTLAND'S VERTICAL DATUM.
8. NOT ALL UNDERGROUND UTILITIES ARE SHOWN ON THIS PLAN. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
9. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 2300510006C, HAVING AN EFFECTIVE DATE OF 12/08/1998. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.
10. PARCEL 1 (150 RIVERSIDE) MAY BE BENEFITED BY AN ACCESS EASEMENT AND RIGHT OF WAY OVER LAND OF AN ABUTTER AS DESCRIBED IN AN EASEMENT FROM MITCHCO PROPERTIES, INC. TO J PROPERTIES LP DATED JANUARY 1, 2017 AND RECORDED IN BOOK 33778, PAGE 151. NOTE: NO PHYSICAL ACCESS OBSERVED; ACCESS BLOCKED BY RETAINING WALL.
11. THE WOOD RETAINING WALL NEAR AND ALONG THE SOUTHERLY BOUNDARY OF PARCEL 1 IS PRESUMED TO BE OWNED BY THE ABUTTER, AND IS LEANING OVER THE BOUNDARY LINE ONTO PARCEL 1 IN PLACES.
12. DEED LINE DELINEATING FIRST AND SECOND MENTIONED PARCELS OF DEED BOOK 4863, PAGE 123, IT IS UNKNOWN WHY TWO PARCELS WERE CREATED FOR THIS CONVEYANCE; THE TWO PARCELS WERE A PORTION OF A LARGER, CONTIGUOUS TRACT OF LAND, AS

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- DEED LINE/R.O.W.
- SETBACK
- EASEMENT
- IRON PIPE/ROD
- (C1/L1) DEED CALL
- C1/L1 CURVE/LINE NO.
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- --120-- --118-- CONTOURS
- CHAIN LINK FENCE
- RETAINING WALL
- BOLLARD
- SIGN
- GAS
- GAS GATE VALVE
- WATER METER
- WATER GATE VALVE
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- TRANSFORMER PAD
- LIGHT POLE
- UTILITY POLE
- GUY WIRE

GRAPHIC SCALE

20 0 15 30 40

(IN FEET)
1 INCH = 30 FT.

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

JIMMY C. COURBRON, PLS 2532 SEPTEMBER 10, 2018

JIMMY C. COURBRON, PLS #2532

STATE OF MAINE — JIMMY C. COURBRON — 2532 — REGISTERED PROFESSIONAL LAND SURVEYOR

REV:	BY:	DATE:	STATUS:
B	JCC	1/22/19	REVISED TO ADD STRUCTURE DATA/ REVISED VERTICAL DATUM
A	JCC	9/10/18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

DRAWN: JCC — CHECKED: MWE

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

EXISTING CONDITIONS SURVEY
OF:
PATAGON STORAGE
150 RIVERSIDE ST
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 70
WASHAUGAL, WASHINGTON

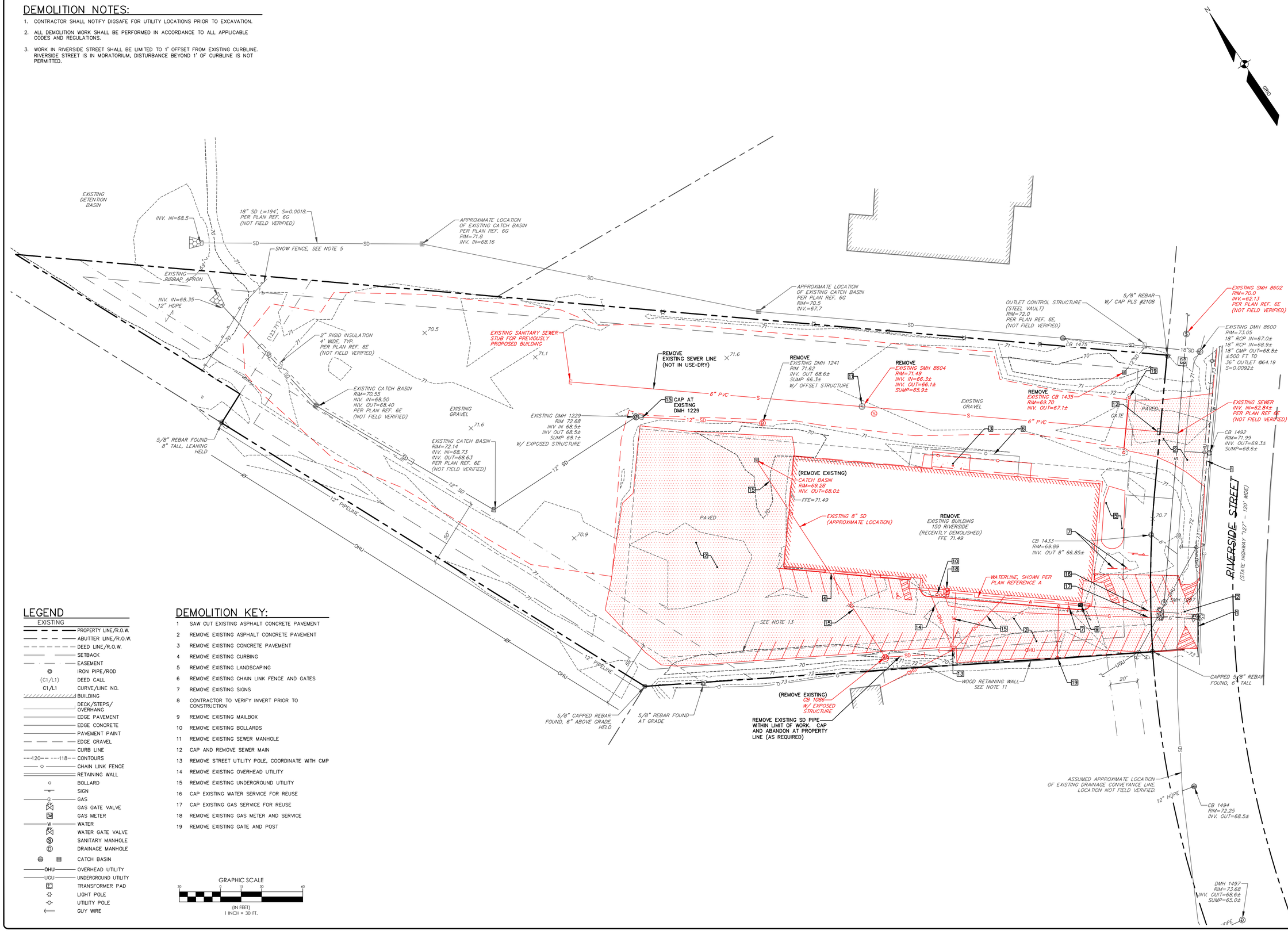
PROJECT NO.	SCALE
17500	1" = 30'

SHEET 2 OF 9

17500_TS.dwg, TAB:EC

DEMOLITION NOTES:

1. CONTRACTOR SHALL NOTIFY DIGSAFE FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE TO ALL APPLICABLE CODES AND REGULATIONS.
3. WORK IN RIVERSIDE STREET SHALL BE LIMITED TO 1' OFFSET FROM EXISTING CURBLINE. RIVERSIDE STREET IS IN MORATORIUM, DISTURBANCE BEYOND 1' OF CURBLINE IS NOT PERMITTED.



LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- DEED LINE/R.O.W.
- SETBACK
- EASEMENT
- IRON PIPE/ROD
- (C1/L1) DEED CALL
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- CHAIN LINK FENCE
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- SIGN
- G GAS
- GAS GATE VALVE
- GM GAS METER
- W WATER
- WATER GATE VALVE
- S SANITARY MANHOLE
- D DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- TRANSFORMER PAD
- LIGHT POLE
- UTILITY POLE
- GUY WIRE

DEMOLITION KEY:

1. SAW CUT EXISTING ASPHALT CONCRETE PAVEMENT
2. REMOVE EXISTING ASPHALT CONCRETE PAVEMENT
3. REMOVE EXISTING CONCRETE PAVEMENT
4. REMOVE EXISTING CURBING
5. REMOVE EXISTING LANDSCAPING
6. REMOVE EXISTING CHAIN LINK FENCE AND GATES
7. REMOVE EXISTING SIGNS
8. CONTRACTOR TO VERIFY INVERT PRIOR TO CONSTRUCTION
9. REMOVE EXISTING MAILBOX
10. REMOVE EXISTING BOLLARDS
11. REMOVE EXISTING SEWER MANHOLE
12. CAP AND REMOVE SEWER MAIN
13. REMOVE STREET UTILITY POLE, COORDINATE WITH CMP
14. REMOVE EXISTING OVERHEAD UTILITY
15. REMOVE EXISTING UNDERGROUND UTILITY
16. CAP EXISTING WATER SERVICE FOR REUSE
17. CAP EXISTING GAS SERVICE FOR REUSE
18. REMOVE EXISTING GAS METER AND SERVICE
19. REMOVE EXISTING GATE AND POST

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 INCH = 30 FT.

JAMES R. SEYMOUR PE 9984

STATE OF MAINE — JAMES R. SEYMOUR No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 1-23-19

DESIGNED	CHECKED
JRS	JRS

REV.	BY:	DATE:	STATUS:
B	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

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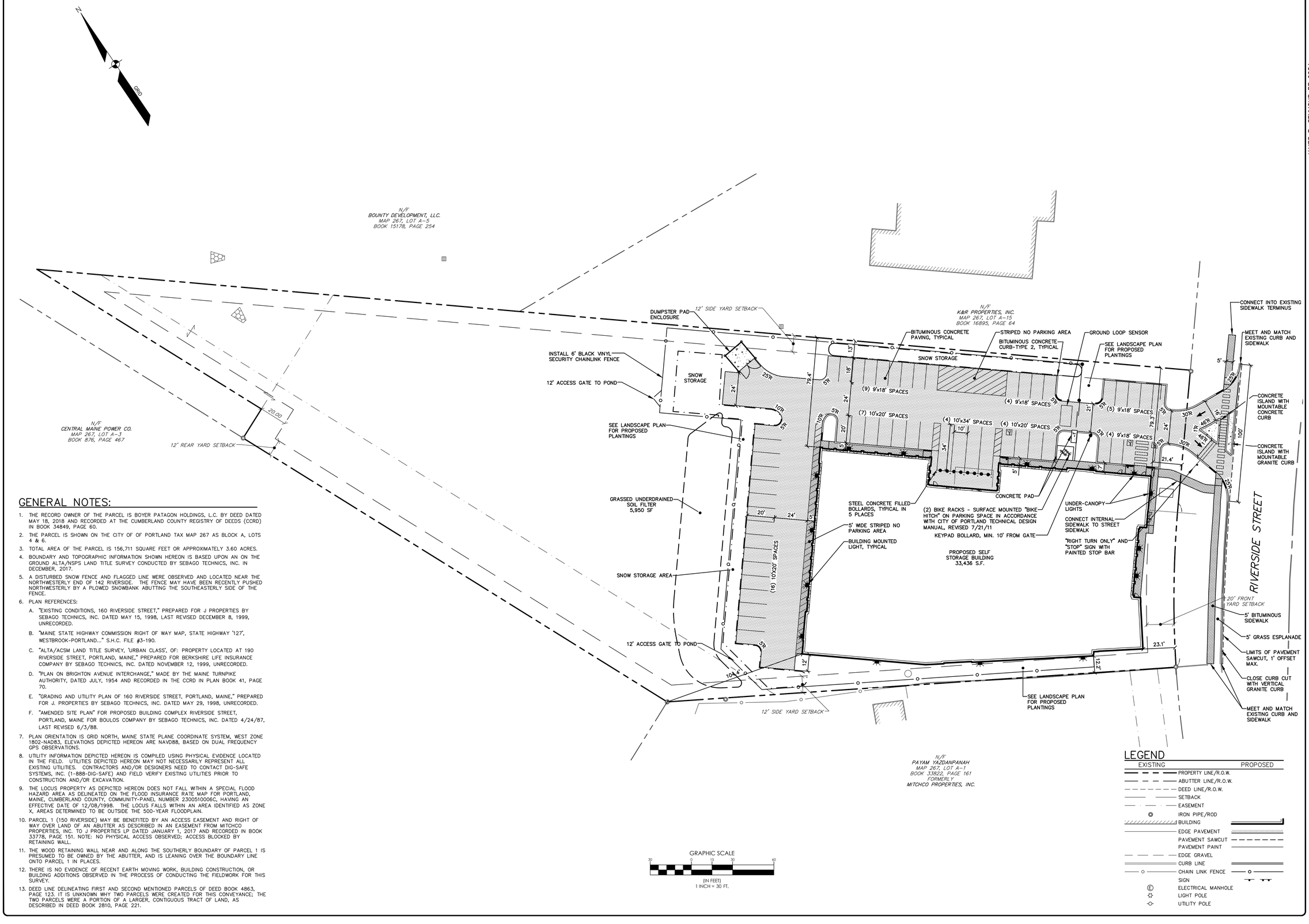
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DEMOLITION PLAN
OF:
PATAGON STORAGE
150 RIVERSIDE STREET
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	1" = 30'

SHEET 3 OF 9

17500DEMO.dwg, TAB:DEMO



GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS BOYER PATAGON HOLDINGS, L.C. BY DEED DATED MAY 18, 2018 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34849, PAGE 60.
2. THE PARCEL IS SHOWN ON THE CITY OF OF PORTLAND TAX MAP 267 AS BLOCK A, LOTS 4 & 6.
3. TOTAL AREA OF THE PARCEL IS 156,711 SQUARE FEET OR APPROXIMATELY 3.60 ACRES.
4. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND ALTA/NSPS LAND TITLE SURVEY CONDUCTED BY SEBAGO TECHNICS, INC. IN DECEMBER, 2017.
5. A DISTURBED SNOW FENCE AND FLAGGED LINE WERE OBSERVED AND LOCATED NEAR THE NORTHWESTERLY END OF 142 RIVERSIDE. THE FENCE MAY HAVE BEEN RECENTLY PUSHED NORTHWESTERLY BY A PLOWED SNOWBANK ABUTTING THE SOUTHEASTERLY SIDE OF THE FENCE.
6. PLAN REFERENCES:
   A. "EXISTING CONDITIONS, 160 RIVERSIDE STREET," PREPARED FOR J PROPERTIES BY SEBAGO TECHNICS, INC. DATED MAY 15, 1998, LAST REVISED DECEMBER 8, 1999, UNRECORDED.
   B. "MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY '127', WESTBROOK-PORTLAND..." S.H.C. FILE #3-190.
   C. "ALTA/ACSM LAND TITLE SURVEY, 'URBAN CLASS', OF: PROPERTY LOCATED AT 190 RIVERSIDE STREET, PORTLAND, MAINE," PREPARED FOR BERKSHIRE LIFE INSURANCE COMPANY BY SEBAGO TECHNICS, INC. DATED NOVEMBER 12, 1999, UNRECORDED.
   D. "PLAN ON BRIGHTON AVENUE INTERCHANGE," MADE BY THE MAINE TURNPIKE AUTHORITY, DATED JULY, 1954 AND RECORDED IN THE CCRD IN PLAN BOOK 41, PAGE 70.
   E. "GRADING AND UTILITY PLAN OF 160 RIVERSIDE STREET, PORTLAND, MAINE," PREPARED FOR J. PROPERTIES BY SEBAGO TECHNICS, INC. DATED MAY 29, 1998, UNRECORDED.
   F. "AMENDED SITE PLAN" FOR PROPOSED BUILDING COMPLEX RIVERSIDE STREET, PORTLAND, MAINE FOR BOULOS COMPANY BY SEBAGO TECHNICS, INC. DATED 4/24/87, LAST REVISED 6/3/88.
7. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NAVD88, BASED ON DUAL FREQUENCY GPS OBSERVATIONS.
8. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
9. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 2300510006C, HAVING AN EFFECTIVE DATE OF 12/08/1998. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.
10. PARCEL 1 (150 RIVERSIDE) MAY BE BENEFITED BY AN ACCESS EASEMENT AND RIGHT OF WAY OVER LAND OF AN ABUTTER AS DESCRIBED IN AN EASEMENT FROM MITCHCO PROPERTIES, INC. TO J PROPERTIES LP DATED JANUARY 1, 2017 AND RECORDED IN BOOK 33778, PAGE 151. NOTE: NO PHYSICAL ACCESS OBSERVED; ACCESS BLOCKED BY RETAINING WALL.
11. THE WOOD RETAINING WALL NEAR AND ALONG THE SOUTHERLY BOUNDARY OF PARCEL 1 IS PRESUMED TO BE OWNED BY THE ABUTTER, AND IS LEANING OVER THE BOUNDARY LINE ONTO PARCEL 1 IN PLACES.
12. THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK FOR THIS SURVEY.
13. DEED LINE DELINEATING FIRST AND SECOND MENTIONED PARCELS OF DEED BOOK 4863, PAGE 123, IT IS UNKNOWN WHY TWO PARCELS WERE CREATED FOR THIS CONVEYANCE; THE TWO PARCELS WERE A PORTION OF A LARGER, CONTIGUOUS TRACT OF LAND, AS DESCRIBED IN DEED BOOK 2810, PAGE 221.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	SETBACK	
	EASEMENT	
⊙	IRON PIPE/ROD	
	BUILDING	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	CHAIN LINK FENCE	
	SIGN	
Ⓔ	ELECTRICAL MANHOLE	
☼	LIGHT POLE	
⊸	UTILITY POLE	

JAMES R. SEYMOUR PE 9984

STATE OF MAINE — JAMES R. SEYMOUR No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 1-23-19

DESIGNED	CHECKED
JRS	JRS

REV.	BY:	DATE:	STATUS
B	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

ANY REPRODUCTIONS OF THESE PLANS AND/OR SPECIFICATIONS WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS PLANS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF SEBAGO TECHNICS, INC. AUTHORIZED ALTERATIONS, IF ANY, TO THESE PLANS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

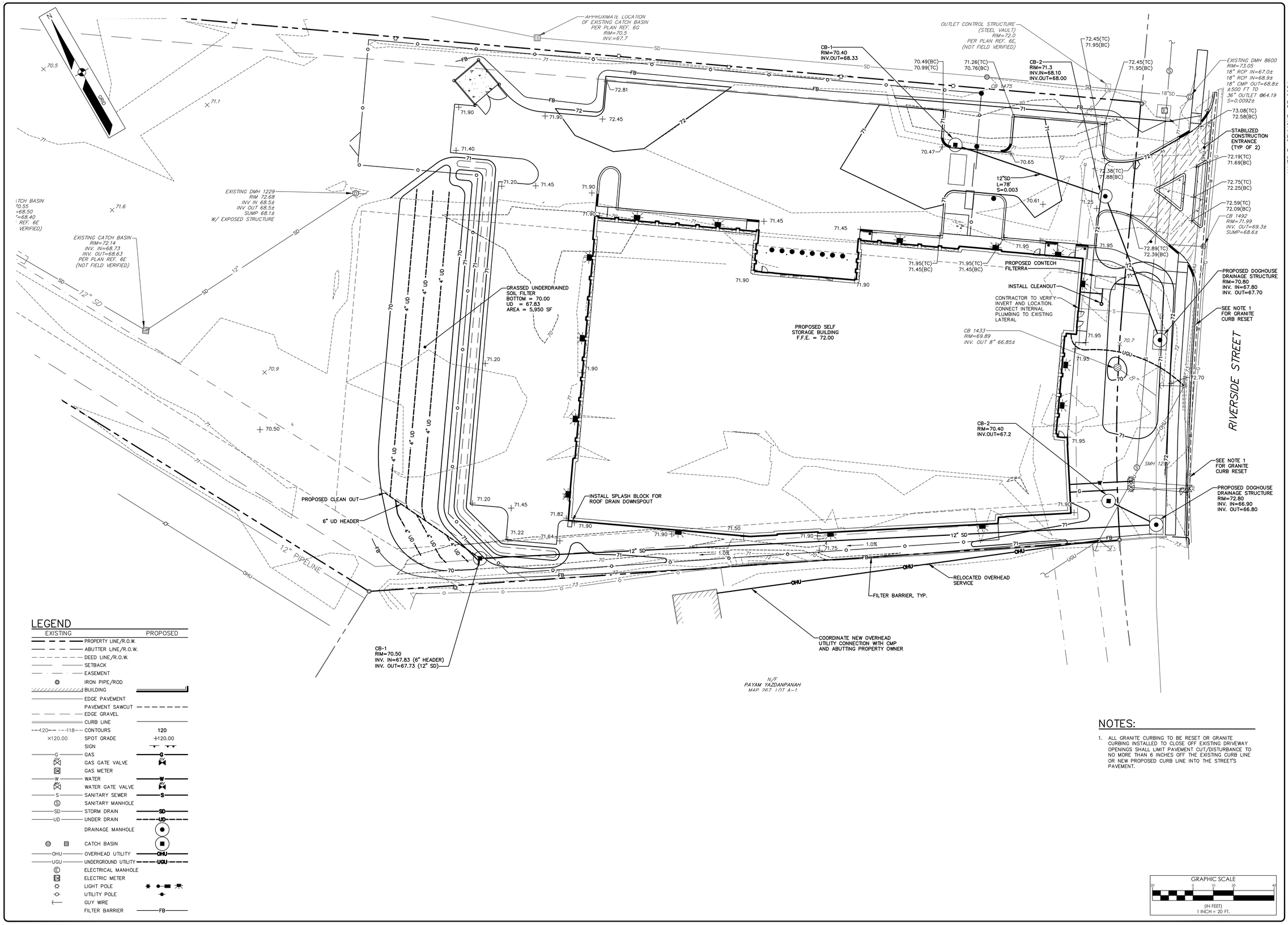
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

SITE PLAN
OF:
PATAGON STORAGE
150 RIVERSIDE STREET
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	1" = 30'

SHEET 4 OF 9

17500S.dwg, TAB: S



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	SETBACK	
	EASEMENT	
	IRON PIPE/ROD	
	BUILDING	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE GRAVEL	
	CURB LINE	
120	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	SIGN	
G	GAS	G
	GAS GATE VALVE	
GM	GAS METER	
W	WATER	W
	WATER GATE VALVE	
S	SANITARY SEWER	S
	SANITARY MANHOLE	
SD	STORM DRAIN	SD
UD	UNDER DRAIN	UD
	DRAINAGE MANHOLE	
	CATCH BASIN	
OHU	OVERHEAD UTILITY	OHU
UGU	UNDERGROUND UTILITY	UGU
	ELECTRICAL MANHOLE	
EM	ELECTRIC METER	
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	FILTER BARRIER	FB

NOTES:

1. ALL GRANITE CURBING TO BE RESET OR GRANITE CURBING INSTALLED TO CLOSE OFF EXISTING DRIVEWAY OPENINGS SHALL LIMIT PAVEMENT CUT/DISTURBANCE TO NO MORE THAN 6 INCHES OFF THE EXISTING CURB LINE OR NEW PROPOSED CURB LINE INTO THE STREET'S PAVEMENT.

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

JAMES R. SEYMOUR, PE 9984

STATE OF MAINE — JAMES R. SEYMOUR No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 1-23-19

DESIGNED	CHECKED
JRS	JRS

REV.:	BY:	DATE:	STATUS:
B	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

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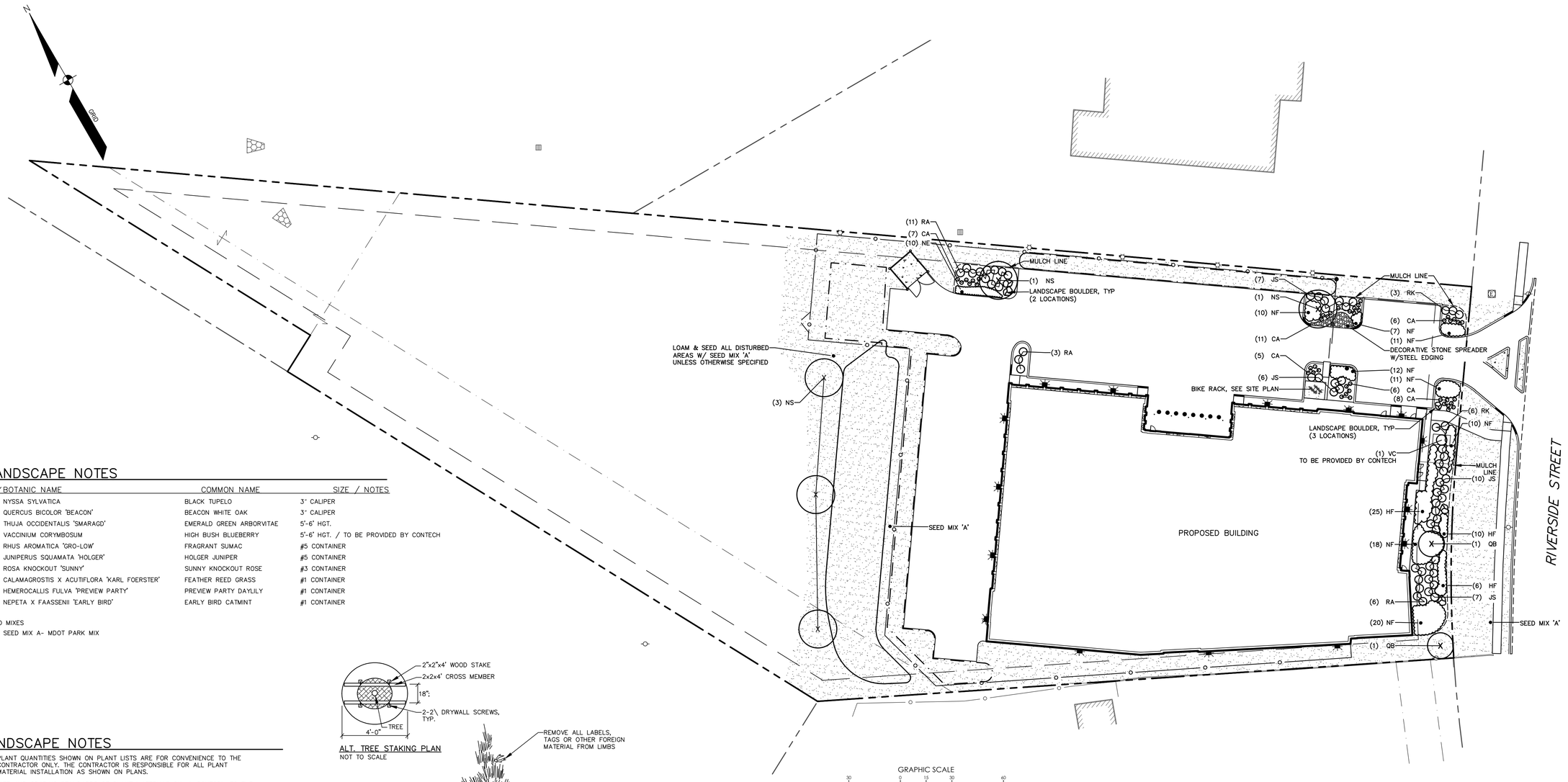
GRADING AND UTILITY PLAN
OF:
PATAGON STORAGE
150 RIVERSIDE STREET
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	1" = 20'

SHEET 5 OF 9

17500GU.dwg, TAB:GU



GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 INCH = 30 FT.

LANDSCAPE NOTES

KEY	BOTANIC NAME	COMMON NAME	SIZE / NOTES
NS	NYSSA SYLVATICA	BLACK TUPELO	3" CALIPER
QB	QUERCUS BICOLOR 'BEACON'	BEACON WHITE OAK	3" CALIPER
TO	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	5'-6" HGT.
VC	VACCINIUM CORYMBOSUM	HIGH BUSH BLUEBERRY	5'-6" HGT. / TO BE PROVIDED BY CONTECH
RA	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	#5 CONTAINER
JS	JUNIPERUS SQUAMATA 'HOLGER'	HOLGER JUNIPER	#5 CONTAINER
RK	ROSA KNOCKOUT 'SUNNY'	SUNNY KNOCKOUT ROSE	#3 CONTAINER
CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	#1 CONTAINER
HF	HEMEROCALLIS FULVA 'PREVIEW PARTY'	PREVIEW PARTY DAYLILY	#1 CONTAINER
NF	NEPETA X FAASSENII 'EARLY BIRD'	EARLY BIRD CATMINT	#1 CONTAINER

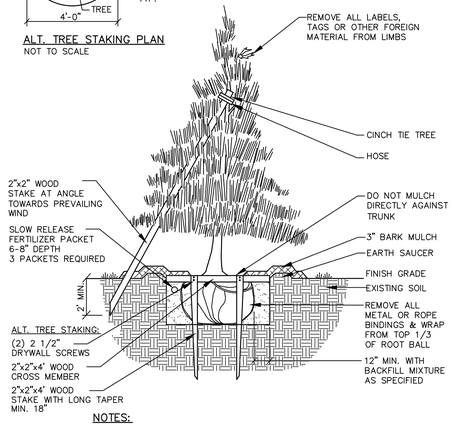
SEED MIXES

SEED MIX A- MDOT PARK MIX

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. 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 BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE 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 THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 4" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
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 PERENNIAL AND ANNUAL FLOWER 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.

ALT. TREE STAKING PLAN
NOT TO SCALE

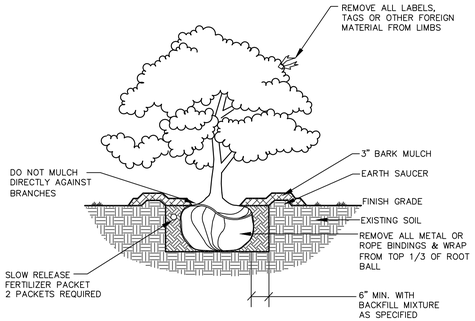


NOTES:

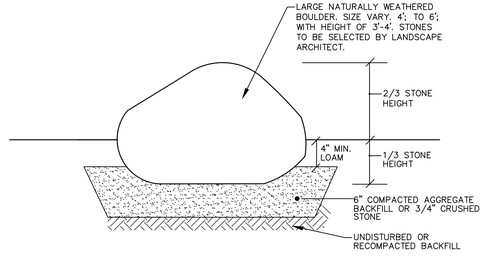
INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:

1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

DECIDUOUS TREES
EVERGREEN TREES
NOT TO SCALE



DECIDUOUS & EVERGREEN SHRUB
NOT TO SCALE



BOULDER INSTALLATION
NOT TO SCALE

LEGEND

EXISTING	PROPOSED
	PROPERTY LINE/R.O.W.
	ABUTTER LINE/R.O.W.
	DEED LINE/R.O.W.
	SETBACK
	EASEMENT
	BUILDING
	EDGE PAVEMENT
	PAVEMENT SAWCUT
	PAVEMENT PAINT
	EDGE GRAVEL
	CURB LINE
	CHAIN LINK FENCE
	DECIDUOUS TREE
	CONIFEROUS TREE
	MULCH LINE
	SIGN
E	ELECTRICAL MANHOLE
	UTILITY POLE

STEPHEN G. DOE, RLA 131

REGISTERED LANDSCAPE ARCHITECT STATE OF MAINE STEPHEN G. DOE 131 1-23-19

DESIGNED	CHECKED
DMD	SGD

REV.	BY	DATE:	STATUS
C	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
B	DMD	11-30-18	RESUBMIT TO CITY PER REVIEW COMMENTS
A	DMD	09-18-18	LEVEL III SITE PLAN SUBMISSION OT THE CITY

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LANDSCAPE PLAN
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FOR:
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1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	1" = 30'

SHEET 6 OF 9

17500LD.dwg, TAB:1

EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS (SILT FENCE) WILL BE STAKED/INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THIS EROSION CONTROL PLAN AND DETAILS IN THIS PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED AT THE INTERSECTION OF THE PROPOSED ENTRANCES AND EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD. OPEN AREAS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL AS SHOWN ON THE DESIGN PLANS AND AS DESCRIBED WITHIN THIS EROSION CONTROL PLAN WITHIN 7 DAYS OF DISTURBANCE. AREAS LOCATED WITHIN 100' OF STREAMS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL WITHIN SEVEN (7) DAYS. REFER TO WINTER EROSION CONTROL NOTES FOR THE TREATMENT OF OPEN AREAS AFTER OCTOBER 1ST OF THE CONSTRUCTION YEAR. NO MORE THAN ONE (1) ACRE SHOULD BE ACTIVELY WORKED ON AT ONE TIME, AND NO LARGER AREA SHOULD BE DISTURBED THAN CAN BE MULCHED IN ONE (1) DAY.

THE CONTRACTOR MUST 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.

EROSION CONTROL APPLICATIONS & MEASURES
THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET.

1. TEMPORARY MULCHING:

ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 14 DAYS SHALL BE MULCHED. DISTURBED AREAS ADJACENT TO NATURAL RESOURCES THAT ARE NOT GRADED WITHIN SEVEN (7) DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 33%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
TYPES OF MULCH:

HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).

EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.

EROSION CONTROL BLANKET: SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BLANKETS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SOIL STOCKPILES:

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE) OR WITH A SOIL FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADIENT OF STOCKPILES, AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO THE STOCKPILE.

3. NATURAL RESOURCES PROTECTION:

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 90% MATURE VEGETATION CATCH, SHALL BE MULCHED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1. OF THIS SECTION) WITHIN 7 DAYS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4. OF THIS SECTION) 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.

4. SEDIMENT BARRIERS:

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

HAY BALES: SHALL NOT BE INSTALLED ADJACENT TO WETLAND. INSTALL PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

EROSION CONTROL MIX: SHALL NOT BE USED ADJACENT TO WETLANDS. INSTALL PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER. EROSION CONTROL MIX BERMS SHALL NOT BE USED AT THE TOP OF STEEP SLOPES (>8%) OR SLOPES WITH FLOWING WATER.

CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

5. TEMPORARY CHECK DAMS:

SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALE ARE ESTABLISHED WITH AT LEAST 90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.

STONE CHECK DAMS: STONE DAMS SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS: BALES SHALL BE WIRE-BOUND OR STRING-TIED. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. HAY BALES SHALL BE PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

6. STORMDRAIN INLET PROTECTION:

INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLET OR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER FROM THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. STABILIZED CONSTRUCTION ENTRANCE/EXIT:

PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT OR WASHED TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

8. DUST CONTROL:

DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE. IF OFFSITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NOT LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS.

9. TEMPORARY VEGETATION:

TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

10. PERMANENT VEGETATION:

REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

SEEDBED PREPARATION:

A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)	18.4 LBS./1,000 S.F.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS./1,000 S.F.

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

APPLICATION OF SEED:

A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (MDEP SEED MIX 2 IS DISPLAYED)

SEED TYPE	APPLICATION RATE
CREEPING RED FESCUE	0.46 LBS/1,000 S.F. (20 LBS/ACRE)
REDTOP	0.05 LBS/1,000 S.F. (2 LBS/ACRE)
TALL FESCUE	0.46 LBS/1,000 S.F. (20 LBS/ACRE)
TOTAL:	0.97 LBS/1,000 S.F. (42 LBS/ACRE)

NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER.

B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

SODDING:
FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.
B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 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 WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
C. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 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 WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.
B. STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, AND AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS NO LATER THAN THE END OF THE NEXT WORKDAY, TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN WITHIN SEVEN (7) DAYS.

2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSE KEEPING:

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED, OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL. BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTES AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
A. DISCHARGES FROM FIREFIGHTING ACTIVITY;
B. FIRE HYDRANT FLUSHINGS;
C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
D. DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
E. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
F. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD B

CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.

4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.

7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.

8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.

11. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.

12. INSTALL UNDERGROUND UTILITY SERVICES IN SCHEDULE 40 PVC CONDUIT AT LOCATIONS WITHIN PAVED, GRAVEL, OR TRAFFIC AREAS.

13. ALL SEWER PIPE TO BE PVC SDR 35. ALL OTHER REQUIRED DRAINAGE PIPE SHALL BE CORRUGATED METAL PIPE OR REINFORCED CONCRETE PIPE.

14. PRIOR TO ANY CONSTRUCTION AT THE SITE, REPRESENTATIVES OF THE OWNER, SITE CONTRACTOR AND THE SITE DESIGN ENGINEER SHALL ARRANGE FOR AND MEET WITH THE DIRECTOR OF PUBLIC WORKS AND CITY ENGINEER TO DISCUSS THE SCHEDULING OF THE SITE CONSTRUCTION. ON OR BEFORE THAT MEETING, THE CONTRACTOR WILL PREPARE A DETAILED SCHEDULE AND MARKED-UP SITE PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK IS DISTURBED AREAS ARE NOT TO BE FINISHED (LOAMED, SEEDED AND MULCHED) WITHIN FOURTEEN (14) DAYS, THE SCHEDULE SHALL INDICATE THOSE AREAS TO BE PROTECTED WITH TEMPORARY SEEDING/MULCH.

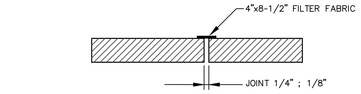
15. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL CONFIRM SETBACKS AND BUILDING DIMENSIONS WITH ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER OF ANY DIFFERENCES AFFECTING BUILDING OR SITE CONSTRUCTION.

16. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557 (MODIFIED), AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).

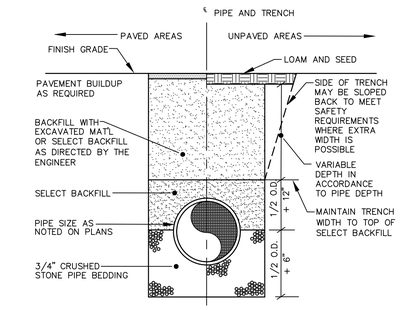
17. REMOVE TOPSOIL AND ROUGHEN SUBGRADE TO ESTABLISH SUITABLE INTERFACE FOR ALL FILLS.

18. FILL AREAS UNDER PAVEMENT SHALL BE GRANULAR BORROW. ALL OTHER FILL AREAS SHALL BE A COMMON BORROW MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL PERISHABLE RUBBLE, PEAT, ORGANIC, ROCKS LARGER THAN 12" IN DIAMETER VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL IF THE ENGINEER GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH M.D.O.T. SPECIFICATIONS.

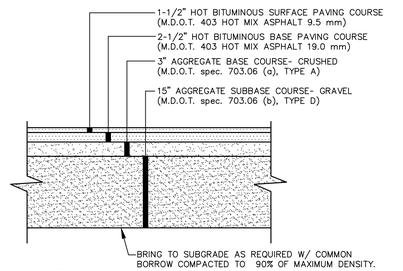
19. ALL SUBSURFACE UTILITY LINES SHOWN HEREON ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMH'S, CB'S, HYDRANTS, ETC., IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO SEBAGO TECHNICS INC. BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING, ETC., DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON AND ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA.



VERTICAL GRANITE CURB
NOT TO SCALE

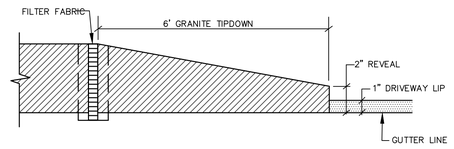


TYPICAL TRENCH SECTION
NOT TO SCALE

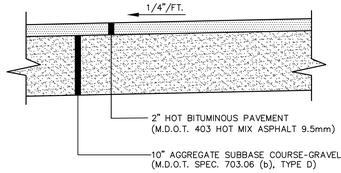


NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.
3. CONTRACTOR MAY REPLACE BITUMINOUS PAVING SECTION WITH TWO (2) 1-1/2" LIFTS OF 12.5mm SUPERPAVE MIX. SUBMIT PAVEMENT MIX DESIGN PRIOR TO CONSTRUCTION.

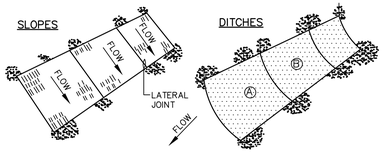
TYPICAL PAVED PARKING LOT SECTION
NOT TO SCALE



TYPICAL TIPDOWN CURB INSTALLATION
NOT TO SCALE

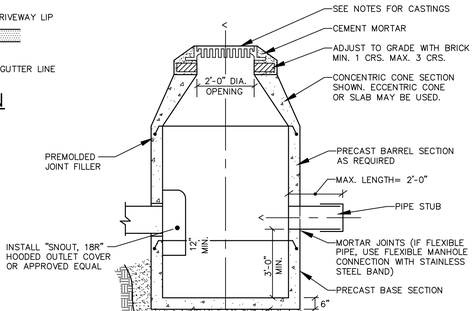


BITUMINOUS SIDEWALK
NOT TO SCALE



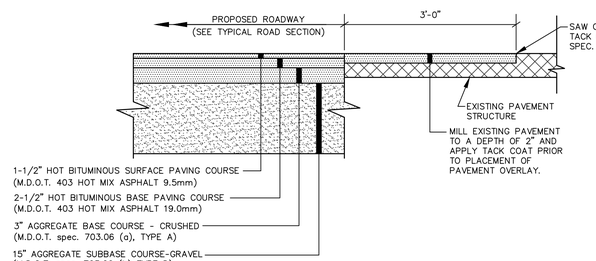
NOTES:
1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.
5. WIRE STAPLES TO BE MIN OF #11 WIRE 6" LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET
NOT TO SCALE

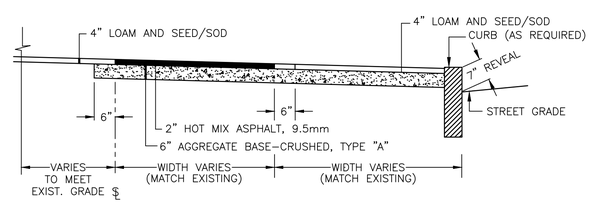


NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
5. DRAIN MANHOLE FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 1080, TYPE A OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".

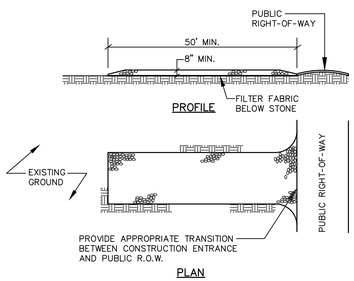
TYPICAL DRAINAGE MANHOLE/CATCH BASIN
NOT TO SCALE



TYPICAL PAVEMENT JOINT
NOT TO SCALE

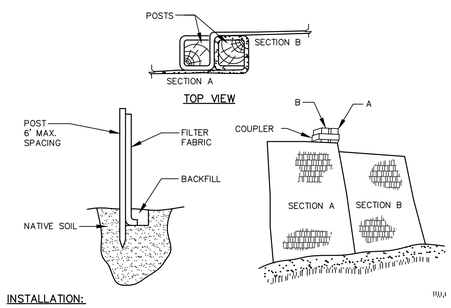


BITUMINOUS SIDEWALK WITH ESPLANADE
NOT TO SCALE



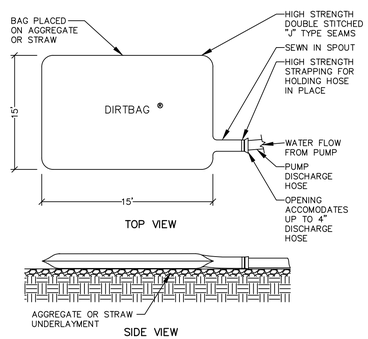
NOTES:
1. STONE SIZE- AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"). USE CRUSHED STONE.
2. LENGTH- AS SHOWN ON PLANS, MIN. 50 FEET.
3. THICKNESS- NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH- NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.
5. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

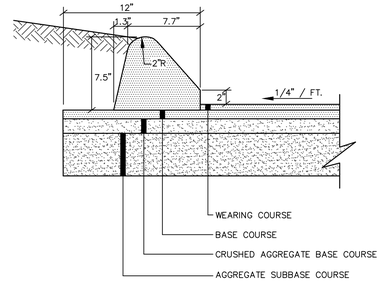


INSTALLATION:
1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION AS SHOWN ABOVE.
6. BARRIER SHALL BE MIRAFI SILT FENCE OR EQUAL.

FILTER BARRIER
NOT TO SCALE



DIRTBAG PUMPED SILT CONTROL SYSTEM
NOT TO SCALE



BITUMINOUS CURB SECTION
NOT TO SCALE

JAMES R. SEYMOUR PE 9984

STATE OF MAINE — JAMES R. SEYMOUR — No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 1-23-19

DESIGNED	CHECKED
JRS	JRS

REV.	BY:	DATE:	STATUS
B	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

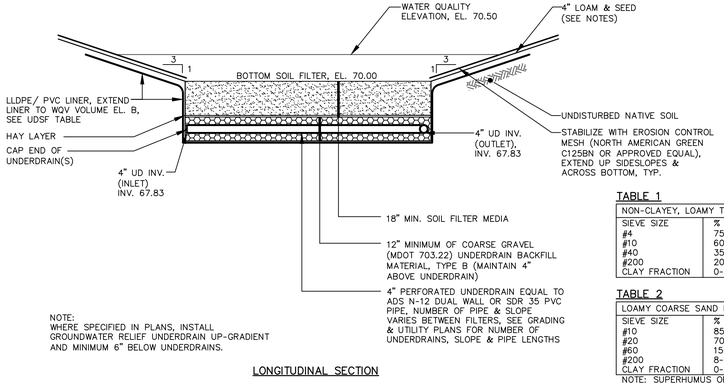
ANY ALTERATIONS, AVAILABLE ONLY IN NATIVE DWG. FORMAT, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS INC. UNLESS OTHERWISE AUTHORIZED IN WRITING BY SEBAGO TECHNICS INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DETAILS
OF:
PATAGON STORAGE
150 RIVERSIDE STREET
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHALIGAL, WASHINGTON

PROJECT NO.	SCALE
17500	N.T.S.

17500D.dwg, TAB:D2



NOTE:
WHERE SPECIFIED IN PLANS, INSTALL GROUNDWATER RELIEF UNDERDRAIN UP-GRADIENT AND MINIMUM 6" BELOW UNDERDRAINS.

LONGITUDINAL SECTION

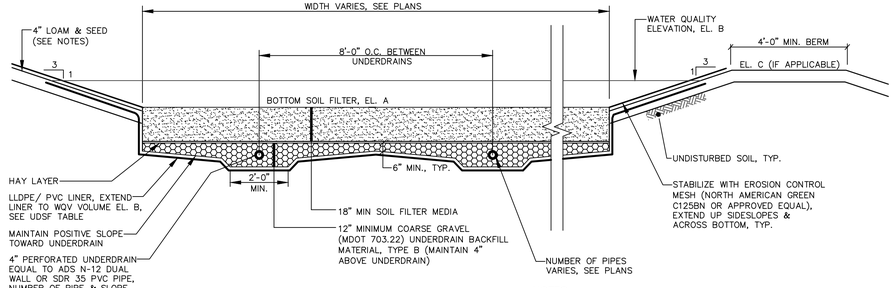
TABLE 1

NON-CLAYEY, LOAMY TOPSOIL	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75-95
#10	60-90
#40	35-85
#200	20-70
CLAY FRACTION	0-2

TABLE 2

LOAMY COARSE SAND LAYER	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-50
#200	8-15
CLAY FRACTION	0-2

NOTE: SUPERHUMUS OR EQUIVALENT.



SECTION

NOTES:
1. MULTIPLE ROWS OF UNDERDRAIN SHALL CONNECT INTO A 6" HEADER LAID LEVEL PIPE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2. WHERE SPECIFIED IN PLANS, INSTALL GROUNDWATER RELIEF UNDERDRAIN UP-GRADIENT AND MINIMUM 6" BELOW UNDERDRAINS.

UNDERDRAINED SOIL FILTER DETAIL

NOT TO SCALE

UNDERDRAINED SOIL FILTER CONSTRUCTION OVERSIGHT NOTES:

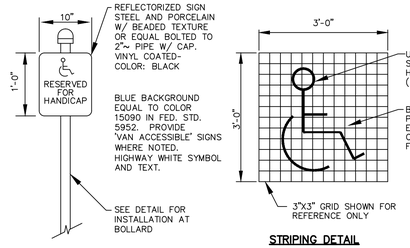
THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE UNDERDRAIN. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE UNDERDRAIN'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

1. CONSTRUCTION SEQUENCE: THE UNDERDRAIN AND VEGETATION MUST NOT BE INSTALLEDUNTIL THE AREA THAT DRAINS TO THE UNDERDRAIN HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.
2. COMPACTION OF UNDERDRAIN: UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
3. CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM:
   A. FOR FIRST UNDERDRAIN CONSTRUCTED, AFTER UNDERDRAIN PIPE IS INSTALLED AT GRADE AND BUT NOT BACKFILLED. AFTER THE UNDERDRAIN PIPE IS COMPLETELY BACKFILLED AND BEFORE PLACEMENT OF LOAMY COARSE SAND LAYER.
   B. AFTER THE LOAMY COARSE SAND LAYER AND SOD/ LOAM HAS BEEN INSTALLED.
   C. AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
   D. ALL MATERIAL USED FOR THE CONSTRUCTION OF THE UNDERDRAIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY.

TESTING AND SUBMITTALS
1. THE UNDERDRAIN SHALL CONSIST OF THE TOP THREE LAYERS IDENTIFIED AS LOAMY TOPSOIL, 2" TRANSITION AND 12" LOAMY COARSE SAND. THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE FOR EACH COMPONENT OF THE UNDERDRAIN AND SUBMIT GRADATIONS FOR THE UNDERDRAIN MATERIALS TO THE ENGINEER FOR APPROVAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.

UNDERDRAINED SOIL FILTER MATERIAL NOTES:

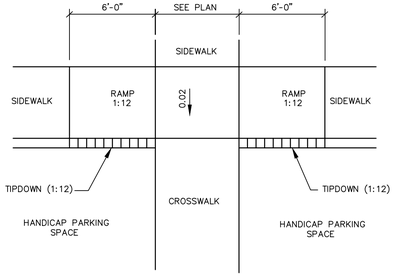
1. ONSITE LOAM SHALL BE SCREENED FOR STONES LARGER THAN 1 INCH AND BE TESTED TO VERIFY THERE IS LESS THAN 2% CLAY CONTENT AND 5-8% ORGANIC MATTER. IF ONSITE LOAM DOES NOT MEET REQUIREMENTS, THEN LOAM FROM OFFSITE SHALL BE A NON-CLAYEY, LOAMY TOPSOIL SUCH AS A USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER AND 3-10% CLAY CONTENT.
2. 2" TRANSITION LAYER OF THE LOAM/SOD LAYER SHALL BE ROTOTILLED INTO THE LOAMY COARSE SAND LAYER BELOW.
3. THE LOAMY COARSE SAND LAYER SHALL BE TESTED IN ACCORDANCE WITH THE TESTING AND SUBMITTALS NOTES ABOVE.
4. A LAYER OF HAY SHALL BE PLACED BETWEEN 12" LOAMY COARSE LAYER AND UNDERDRAIN STONE BEDDING TO PREVENT SUBSIDENCE OR PLUGGING OF THE SAND/GRAVEL/STONE LAYER AND/OR PIPE.
5. UNDERDRAIN STONE BEDDING MATERIAL MUST CONFORM TO THE MDOT SPECIFICATION 703.22 UNDERDRAIN TYPE B FOR UNDERDRAIN BACKFILL MATERIAL. THE BEDDING MATERIAL MUST HAVE NO MORE THAN 5% PASSING THE 200 SIEVE.
6. MATERIAL LAYERS ABOVE THE UNDERDRAIN BACKFILL LAYER SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS CAN BE MIXED WITHIN THE FILTER. DURING CONSTRUCTION, CARE SHOULD BE TAKEN TO AVOID COMPACTION OF BOTH THE GRAVEL AND SOIL FILTER.
7. OVER COMPACTION OF UNDERDRAIN MATERIAL SHALL BE AVOIDED. IF OVER COMPACTION OCCURS, ROTOTILL AGAIN PRIOR TO SEEDING OR SODDING.



STRIPING DETAIL

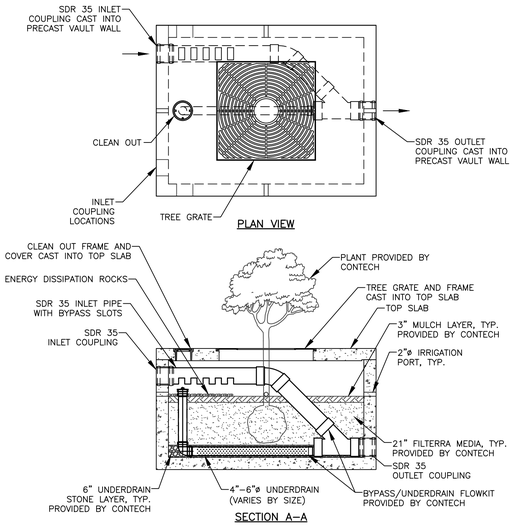
HANDICAP SIGNS AND STRIPING

NOT TO SCALE

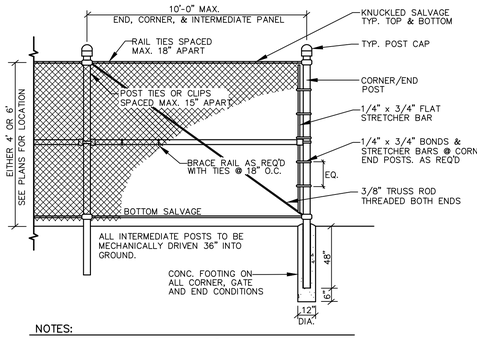


HANDICAP RAMP

NOT TO SCALE



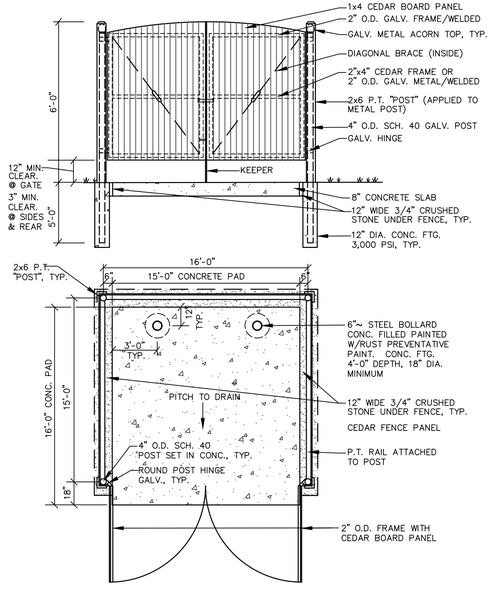
FILTERRA DETAIL



NOTES:
1. CORNER OR END POST: NOMINAL 3" O.D. GALVANIZED STEEL PIPE, MIN. 5.79 lbs./LF.
2. INTERMEDIATE POST: NOMINAL 2-1/2" O.D. GALVANIZED STEEL PIPE, MIN. 3.65 lbs./LF.
3. BRACES (TOP & BOTTOM): NOMINAL 1-5/8" O.D. GALVANIZED STEEL PIPE, MIN. 2.27 lbs./LF.
4. THE OUTSIDE OF THE FENCE FABRIC SHALL BE 3" INSIDE THE EDGE OF PAVEMENT.
5. BRACE RAIL AND DIAGONAL BRACE ROD SHALL BE INSTALLED AT EACH 10' CORNER SECTION OF ENCLOSURE.
6. CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH (f) c OF 3,000 psi WITH 6% AIR ENTRAINMENT.
7. SUBMIT SHOP DRAWINGS FOR OWNER'S/ENGINEER'S APPROVAL.
8. FENCE FABRIC, POST, RAILS AND APPURTENANCES SHALL BE VINYL CLAD; COLOR: BLACK

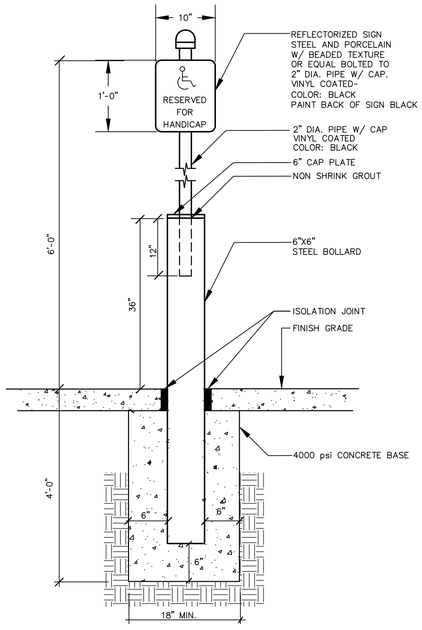
TYPICAL CHAIN LINK FENCE

NOT TO SCALE



TYPICAL DUMPSTER ENCLOSURE

NOT TO SCALE



STEEL BOLLARD MOUNTED SIGN

NOT TO SCALE

JAMES R. SEYMOUR PE 9984

STATE OF MAINE — JAMES R. SEYMOUR — No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 1-23-19

DESIGNED	CHECKED
JRS	JRS

REV.	BY:	DATE:	STATUS
B	JRS	01-30-19	CLIENT REVIEW/CITY SUBMITTAL
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, UNLESS SEAL IS AFFIXED, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

DETAILS
OF:
PATAGON STORAGE
150 RIVERSIDE STREET
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 208
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	N.T.S.

SHEET 9 OF 9

175000.dwg, TAB:D3

N/F
BOUNTY DEVELOPMENT, LLC.
MAP 267, LOT A-5
BOOK 15178, PAGE 254

N/F
K&R PROPERTIES, INC.
MAP 267, LOT A-15
BOOK 16895, PAGE 64

N/F
CENTRAL MAINE POWER CO.
MAP 267, LOT A-3
BOOK 876, PAGE 467

N/F
PAYAM YAZDANPANAH
MAP 267, LOT A-1
BOOK 33622, PAGE 161
FORMERLY
MITCHCO PROPERTIES, INC.

RIVERSIDE STREET

OHW

INV=68.40'
12" HDPE

12" PIPELINE

CATCH BASIN
PER PLAN REF. 6E,
NOT FIELD VERIFIED

DMH 1241
W/ OFFSET STRUCTURE

DMH 1229
W/ EXPOSED STRUCTURE

CB 1475

CB 1435

DMH 8600

CB 1433

CB 1436
W/ EXPOSED STRUCTURE

Sx(C)

Au(A)

1P

1R

2S

3S

1S

SP1

A

B

C

D

FT

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- EASEMENT
- IRON PIPE/ROD
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- EDGE GRAVEL
- CURB LINE
- 120 118 CONTOURS
- SD STORM DRAIN
- CATCH BASIN

LEGEND

- WATERSHED BOUNDARY
- B C TIME OF CONCENTRATION
- REACH
- 1 WATERSHED LABEL
- 1 REACH
- 1 DETENTION POND
- SOILS BOUNDARY

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

JAMES R. SEYMOUR, PE 9984

STATE OF MAINE
JAMES R. SEYMOUR
No. 9984
REGISTERED PROFESSIONAL ENGINEER
09-18-18

DESIGNED	CHECKED
DJS	JRS

REV.	BY:	DATE:	STATUS:
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

PRE-DEVELOPMENT WATERSHED MAP

OF:
PATAGON STORAGE
142 & 150 RIVERSIDE STREET
PORTLAND, ME

FOR:
PATAGON STORAGE, LLC.
1700 MAIN ST. - SUITE 70
WASHOUGAL, WA 98671

PROJECT NO.	SCALE
17500	1" = 30'

SHEET 1 OF 2

17500SWP.dwg, TAB:PRE

N/F
BOUNTY DEVELOPMENT, LLC.
MAP 267, LOT A-5
BOOK 15178, PAGE 254

N/F
K&R PROPERTIES, INC.
MAP 267, LOT A-15
BOOK 16895, PAGE 64

N/F
CENTRAL MAINE POWER CO.
MAP 267, LOT A-3
BOOK 876, PAGE 467

(ABANDON)
1P

1R

2R

(ABANDON)
CATCH BASIN
PER PLAN REF. 6E,
NOT FIELD VERIFIED

4S

(ABANDON)
DMH 1229
W/ EXPOSED STRUCTURE

3S

(ABANDON)
DMH 1241
W/ EXPOSED STRUCTURE

8S

FOCAL POINT-3

ABANDON EXISTING
CB 1435

CB 1475

DMH 8600

CB 1435

4P

DMH-1
RIM=71.00
INV. IN=68.71(12")
INV. IN=67.75(4")
INV. OUT=67.75(12")

12" SD
L=234'
S=0.005

2S

4R

FOCAL POINT-2

3P

CULTEC 150XLHD
TREATMENT SYSTEM

DMH-2
RIM=70.83
INV. IN=67.75(12")
INV. OUT=68.75(12")
INV. OUT=67.75(6")

12" SD
L=81'
S=0.005

CATCH BASIN
PER PLAN REF. 6E,
NOT FIELD VERIFIED

5S

3R

FOCAL POINT-1

2P

Sz(C)

Au(A)

7S

6S

DMH-3
RIM=69.95
INV. IN=66.95(12")
INV. OUT=67.95(12")
INV. OUT=66.95(6")

DMH-4
RIM=70.48
INV. IN=67.89(12")
INV. IN=66.95(4")
INV. OUT=66.95(12")

6R

5R

E: 2,909,871.37
N: 143,137.37
15"SD
L=62'
S=0.005

DMH-5
RIM=71.64
INV. IN=66.08
INV. IN=66.08
INV. OUT=65.98

5P1

CB 1437

1S

INV. IN=65.67

RIVERSIDE STREET

CB 1086
W/ EXPOSED STRUCTURE

12" PIPELINE

INV. IN=68.20

12"SD
L=95'
S=0.018

INV. IN=66.51

CONTRACTOR TO
CONNECT NEW STORM
DRAIN TO EXISTING STORM
DRAIN, FIELD VERIFY

N/F
PAYAM YAZDANPANAH
MAP 267, LOT A-1
BOOK 33622, PAGE 161
FORMERLY
MITCHCO PROPERTIES, INC.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	SETBACK	
	EASEMENT	
	BUFFER	
⊙	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE GRAVEL	
	CURB LINE	
--120-- --118--	CONTOURS	120
	SPOT GRADE	+120.00
SD	STORM DRAIN	SD
Ⓓ	DRAINAGE MANHOLE	
	CATCH BASIN	
	RIPRAP	

LEGEND

	WATERSHED BOUNDARY
B C	TIME OF CONCENTRATION
	REACH
1	WATERSHED LABEL
1	REACH
1	DETENTION POND
	SOILS BOUNDARY

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

JAMES R. SEYMOUR, PE 9984

STATE OF MAINE
JAMES R. SEYMOUR
No. 9984
REGISTERED PROFESSIONAL ENGINEER
09-18-18

DESIGNED	CHECKED
DJS	JRS

REV.	BY:	DATE:	STATUS:
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

POST-DEVELOPMENT WATERSHED MAP

OF:
PATAGON SELF STORAGE
142 & 150 RIVERSIDE STREET
PORTLAND, ME

FOR:
PATAGON STORAGE, LLC.
1700 MAIN ST. - SUITE 70
WASHOUGAL, WA 98671

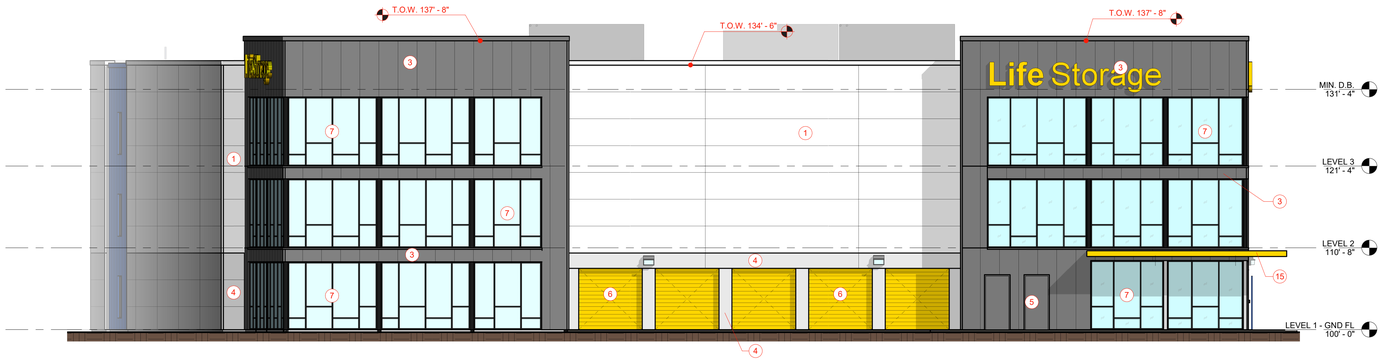
PROJECT NO.	SCALE
17500	1" = 30'

SHEET 2 OF 2

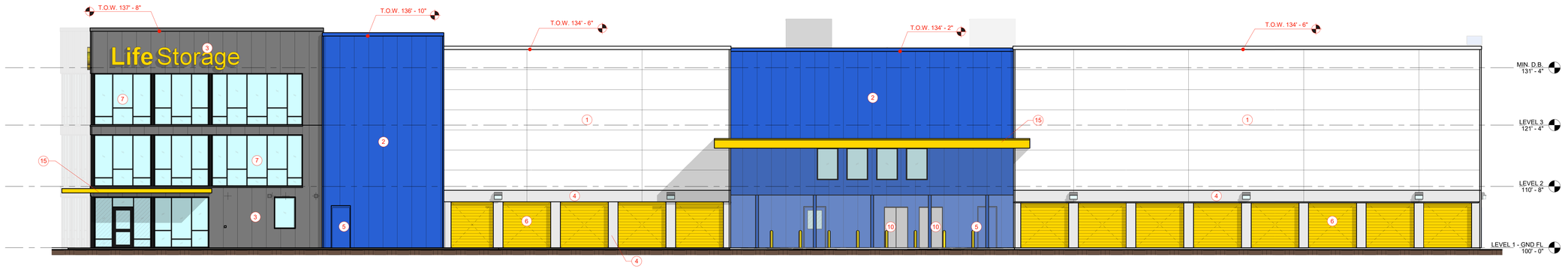
17500SWP.dwg, TAB:POST

KEYNOTES

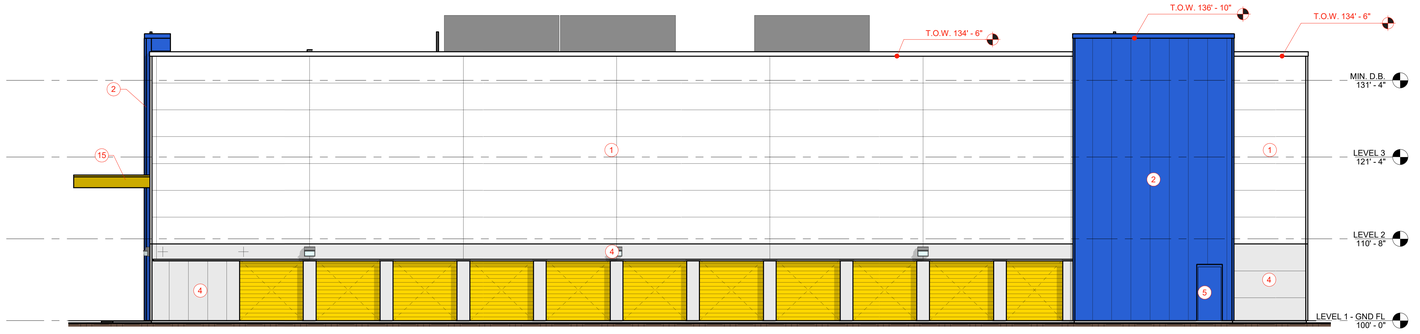
1 INSULATED METAL PANEL, COLOR WHITE
2 INSULATED METAL PANEL, COLOR BLUE
3 INSULATED METAL PANEL, COLOR BLACK
4 INSULATED METAL PANEL, COLOR GREY
5 HOLLOW METAL DOOR & FRAME
6 OVERHEAD COILING DOOR
7 ALUMINUM STOREFRONT GLAZING SYSTEM - BLACK FRAME
10 ELEVATOR
15 ENTRY CANOPY



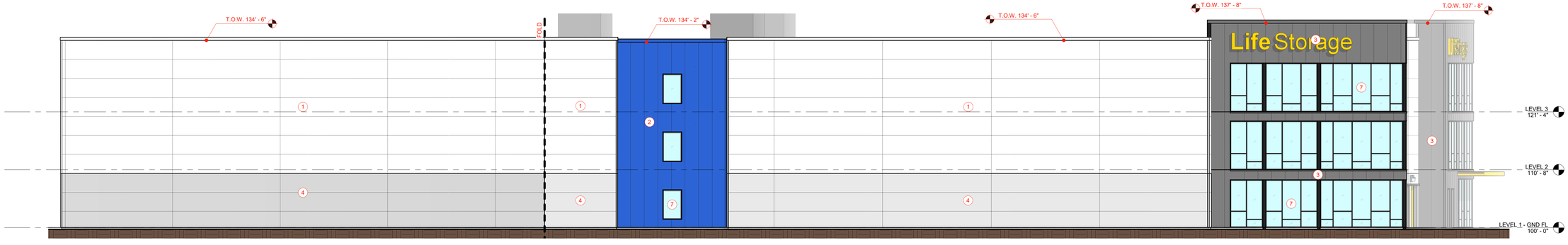
4 SOUTH ELEVATION
1/8" = 1'-0"



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



3 NORTH ELEVATION
1/8" = 1'-0"



2 SOUTHWEST ELEVATION - PLANNING
1/8" = 1'-0"

di'velept
454 N 600 W, SLC, UT 84116
e: howdy@divelept.com
p: 801-680-4485
w: www.divelept.com

PORT

REVISIONS:
No. Date Description

PROFESSIONAL SEAL:

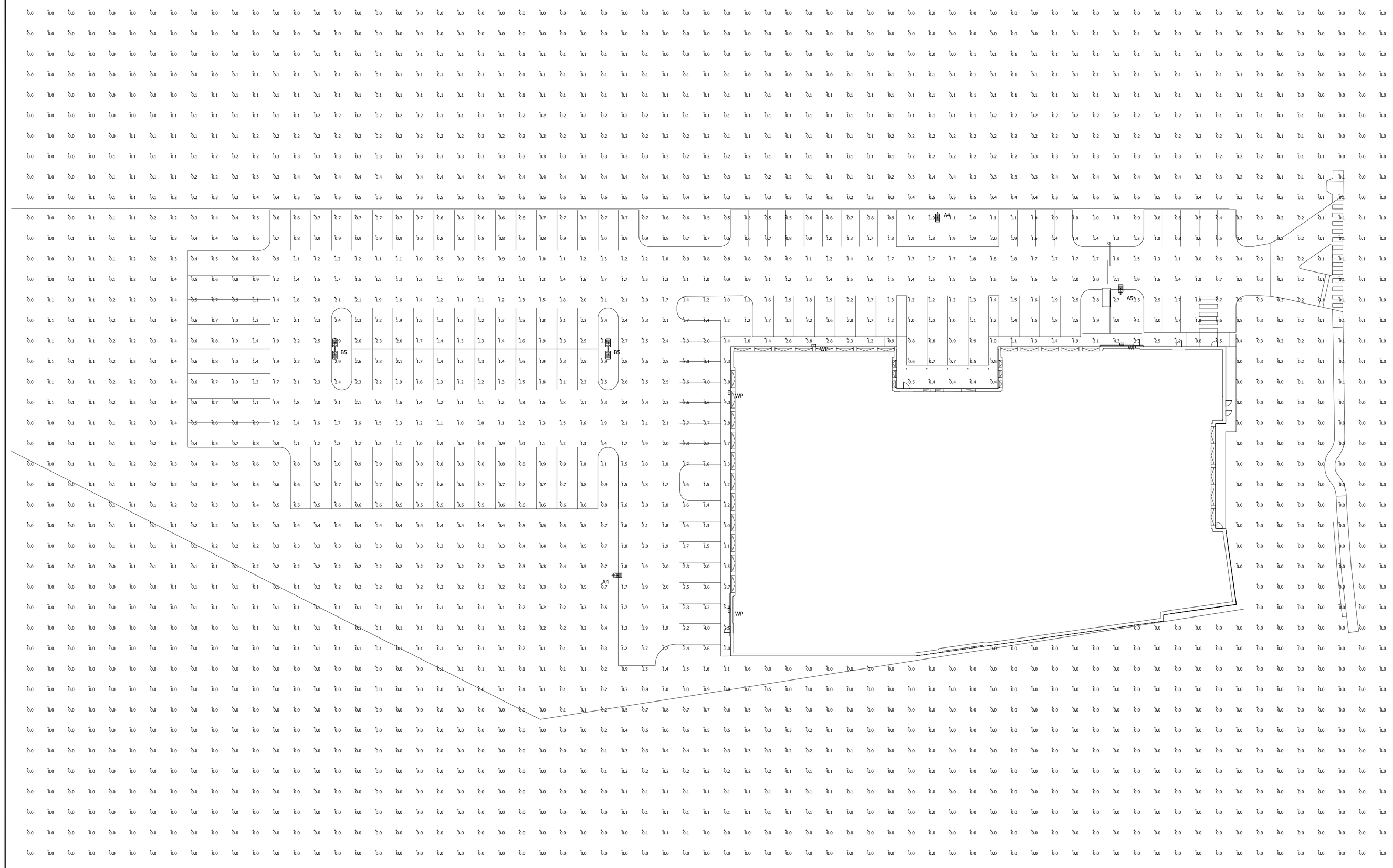
PROJECT: MAINE PORTLAND & RIVERSIDE
PROJECT ADDRESS: 150 RIVERSIDE STREET PORTLAND, ME 04103
ARCH PROJECT #: 17-31
A.D.R.: JDH
PHASE: BUILDING PERMIT SET
PUBLISH DATE: JAN. 09, 2019
SHEET SCALE: 1/8" = 1'-0"
SHEET NAME:

EXTERIOR ELEVATIONS

SHEET NUMBER:
A250

2/22/2019 6:53:02 AM

DIVELEPT DESIGN LLC © 2019



Luminaire Schedule							
Symbol	Label	Qty	Mounting Height	LLF	Watts	Lumens	Description
	A4	2	30' - 0" AFG	0.900	135	17163	VP-L-64L-135-4K7-4W
	A5	1	30' - 0" AFG	0.900	135	17009	VP-L-64L-135-4K7-5W
	B5	2	30' - 0" AFG	0.900	135	17009	VP-L-64L-135-4K7-5W
	WP	4	12' - 0" AFG	0.900	45	3998	LNC2-18LU-4K-4

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.43	5.0	0.0	N.A.	N.A.
Parking Area	Illuminance	Fc	1.41	4.0	0.4	3.53	10.00

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 - FT.

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

PATAGON STORAGE
WASHAUGAL, WA
SITE LIGHTING PLAN

REVISED FROM DRAWING NUMBER(S):

HUBBELL®
Hubbell Lighting, Inc.
701 MILLENNIUM BLVD.
GREENVILLE, SC 29607

DN BY:	DATE:	CHK BY:
DHK	09/20/18	N/A
REV. BY:	DATE:	SCALE:
		AS NOTED
QUOTE:	DRAWING / DESIGN NO.:	
N/A	1822786	

Construction Management Plan
General Template
Patagon Storage, LLC
142 & 150 Riverside Street

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

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

A. Construction Management Principles

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

B. Development Review of Construction Management Plan

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

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood. Such a condition may involve a delay in commencement of construction, if necessary.

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

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, applicant and contractor shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

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

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

E. Construction Schedule

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

F. Security & Public Safety

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

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

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

for safety. MOT plans shall employ the appropriate techniques and devices as called for the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In some situations, flaggers may be required.
- Police details may be required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control of bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

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

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.

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

I. Erosion Control and Preservation of Trees

1. The contractor shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection, or the U.S. Environmental Protection Agency upon request.
2. The contractor shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

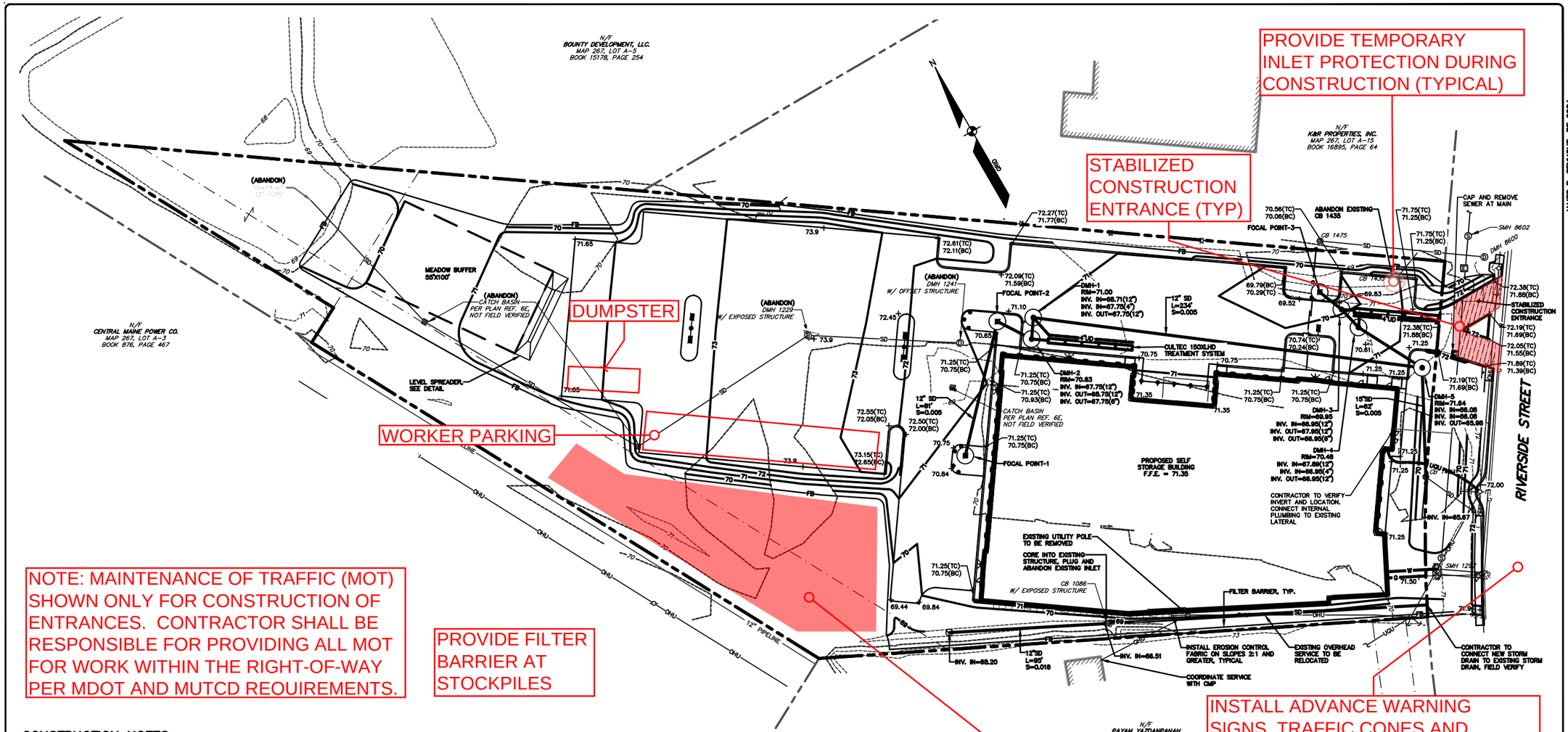
1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction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

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.
2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. 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.



CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.

4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.

7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.

8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.

12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.

13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.

14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A M.D.O.T. PERMIT AS WELL AS PERMITS FROM THE CITY AS APPLICABLE.

17. THE PROPOSED LIMITS OF CLEARING SHOWN HEREON ARE APPROXIMATE BASED UPON THE PROPOSED LIMITS OF SITE GRADING. THE APPLICANT RESERVES THE RIGHT TO PERFORM NORMAL FOREST MANAGEMENT ACTIVITIES OUTSIDE OF THE CLEARING LIMIT AS SHOWN. TREE REMOVAL OUTSIDE OF THE LIMITS OF CLEARING MAY BE NECESSARY TO REMOVE DEAD OR DYING TREES OR TREE LIMBS. THIS REMOVAL IS DUE TO POTENTIAL SAFETY HAZARDS AND TO PROMOTE PROPER FOREST GROWTH.

18. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.

19. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

20. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.

21. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF SEBAGO TECHNICS, INC.

22. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.

23. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

24. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.

25. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.

26. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.

27. ALL SUBSURFACE UTILITY LINES SHOWN HEREON ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMFS, CB'S, HYDRANTS, ETC.. IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO SEBAGO TECHNICS INC. BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING, ETC.. DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON AND ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA.

CONSTRUCTION MANAGEMENT PLAN

SETBACK
EASEMENT
IRON PIPE/ROD
BUILDING
EDGE PAVEMENT
PAVEMENT SAWCUT
EDGE GRAVEL
CURB LINE
CONTOURS
SPOT GRADE
SIGN
GAS
GAS GATE VALVE
GAS METER
WATER
WATER GATE VALVE
SANITARY SEWER
SANITARY MANHOLE
STORM DRAIN
UNDER DRAIN
DRAINAGE MANHOLE
CATCH BASIN
OVERHEAD UTILITY
UNDERGROUND UTILITY
ELECTRICAL MANHOLE
ELECTRIC METER
LIGHT POLE
UTILITY POLE
GUY WIRE
FILTER BARRIER

JAMES R. SEYMOUR, PE 9984
STATE OF MAINE — JAMES R. SEYMOUR No. 9984 — REGISTERED PROFESSIONAL ENGINEER — 9-18-18

DESIGNED	CHECKED
JRS	JRS

REV.	BY:	DATE:	STATUS:
A	JRS	09-18-18	LEVEL III SITE PLAN SUBMISSION TO THE CITY

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
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75 John Roberts Rd. Suite 4A
South Portland, ME 04106
Tel: 207-200-2100

GRADING AND UTILITY PLAN
OF
PATAGON STORAGE
150 RIVERSIDE ST
PORTLAND, MAINE
FOR:
PATAGON STORAGE, LLC
1700 MAIN STREET, SUITE 70
WASHAUGAL, WASHINGTON

PROJECT NO.	SCALE
17500	1" = 30'

SHEET 4 OF 8

17500GU.dwg, TAB:GU

PLANNING BOARD REPORT
PORTLAND, MAINE

New 72,000 sf Warehouse, 56 Milliken Street

Level III Site Plan and Site Location of Development (SLODA)
Project: # PL000392-2018
CBL: 334 A014 and 334 A016
Applicant**:** Plymouth Industrial REIT, Inc.

Submitted to: Portland Planning Board Public Hearing Date: February 26th, 2019	Prepared by: Jean Fraser, Planner Date: February 22nd, 2019

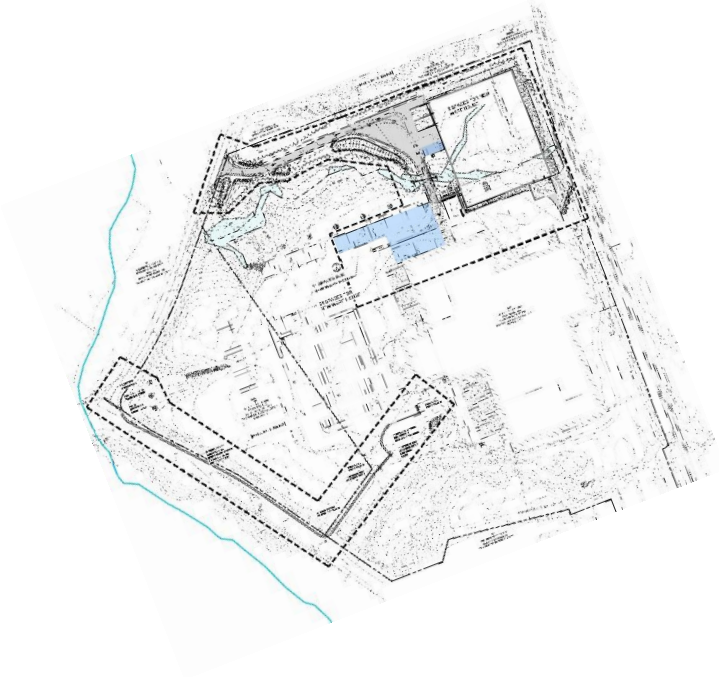
I. INTRODUCTION

CES, Inc (John Kuchinski) has requested final approval to a Level III Site Plan and Site Location of Development (SLODA) amendment application, as submitted on behalf of Plymouth Industrial REIT, Inc., for a 31.2 acre site at the intersection of Milliken Street and Riverside Industrial Parkway. The proposal comprises a new 72,000 sq ft single story warehouse building located in the northern part of the site, with a new one-way egress drive to Riverside Industrial Parkway of approximately 500 linear feet. The project was considered at a Planning Board Workshop on January 22, 2019.

The proposed development would be located immediately to the north of the existing 1966 industrial building (200,325 sq ft) and the existing 237 parking spaces. The site is located in the IM (Moderate Impact Industrial) Zone.

SITE BELOW:

PROPOSAL TO RIGHT:



The site is currently wetland and woodland, located between existing development and the railway to the east. The proposal would add 2.98 acres of impervious surface to the existing 11.4 acres of impervious surface, and results in the filling of 8,034 sq ft of wetland.

The new drive exits onto Riverside Industrial Parkway opposite the recently approved Seabreeze project at 250 Riverside Industrial Parkway. The site is also served by an existing access from Milliken Street. The user of the new warehouse building has not yet been determined, though it has been confirmed to be warehousing only, possibly for the occupants of the large existing building (Paradigm Windows and Advance Pierre foods).

Applicant: Plymouth Industrial REIT, Inc. (Jeff Witherell)
Consultants: Engineering: CES, Inc (John Kuchinski, PE)
Building Design: Port City Architecture

II. REQUIRED REVIEWS

Review	Applicable Standards
Site Plan	Section 14-526 City's Land Use Code
Site Location of Development (delegated from State) - amendment to 1994 permit	Section 14-Technical Manual and State Regulations
(the project also requires MDEP NRPA and Army Corps Permits for the proposed wetland fill)	

III. REQUESTED WAIVERS

Waiver Request	Applicable Standards
Sidewalk (Riverside Industrial Parkway): The final proposals require a waiver for a sidewalk along Riverside Industrial Parkway (length of about 900 linear feet), based on the fact there is no expectation of pedestrian usage and there will be a sidewalk on the other side of the street.	Site Plan 14-526 (a)2ci *Sidewalks* requires that "*all developments shall provide sidewalks along all frontages*" and refers to waiver criteria. Reviewers support a waiver from the sidewalk requirement in Riverside Industrial Parkway as the development on the opposite side of the street will be installing a sidewalk that provides an alternative route (Att. 1).
Curbing (Milliken Street): Waiver requested for the curbing associated the provision of a sidewalk in Milliken Street, based on the landscape and drainage constraints.	Site Plan 14-526 (a)2ci *Sidewalks* requires that "*all developments shall provide sidewalks along all frontages*" and refers to waiver criteria for sidewalks and associated curbing. Reviewers consider that a waiver for curbing would only be granted where there is provision of an esplanade of at least 4 feet between the travel way and the sidewalk, so a conditional waiver is supported (Att. 1).
Bicycle Parking: The applicant is proposing 10 bicycle parking spaces near the entrance to the new building, but the overall site requirement is at least 27 spaces.	Site Plan 14-526 (a) 4.b. requires bicycle parking spaces for non-residential structures based on the required vehicle parking spaces. Staff note that there are about 100 employees at the existing building and recommend that 10 additional bicycle parking spaces be provided near the entrance to the existing building.

IV PROJECT DATA

Existing Zoning	IM		
Existing Use	Industrial with undeveloped areas		
Proposed Use	Warehouse		
New disturbed area	Approximately 5 acres		
Parcel Size	31.2 acres		
	Existing	*Proposed*	*Net Change*
Wetlands			8034 sq ft
Impervious Surface Area	11.4 acres	14.38 acres	2.98 acres
Building area	200,325 sq ft	272,325 sq ft	72,000 sq ft
Parking Spaces (on site)	237 (188 car parking spaces; 49 trailer parking spaces)	238 (37 nearest allocated to the new building)	+1 (Applicant requests the Planning Board approve 238 parking spaces, as demand is below the zoning requirement of 273)
Bicycle Parking Spaces	0	10	10 (25-29 would be required for existing and proposed together)
Est. Cost of Project	Not provided		

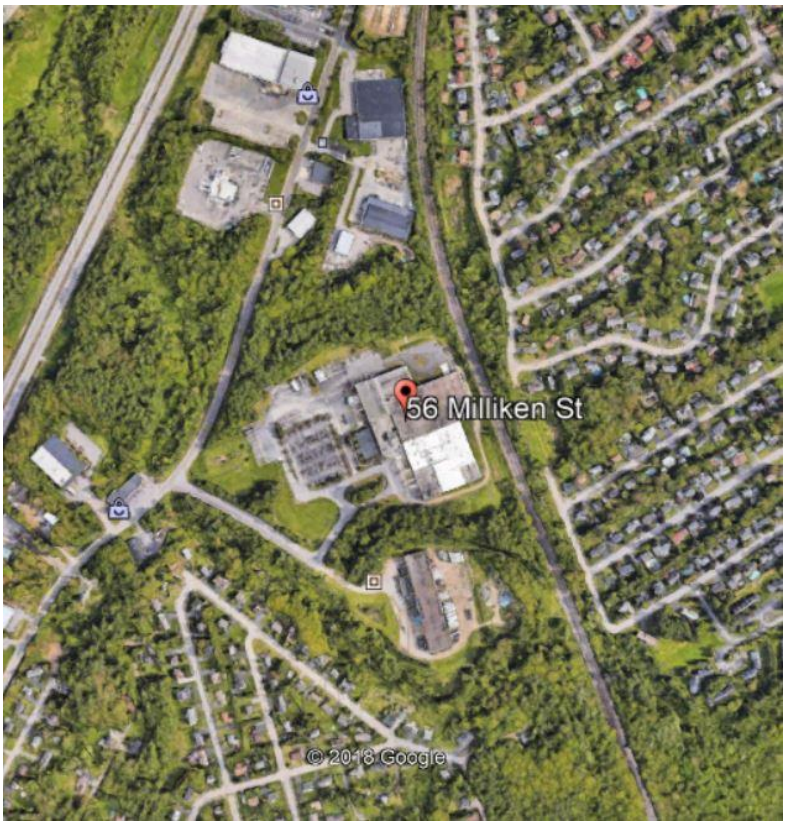
V. EXISTING CONDITIONS

The proposed site for the new development is mostly wooded with two wetland areas and an intermittent stream within this undeveloped northern part of the site. These are shown on the existing Site Plan (Plan 01) and described in the recently submitted wetland assessment by a CES, Inc Senior Project Scientist (Attachment Q).

The development is located at the northeastern edge of the parking and circulation area for the existing large industrial buiding (over 200,000 sq ft) and associated parking lot. The site comprises two lots, both in the same ownership.

The site is located opposite the recently approved Seabreeze Facility at 250 Riverside Industrial Parkway, which is required to install a 5 foot wide sidewalk (with 5 foot wide esplanade) along the west side of Riverside Industrial Parkway for a length that is longer than the 56 Milliken frontage.

As noted on the Zoning Map (see below) and visible in the aerial photoraph, this site is located on the eastern boundary of a large I-M zone, and R2 and R3 residential is located on the other side of the railway that bounds the site.

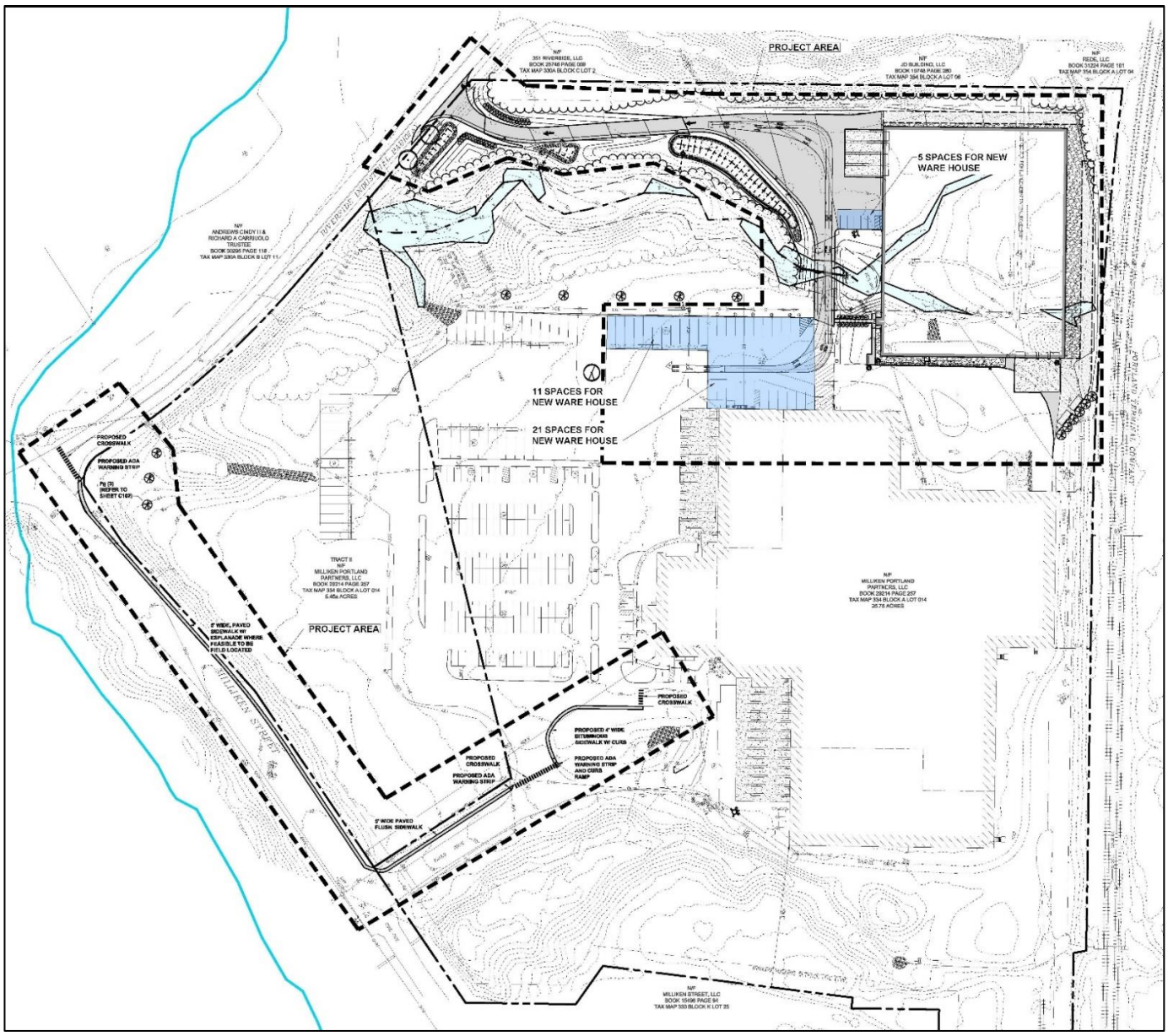


VI. PROPOSED DEVELOPMENT - (see Overall Site Plan 02-b below, and Proposed Site Plan 02-a attached).

The proposals have been revised to address the Workshop review comments and include:

- New single story building of 72,000 sq ft for warehouse with small area of reception and offices (Floorplan in Plan 13)
- New 5 foot wide paved sidewalk along Milliken Street, with esplanade where possible and crossing of Riverside Industrial Parkway
- New 20 foot wide access drive from Riverside Industrial Parkway to the new building (approx. 600 feet in length), including a 4 foot wide painted flush walkway as recommended by staff
- New 4 foot paved walkway from Milliken Street to the existing building in the south of the site, located along the existing access (as recommended in review comments)
- Filling of 8034 sq ft of wetlands
- Three underdrained soil filters
- Areas of planting: entrance to the new building; screening of the building and dumpsters from the residential areas; near the new egress drive where it meets Riverside Industrial Parkway; along the existing parking nearest to the new building drive; and replacement planting of native species near sign at corner Milliken and Riverside Industrial Parkway
- Tree save areas identified
- Retention of existing parking with minor layout changes to create one additional space (total of 238), and allocation of 37 spaces nearest to the new building for its employees and visitors.

Proposed Overall Site Plan (see Plan 02-b)



VII. PLANNING BOARD WORKSHOP SUMMARY - January 22, 2019

The Planning Board provided the following comments:

- Supportive of staff recommendations regarding sidewalks/walkways and reduced parking
- Sidewalk on Milliken to be similar to that required of project opposite on Riverside Industrial Parkway
- Concern to see wetlands protected
- Suggestion for amenities for employees given scale of paving eg green space/picnic area
- Suggestion incorporate solar panels and electric vehicle charging stations
- Photometric to clarify that lighting adequate for pedestrian access
- Explore scope for a condition regarding noticing if the use converts to marijuana related activity

With regard to the last point, the City Council adopted zoning amendments for marijuana facilities on February 20th and the Council will be developing licensing procedures for all marijuana related activities. These ordinances and regulations will apply to any marijuana related facility proposed at the time of application for fit-up permits. This site plan application states that the new building will be for warehousing, and has stated that it is not intended for a marijuana business. Thus, no condition of site plan approval is proposed to require more review or process above the City's adopted ordinances and licensing procedures.

VIII. PUBLIC COMMENTS

A total of 225 notices were sent to property owners within 500 feet of the site, and a legal ad ran in the February 15th and 18th, 2019 editions of the *Portland Press Herald*. The applicant held a Neighborhood Meeting on December 18, 2018 attended by three neighbors, though confusion over the noticing meant that neighbors thought this proposal was for the marijuana facility that was recently approved as a Level II site plan for 65 Milliken Street.

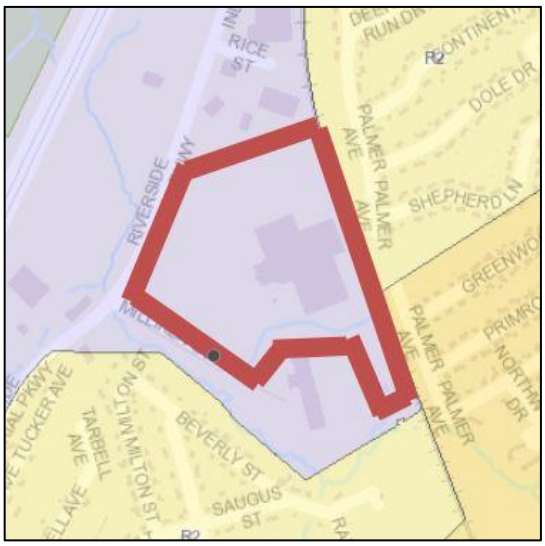
One written public comment (PC1) was received from Jaime Parker of Portland Trails just prior to the PB Workshop, setting out a potential trail extension over the applicant's site to complete the wider trail network in this area. Subsequent discussions between Portland Trails and the City's Parks Department have concluded that the trail link through this site is not a high priority and unlikely to qualify for any significant modification of the Parks and Recreation impact fee, so this trail extension has not been pursued.

At the Planning Board Workshop one neighbor raised concerns over the possibility that this new building would be used for marijuana related activity, and that the applicant was being given a variance from stormwater fees. The applicant has confirmed the intention is to use the building for warehousing, and the Planning Board noted that the Stormwater Fee was intended to encourage the reduction in impervious surface, and that a separate Sewer fee will be payable in association with the Building Permit as part of the recently adopted Impact Fee program.

IX. STAFF REVIEW

A. ZONING ANALYSIS

The proposed development meets the dimensional standards of the I-M zone, and remains below the maximum impervious surface ratio.



The parking requirements under Zoning would be 72 vehicle parking spaces for the proposed building and 201 spaces for the existing building, giving a total of 273. The applicant is proposing to retain existing parking and modify parking nearest to the proposed building so that there is a net increase of 1, to provide a total of 238 spaces.

The Site Plan ordinance allows the applicant to request that the Planning Board make the parking requirement determination. The applicant has requested that the 238 spaces within the existing paved area be considered the overall parking requirement in order to avoid the introduction of additional impervious surface. This request is discussed in detail in *Section IX c* below.

B. SITE LOCATION OF DEVELOPMENT ACT (SLODA) REVIEW (Technical Manual Sec. 14.3. Standards

(Note- All of the applicants submittal A through N comprise the SLOD application)

This SLOD application is the fourth amendment to the original 1994 City of Portland delegated approval to a 100,000 sq ft addition to an existing warehouse building and truck parking area (Attachment O)

a. Financial and technical capacity.

Standard: That developer has the financial capacity and technical ability to develop the project in a manner consistent with state environmental standards and with the provisions of Portland's Code of Ordinances. The Planning Board may issue a permit that conditions any site alterations upon a developer providing the Planning Board with evidence that the developer has been granted a line of credit or a loan by a financial institution authorized to do business in this State or with evidence of any other form of financial assurance the Planning Board determines to be adequate.

Proposal: The applicant has submitted the August 2018 SEC Report to meet this requirement (Att. E.).

b. Traffic movement – The TMP standards relate to trip generation during the peak hours.

Proposal: The applicant has submitted a Transportation Analysis (Attachment G) and further information in Attachment P to support their view that a TMP is not required. The City's Traffic Engineering reviewer Tom Errico has confirmed that a TMP is not required (Attachment 1).

c. No adverse effect on the natural environment
Standard: That the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 375 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.

Proposal:

- Wetlands: A Tier I NRPA Permit has been issued for the filling of 8034 sq ft of freshwater forested wetland for the project. The MDEP and Army Corps Permits and NRPA application are included in Attachment O. It is noted that the wetland delineation was carried out by CES Inc and the Wetland assessment has been submitted for inclusion in the hearing Report as Attachment Q. Measures to identify and protect the remaining wetland were requested to be included in the final proposals but these do not appear to be included in the final submissions. Two suggested conditions of approval incorporate requirements to address this objective.

- Stream and Water Quality: The stream impacted by the development is mainly a drainage swale, which has been channelized in the vicinity of the new building. Three underdrained filters have been introduced in the swale for treatment, with rip rap used around the filters. The Peer Engineer, Lauren Swett, initially raised concerns regarding the size of the filters and how the rip rap slopes will function (Attachment 2); the final review comments confirm that the revised proposals have addressed these concerns.

  The project is within the watershed of the Dole Brook urban impaired stream, and the applicant has proposed paying the $42,775 compensation fee.

- Wooded areas: The proposal results in the loss of several acres of the existing woodland on this site. The proposals have minimized the loss of trees as far as possible. The site plans have been revised to identify treesave areas and the recommended conditions require that measures be taken to protect these areas during construction and in the future.

d. Soil types
Standard: – That the applicant to provide a map and analysis indicating the location of various soil types on-site, and suitability of such soils and ledge to support the proposed site improvements.

Proposal: This does not appear to have been submitted, but may not be relevant given the single story nature of the new building.

e. Ground Water - In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules as may be amended from time to time. *Proposal:* See g. below.

f. Infrastructure.
Standard: That the developer has made adequate provision of utilities, including water supplies, sewerage facilities, solid waste disposal and roadways required for the development and the

development will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipality or area served by those services.

Proposal: Although the new structure is large, the proposed warehouse use would not be expected to have a significant effect on existing or proposed infrastructure. The capacity letters from both the Portland Water District the City of Portland regarding wastewater have been received (Attachment K).

Under the site plan review a sidewalk along Milliken Street, with a crossing at Riverside Industrial Parkway, is recommended as a requirement to contribute to the sidewalk infrastructure in the area.

In the Workshop comments (Attachment 2) the Peer Engineer requested further information regarding the utility crossings. The applicant has provided further information but the Peer Engineer has commented:

> *2/21/2019 STATUS UPDATE - Additional information has been provided on the proposed culvert. Based on the culvert inverts provided on sheet C102, and the stormdrain inverts provided for DMH3 and it's outlet pipe, it appears that there will be a conflict between the two pipes. The Applicant should address this conflict.*

A suggested condition of approval requires that the plans for these utility crossings be revised and submitted for review and approval prior to applying for a building permit.

g. Flooding and Storm water management, erosion, and sedimentation control.
Standards:

- The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules as may be amended from time to time.
- The proposed development meets the standards for storm water management in 38 MRSA §420-D as amended from time to time (See Exhibit 1) and the standard for erosion and sedimentation control in 38 MRSA §420-C as amended from time to time. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules, as may be amended from time to time.

Proposals: The Peer Engineer previously raised several concerns regarding erosion control, the HydroCAD model, and whether the design meets the MDEP Chapter 500 standards (Attachment 2). These questions have been resolved and the Peer engineer considers the proposal satisfactory.

C. SITE PLAN REVIEW

The proposals were reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance.

1. Transportation Standards

a. Impact on Surrounding Street Systems (see above under SLOD Review, ***b***)

b. Access and Circulation and c. Loading and Servicing

The proposal includes a second drive (egress only) onto Riverside Industrial Parkway so that large trucks are provided with a one-way system entering from Milliken Street (see Attachment O). Staff consider this acceptable given the low traffic volumes (Attachment 1); this may also reduce the truck maneuvers around the parking lot. The one-way drive allows the width to be reduced and minimize impervious surface.

At the Workshop the Traffic Engineering Reviewer requested further information regarding truck turning and parking dimensions in the area between the new and existing buildings (Attachment 1). The Overall Site Plan

(Plan 02-b) includes the requested information and the final plans include some adjustments to the parking layout and dumpsters to provide improved site circulation and access.

c. Sidewalks along public streets

The 31+acre site is located at the corner of two public streets, with about 900 feet of frontage on Riverside Industrial Parkway and 650 feet of frontage on Milliken Street. The site plan ordinance requires the provision of sidewalks on both frontages and at the Workshop the applicant requested a waiver from providing frontage sidewalks (and any associated curbing) on both public street frontages.

The Workshop Memo recommended that the waiver request for a sidewalk along Riverside Industrial Parkway be supported based on sidewalk criteria 1 and 3 below, and the proposed motion for the Board includes this waiver. The Workshop Memo also recommended that a sidewalk similar to that required for the frontage of 250 Riverside Industrial Parkway (5 foot wide bituminous with 5 foot esplanade, with no curbing) be required along the north side of Milliken Street. The Planning Board supported this approach.

The applicant has shown a 5 foot wide sidewalk along the north side of Milliken Street (Plan 02-b) but it is not clear regarding the width of the esplanade (indicated to be field located) because a survey of the street and the location of existing pavement and drainage swales is not available. The photos of Milliken Street show that the edge and swale depth/location are variable:

Looking west from end near existing drive

Where Milliken Street joins Riverside Industrial Parkway

Staff feel strongly that an uncurbed sidewalk should not be immediately adjacent to the travel lane, particularly on a street where truck traffic is expected. The Traffic Engineering Reviewer Tom Errico has commented (Attachment 1):

> *A sidewalk shall be constructed on Milliken Street from the project driveway to Riverside Industrial Parkway. A fully compliant ADA crosswalk shall be installed to the proposed sidewalk located on the north side of Riverside Industrial Parkway (to be constructed by others).*
>
> ***Status: The current site plan does not provide an acceptable pedestrian facility that meets City standards. As a condition of approval, it is recommended that the Applicant provide a design that incorporates a 5-foot sidewalk with either a 4-foot esplanade (separating the sidewalk from the roadway) or vertical curbing. Final design elements are to be reviewed and approved by City staff.***

The suggested curbing waiver for Milliken has been qualified to reflect this comment, and a separate condition is included to require the review and approval of the final plans for the sidewalk.

For reference, below are the ordinance waiver criteria:

Sidewalks-

1. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.
2. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
3. A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.

4. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.
5. The street has been constructed or reconstructed without sidewalks within the last 24 months.
6. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

Curbing-

1. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.
2. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.
3. The street has been rehabilitated without curbing in the last 60 months.
4. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.
5. Runoff from the development site or within the street does not require curbing for stormwater management.

d. Internal Walkways

At the Workshop staff recommended that pedestrian walkways be added alongside the existing and proposed access drives to address the site plan standard regarding pedestrian connections from the sidewalks to the entrances of buildings. The City's Traffic Engineering Reviewer Tom Errico set out specific suggestions for a painted flush walkway on the new one-way egress drive, and a separate walkway along the existing access drive (Attachment 1).

The applicant has incorporated these recommended walkways into the site plans, which are considered to be acceptable (Attachment 1).

e. Public Transit Access - this standard does not apply.

f. Parking

The existing parking on the site comprises 188 vehicle spaces and 39 trailer spaces to total 237 spaces. As noted above under Zoning, the parking requirement would be 273 spaces under the ordinance. The applicant is proposing one additional parking space and relocation of some spaces to total 238 spaces. The applicant has requested approval to the 238 spaces to avoid creating additional impervious surface, noting that this number would meet the demand (indicated as 37 for the new building) as substantiated in the submission (Att. G.)

The Traffic Engineering Reviewer Tom Errico concurs with the applicant's assessment and considers the existing (plus one) parking provision is adequate for both the existing and proposed developments (Attachment 1). Mr Errico requested a "parking management plan" that clarified the allocation of spaces for the new building, and the applicant has identified the parking for the new building on the Overall Site Plan (above and attached at 02-b). Mr Errico has confirmed these submissions address his request as they meet the objective of accommodating the parking demand for the new building near to the building (Attachment 1).

g. Bicycle parking

The ordinance requires 2 bicycle parking spaces for every 10 required parking spaces up to 100, and 1 per 20 required spaces above 100. Therefore for the entire site the requirement would be 29 spaces based on the zoning requirements. If the Board were to approve the requirement to be 238 vehicle parking spaces, a total of 27 bicycle parking spaces would be required.

The proposals show 10 bicycle parking spaces near the new building, and staff recommend that an additional 10 bicycle parking spaces should be provided near the entrance of the existing building where it is understood there are about 100 employees.

h. ***TDM -*** this standard does not apply

i. ***Construction Management Plan*** - The applicant has submitted a Construction Management Plan narrative (Attachment M) and associated plan (Plan 11). These rely on a more detailed plan being developed by the contractor and discussed at the Pre-Construction meeting, which is considered acceptable for this site.

2. Environmental Quality Standards

a. ***Preservation of Significant Natural Features -*** covered by the SLODA review above.

b. ***Landscaping and Landscape Preservation, including parking lot landscaping and street trees***
The City Arborist, Jeff Tarling, provided recommendations at the Workshop that sought to revise the tree and plant selections to include native plant types, ensure that treesaves were identified, and to add some additional trees near the parking lot and along the frontages (Attachment 3).

The applicant has incorporated all of these recommendations and added some planting along the rear (avoiding the fire access areas) to screen the dumpsters and buffer the new building (see Site Plans 02-a and 02-b)

d. Water Quality/Storm Water Management/Erosion Control – covered by SLODA review above.

3. Public Infrastructure and Community Safety Standards

a. Consistency with City Master Plans
The final proposals are considered to be consistent with City Master Plans. The preliminary suggestion for a trail through the site has not been pursued as noted above under *VIII Public Comments*.

b. Public Safety (CPTED) and Fire Prevention
The applicant has provided lighting in the immediate vicinity of the building but has not introduced lighting to serve the parking that is allocated to the new building. Staff recommend that several wall mounted lights be added to the north elevation of the existing building to improve the safety where there is likely to be the most congestion of vehicle traffic, parking and pedestrians. A suggested condition outlines this requirement and requests documentation via an updated photometric plan.

The Fire Department requested fire access around the "back" 2 sides of the proposed building, and in Attachment 4 requested the drive between the building and Riverside Industrial Parkway be 20 feet wide. The plans have incorporated these requirements.

c. Availability and Adequate Capacity of Public Utilities
Capacity letters from both the Portland Water District and Department of Public Works (re Wastewater) have been received for this project (Attachment K). As noted under the SLODA review (*Section VII B f*), the Peer Engineer has identified potential conflicts for the utility crossings, and a suggested condition requires this to be addressed. The condition is suggested to apply prior to the application for a building permit as the utility locations would impact internal connections.

4. ***Site Design Standards***
The applicant has addressed all of the site design standards in Attachment L except for *Exterior Lighting*.

Exterior lighting: The submitted Photometric Plan (Plan 10) and proposed light fixtures meet the Technical Standards, but the Workshop Memo recommended that the extent of the lighting needed further consideration to ensure public safety objectives are addressed. As noted above in relation to CPTED objectives, staff recommend that wall-mounted lights be added to the north elevation of the existing building and a revised Photometric Plan be submitted for review and approval. The Site Plan also should be revised to show all of the site lighting that is shown on the Photometric Plan.

X. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed 72,000 sq ft warehouse building and associated site improvements and parking. The applicant has modified the proposals significantly to address the site plan and SLODA standards.

XI. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on February 26th, 2019 for application # PL000392-2018 (56 Milliken Street) relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and the testimony presented at the Planning Board hearing:

1. Sidewalk Waiver (Riverside Industrial Parkway)
   The Planning Board finds that based on the Traffic Engineer Review recommendation dated February 21, 2019, two of the following waiver criteria **do/do not** apply, (namely 1 and 3 from the list below) and therefore **waives/does not waive** the requirement under Site Plan 14-526 (a) 2 c. for the provision of a sidewalk along Riverside Industrial Parkway.

   Waiver Criteria

   1. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.
   2. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
   3. A safe alternative-walking route is reasonably and safely available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.
   4. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.
   5. The street has been constructed or reconstructed without sidewalks within the last 24 months.
   6. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

2. Curbing Waiver (Milliken Street)
   The Planning Board finds that two of the following waiver criteria **do/do not** apply, (namely 4 and 5 from the list below) and therefore **waives/does not waive** the requirement under Site Plan 14-526 (a) 2 c. for curbing along the proposed sidewalk only for those locations where an esplanade of at least 4 feet in width is provided.

   Waiver Criteria

   1. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.
   2. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program or has been funded through an earlier CIP or through other sources.
   3. The street has been rehabilitated without curbing in the last 60 months.
   4. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.
   5. Runoff from the development site or within the street does not require curbing for stormwater management.

3. Bicycle Parking Waiver
   The Planning Board **finds/does not find** that extraordinary conditions exist or undue hardship may result from strict compliance with the Site Plan Standard *(Section 14-526 (a) 4.b)* which requires 27 bicycle parking spaces for this development based on the required vehicle parking spaces. The Planning Board **waives/does not waive** the Site Plan Standard *(Section 14-526(a) 4.b)* to allow the provision of a total of 20 bicycle parking spaces, 10 near the entrance of the proposed new building, and 10 near the entrance of the existing building.

B. DEVELOPMENT REVIEW AND SITE LOCATION OF DEVELOPMENT

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 February 26th, 2019 for application # PL000392-2018 (56 Milliken Street) relevant to the Site Plan and Site Location of Development Act (SLOD) 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 and Site Location of Development Act (SLOD) standards, subject to the following conditions of approval:

Prior to Applying for a Building Permit

1. That the applicant shall revise and submit the plans that relate to the utility crossings (referred to in the Peer Engineer comments dated February 21, 2019) for review and approval by the Planning Authority prior to applying for a building permit.

Prior to Issuance of a Building Permit

2. That the applicant shall submit a detailed design for the sidewalk in the Milliken Street Right-of- Way that incorporates a 5-foot sidewalk with either a 4-foot esplanade (separating the sidewalk from the roadway) or vertical curbing, for review and approval by the Planning Authority prior to the issuance of a building permit.

3. That the applicant shall revise and submit the two Site Plans to show the required bicycle parking spaces (per the Waiver 3 above), and all of the site (pole) lighting as shown on the submitted Photometric Plan.

4. That the applicant shall contribute $42,775 compensation fee to the City's Compensation Fee Utilization Plan for Urban Impaired Streams.

5. That the final stormwater maintenance agreement shall be submitted for review and approval by the Planning Authority and then recorded, with a copy to the Planning Authority and the Department of Public Works.

Prior to the commencement of any work on the site including tree clearance

6. That prior to the Pre-Construction meeting the treesave areas, areas of tree clearance, wetlands to be retained, and areas of wetland to be filled shall be flagged by a surveyor to be consistent with the approved plans, and the contractor shall confirm what measures will be taken to protect treesave and retained wetland areas during construction. Tree save tree protection and wetland protection measures shall be in place prior to the start of Site Work and noted at the Pre-Construction meeting.

During construction

7. That the stormwater installation shall be supervised by an independent "third party" engineer and reports submitted as required under Chapter 500

Prior to the issuance of a Certificate of Occupancy (CO)

8. That the applicant shall install additional building mounted lights on the northern elevation of the existing building that meet the Citys Technical Standards for Site Lighting and provide an expanded area of lighting in the vicinity of the parking allocated for the new building. Proposals for these lights along with a revised Photometric Plan shall be submitted for review and approval prior to their installation, and they shall be installed prior to the Issuance of a Certificate of occupancy.

9. That separate permits from the Permitting and Inspection Department are required for all new signs, including those on the building, and for HVAC systems, which require submission of dBA levels to confirm compliance with the maximum sound limits of the ordinance.

Ongoing

10. That the developer/contractor/subcontractor must comply with conditions of the *Environmental and Stormwater Narrative* dated 2/12/2019 and prepared by CES Inc and based on City standards and state guidelines. The owner/operator of the approved stormwater management system and all assigns shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

11. That the project shall be built and maintained as shown in the approved site plans, including protection of the treesave and retained wetland areas. Any alterations that impact the treesave or retained wetland areas are prohibited unless expressly approved as an amendment with associated analysis of compliance with review standards.

12. That the Planning Board has determined that 238 parking spaces is acceptable based on the submitted demand analysis for the proposed warehousing use. In the event a different use is proposed at the time of a building fit up/permit, the applicant shall provide updated parking demand information and there may be a requirement for additional parking provision at that time.

ATTACHMENTS:

PB REPORT ATTACHMENTS

1. Traffic Engineer Final comments 2.21.19
2. Peer Engineer Final comments 2.21.19
3. City Arborist Workshop Comments
4. Fire Department Workshop Comments

PUBLIC COMMENT

PC1 Portland Trails (submitted for PB Workshop)

APPLICANT'S SUBMITTALS

A. Cover Letter & Application
B. Right, title & Interest
C. Zoning analysis
D. Waiver Table
E. Financial Capability
F. Technical Capability
G. Transportation Analysis incl Parking
H. Environmental & Landscape Narrative
I. SLODA State correspondence
J. Stormwater Management (revised to address review comments)
K. Public Infrastructure and Safety Narrative
L. Site Design Narrative incl lighting specs
M. Construction Management Plan narrative
N. State Permits and Applications
O. Response to comments Dec 2018
P. Neighborhood meeting Cert. & Notes
Q. Wetland Assessment 2019-02-11
R. Response to comments 2.11.19 for Hearing

PLANS

00-CoverSheet
01-Existing Site Plan
02-a Proposed Site Plan updated
02-b Overall Site plan Revised 2.15.19
03-Proposed Utility Plan
04-Site Electrical
05-Details
06-Details
07-Details
08-Pre-Development Hydrology
09-Post-Development Hydrology
10-Photometric Plan
11-Construction Management Site Plan
12- Boundary Survey 56MillikenSt_Signed
13- Floorplans & Elevations

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

56 Milliken Street - Final Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Thu, Feb 21, 2019 at 8:42 AM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Michael Tremblay <mtremblay@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Jean – I have reviewed the revised application materials and offer the following Final Traffic Comments as a status update of previous comments.

- The applicant has conducted a trip generation analysis and the project is not expected to have a significant impact on traffic and safety conditions in the study area. A Traffic Movement Permit is not required.

Status: I have no further comment.

- A sidewalk shall be constructed on Milliken Street from the project driveway to Riverside Industrial Parkway. A fully compliant ADA crosswalk shall be installed to the proposed sidewalk located on the north side of Riverside Industrial Parkway (to be constructed by others).

Status: The current site plan does not provide an acceptable pedestrian facility that meets City standards. As a condition of approval, it is recommended that the Applicant provide a design that incorporates a 5-foot sidewalk with either a 4-foot esplanade (separating the sidewalk from the roadway) or vertical curbing. Final design elements are to be reviewed and approved by City staff.

- I support a waiver for the construction of a sidewalk along the site frontage on Riverside Industrial Parkway given a sidewalk is provided on the other side of the street and pedestrian demand is expected to be primarily destined to the proposed sidewalk on Milliken Street.

Status: I have no further comment.

- It is my understanding that the egress driveway will be widened to 20 feet for emergency vehicle access purposes. It is recommended that the applicant paint a 4-foot area for pedestrians delineated by a 6” white line with painted pedestrian symbols every 75 feet.

Status: The plans have been revised and I have no further comment.

- A sidewalk connection shall be provided between Milliken Street and the entrance to the existing building.

Status: The plans have been revised and I have no further comment.

- Given low traffic volumes, I find the one-way entry and exit circulation pattern to be acceptable.

Status: I have no further comment.

- The applicant has conducted a parking analysis documenting existing and future parking conditions. The analysis documented existing parking demand at the site. According to a survey conducted in October 2018, there were 41 available parking spaces. Based upon a parking demand estimate of 37 parking spaces for the proposed site (estimated from the ITE Parking Generation Manual) the site will have sufficient parking conditions. I concur with this analysis that adequate parking will be provided.

Status: I have no further comment.

- The applicant shall provide a parking management plan that documents the allocation of parking spaces, with a desire to locate parking in proximity to building entrances.

Status: The plans have been revised to note parking allocation and I have no further comment.

- The applicant shall provide greater detail on the site plan in the area to the north of the existing building (where vehicles will travel to access to new site). This shall include dimensioning parking spaces and aisle widths. Additionally, an auto-turn graphic shall be provided that illustrates adequate circulation for trucks entering the new site.

Status: Information have been provided and the plans have been revised. I have no further comment.

If you have any questions, please contact me.

Best regards.

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY·LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
+1.207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+

"One Vision, One Company"

PLAN CORRECTIONS REPORT PL-000392-2018
FOR CITY OF PORTLAND

PLAN ADDRESS: 56 Milliken St
Portland, Maine 04103

PARCEL: 334 A014001

APPLICATION DATE: 10/31/2018

SQUARE FEET: 0.00

DESCRIPTION: Construction of a 72,000 square foot warehouse at 56 Milliken Street with 8 loading bays and an exit drive onto Riverside Industrial Parkway

EXPIRATION DATE:

VALUATION: $0.00

CONTACTS	Name	Company	Address
Agent/Representative	John Kuchinski	CES, Inc.	146 Main Saco, ME 04072

Comments & Corrections Required

City Arborist — Jeff Tarling

Civil Engineering - Third Party Reviewer — Lauren Swett

Comment(s)/ Recommendation(s):

An area of undisturbed wetlands has been left to the west of the building. It is immediately adjacent to a retaining wall and areas to be graded. If the area is to remain as undisturbed, additional erosion and sedimentation control should be provided to protect the area. 2/21/2019 STATUS UPDATE - Applicant has adequately addressed this comment.

In accordance with the Maine DEP Chapter 500 Regulations and Section 5 of the City's Technical Manual, the Applicant is required to meet the Basic, General, and Flooding Standards for Stormwater Management. The Applicant has proposed erosion and sedimentation control features to meet the Basic Standard and grassed underdrained soil filters to help meet the General and Flooding Standards. The following comments should be addressed on the proposed stormwater management plan:
-Please review the time of concentration (TC) numbers that are utilized in the HydroCAD model. It is noted that Post-Development Subcatchment 4 has a larger TC than was utilized for the larger Pre-Development Subcatchment 1 that it is a part of. Also, the general practice is that a minimum TC of 5 or 6 minutes is typically utilized on small subcatchments due to the limitations of the HydroCAD software calculations. This would increase TC values utilized in both the pre-development and post-development models, so it is acknowledged that this likely would have minimal impact on the final model results. 2/21/2019 STATUS UPDATE - Applicant has adequately addressed this comment.
-Please review the HydroCAD input for the proposed underdrained soil filter ponds. It appears based on the review of the output that the model is taking into consideration infiltration at each filter location, but that is not clear from the information shown in the output. Please evaluate why there is zero outflow from each filter. 2/21/2019 STATUS UPDATE - Applicant has adequately addressed this comment.
-Per the DEP standards, a grassed underdrained soil filter should not have a filter area greater than 3,000 SF. The largest proposed filter has a filter area of 3,900 SF. The DEP standard notes that the size restriction is provided due to the difficulty of maintaining large filters. Please adjust the size, or provide justification of a waiver of the size based on the ability to complete adequate maintenance. 2/21/2019 STATUS UPDATE - We are in agreement with the Applicant's assessment of this standard, and the soil filter size and layout is adequate.
-Please provide sediment pre-treatment (forebays) for all grassed underdrained soil filters in accordance with the standards outlined in the Maine DEP's stormwater BMP. A forebay has been provided for the largest filter, but it does not appear to be positioned to receive the runoff from most of the paved area draining to the filter. The Applicant is providing riprap slopes around the perimeter of the filters, which will provide for sediment removal; if this feature is to be used for sediment pre-treatment, specific considerations on how the rip rap slopes can be cleared of sediment should be provided. 2/21/2019 STATUS UPDATE - Applicant has adequately addressed this comment.
-The soil filters are proposed with rip rap side slopes. Please change the detail for the gravel underdrained soil filters to reflect this design. 2/21/2019 STATUS UPDATE - Applicant has adequately addressed this comment.
-A stormwater maintenance agreement will be required for the project. 2/21/2019 STATUS UPDATE - Applicant has noted that this will be provided. A copy will be required as a condition of approval.

The applicant should review the utility crossings to the west of the building. It appears that stormdrain pipes may be in close vertical proximity to the proposed culvert crossing and the sewer line. The size of the culvert crossing and the invert of the sewer services have not been provided on the plans. Please provide this additional information and confirm that the crossings may be adequately made. 2/21/2019 STATUS UPDATE - Additional information has been provided on the proposed culvert. Based on the culvert inverts provided on sheet C102, and the stormdrain inverts provided for DMH3 and it's outlet pipe, it appears that there will be a conflict between the two pipes. The Applicant should address this conflict.

DPW Engineering — Keith Gray

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fwd: Revised plan going to PB workshop 1.2.19

1 message

Jean Fraser <jf@portlandmaine.gov> Fri, Jan 18, 2019 at 10:04 AM
To: "Fraser, Jean" <jf@portlandmaine.gov>

CITY ARBORIST COMMENTS

From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Thu, Jan 17, 2019 at 3:48 PM
Subject: Re: Revised plan going to PB workshop 1.2.19
To: Jean Fraser <jf@portlandmaine.gov>

Jean -

Tree & landscape review for the proposed Milleken project off Riverside Industrial Parkway.

The proposed development is a large warehouse addition to a long existing complex off Riverside Industrial Parkway. As part of this project a pretty significant section of woodland will be removed and a drainage-way filled to complete the necessary site work. While this impact does not trigger local Site Plan regulations or limitations we wanted to at least acknowledge this value.

Our tree & landscape recommendations for this site would be to improve the tree and plant selections to native plant types given the surrounding 'rural' feel to this commercial site.

a) Tree & Landscape Recommendations :

Pin Oak - change to Swamp White Oak

Japanese Juniper - change to 'Blueberry Delight' Common Juniper

Dwarf Boxwood - change to Viburnum or Gro-Low Sumac

White Spruce is native and a good selection for this site.

b) Tree Save delineation & Tree Protection Measures:
Tree save and tree protection measures shall be in place prior to the start of Site Work and noted at the pre-construction conference.

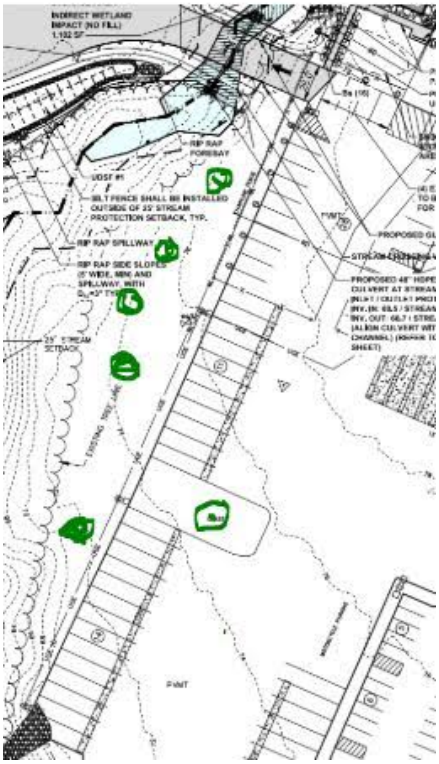
C) Additional tree parking lot tree planting:

Recommend the planting of 5 additional trees near the parking lot edge, acknowledge space for snow snow storage. These trees can be White Pine or White Spruce conifers 5-6' height or Red Maple shade trees and 1 parking lot shade tree on the parking lot island of choice.

Along the project frontage on Riverside Industrial parkway replacing 3 Taxus shrubs, updating them with native trees of the types mentioned above. We feel that the suggested landscape improvements are cost effective and help the project, new and old better blend into the surrounding environment.

Thanks,

Jeff



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

Fire Department comments

Robert Thompson

Comment(s)/ Recommendation(s):

The main entrance to the building must be the address for the property. Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

The proposed new access road shall have a minimum width of twenty feet (20 ft).

12.29.2018

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

October 30, 2018

Ms. Barbara Barhydt
Development Review Manager
City of Portland
389 Congress Street
Portland, ME 04101
bab@portlandmaine.gov

Re: Level III Site Plan Review Application | Plymouth REIT 56 Milliken Street, Portland, Maine

Dear Barbara:

CES, Inc. (CES) is submitting a Level III Site Plan Review application for a 72,000 square foot warehouse building at 56 Milliken Street off Riverside Industrial Parkway. The owner and applicant is Plymouth REIT with offices at 260 Franklin Street, 7th floor, Boston, Massachusetts. The site is the current home of Paradigm Windows and Advance Pierre. This building will provide additional warehouse space within the City of Portland. The new building and impervious area will add 2.98 acres to the exiting 11.4 acres of impervious area. The site was originally developed in 1966. Approximately 5.7 acres or impervious area (building and site impervious) was constructed prior to 1975. In 1994 a major expansion of the building and site impervious area was permitted by the City of Portland under Delegated Authority of Site Location of Development Act (SLODA). There have been revisions to the SLODA. The latest was in 2013 when the City permitted a new loading dock and 26,700 square feet of impervious area. That revision brought the total site impervious area to 11.4 acres. This proposed development will add 2.98 acres of new impervious. The Maine Department of Environmental Protection (MDEP) has not exerted jurisdiction over this project and is allowing the City of Portland to review this project.

The application is divided into Tabs to match the sections of the Level II and Level III Application Submission Checklist. Each Tab has a separate narrative addressing the respective section of the Land Use Ordinance and Technical Manual requirements. Tab 1 contains the basic project information including this cover letter, checklist, Right, Title and Interest, Zoning Assessment, Waiver Requests, Financial Capability, and Technical Capability. Tab 2 addresses Transportation, Tab 3 is Environmental and Landscape Features, Tab 4 is Environmental and Stormwater, Tab 5 is Public Infrastructure and Safety, Tab 6 is Site Design, and Tab 7 is the Construction Management Plan.

465 South Main Street
PO Box 639
Brewer, Maine 04412
T 207.989.4824
F 207.989.4881

Drawings include the following:

Architectural Plans P-T2.1 and P-T2.2 Code Review plans
Architectural Plans P-A1.1 through A2.1 floor plans and elevations
Cover Sheet
C101 Existing Site Plan
C102 Proposed Site Layout and Grading Plan
C103 Proposed Utility Plan
C104 Site Electrical Plan
C501 through C503 Details
C701 Pre-Development Hydrology Plan
C702 Post Development Hydrology Plan
C801 Construction Management Site Plan
C802 Photometric Plan

We are also including a boundary and ALTA survey by SGC Engineering, LLC.

In Tab 1 we have included the Waiver Table to request a waiver from 15-526 (a) 2 c requiring sidewalks on all frontages. Neither Milliken Street nor Riverside Industrial Parkway have sidewalks along the public right-of-way. The area is industrial and not conducive to pedestrian traffic.

Please contact us if we can provide additional information.

Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/gdr
Enc
cc: Jeff Witherell, Plymouth REIT

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

QUITCLAIM DEED WITH COVENANT

KNOW ALL BY THESE PRESENTS, that **Milliken Portland Partners, LLC**, a Massachusetts limited liability company with a mailing address of 40 South Street, Suite 305, Marblehead, MA 01945 (the "Grantor"), for consideration paid, grants to **Plymouth 56 Milliken LLC**, a Delaware limited liability company (the "Grantee"), with a mailing address of 260 Franklin Street, 19th Floor, Boston, MA 02110, with Quitclaim Covenant, the premises in the City of Portland, Cumberland County, State of Maine, described in **Exhibit A** attached hereto and made a part of hereof.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the said Milliken Portland Partners, LLC has caused this instrument to be executed by J. Hilary Rockett, Jr., Manager of JHR Development, LLC, its Manager, hereunto duly authorized this 18TH of November, 2014.

Milliken Portland Partners, LLC, a
Massachusetts limited liability company

By: JHR Development, LLC, its Manager

By:_____
J. Hilary Rockett, Jr., Manager

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

On this 18th day of November, 2014, before me, the undersigned notary public, personally appeared **J. Hilary Rockett, Jr.**, proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☑ personal knowledge of the undersigned, ☐ oath or affirmation of a credible witness, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily and for its stated purpose as Manager of JHR Development, LLC, Manager of Milliken Portland Partners, LLC.

Notary Public:
My commission expires:

JULIA M. WHALL
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
July 24, 2020

EXHIBIT A

(56 Milliken Street, Portland, Cumberland County, Maine)

TRACT I:

A certain lot or parcel of land with any buildings thereon situated easterly of Riverside Industrial Parkway and Northerly of Milliken Street in the City of Portland, County of Cumberland and State of Maine, to wit:

BEGINNING on the westerly side of land now or formerly of the Portland Terminal Company at a drill hole in a found stone at the northerly corner at land now or formerly owned by Portland Water District;

Thence, South 55°14'20" West, 71.28 feet along said Water District land to a point;

Thence, North 21°15'40" West, 17.82 feet along said Water District land to a point;

Thence, South 74°52'45" West, 31.62 feet along said Water District land to a point near an iron pipe;

Thence, South 55°51'08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence, North 21°16'37" West, 555.77 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence, South 68°44'47" West, 114.56 feet to a point near a 5/8" rebar;

Thence, North 14°55'55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2 feet from the terminus of said course, to a point;

Thence, South 75°08'46" West, 328.45 feet along said Milliken Street LLC land to a point;

Thence, South 13°13'08" West, 61.39 feet along said Milliken Street LLC land to a point;

Thence, South 68°44'47" West, 143.78 feet to a point in the easterly line of Milliken Street;

Thence, along easterly line North 56°10'30" West, 92.98 feet to a point;

Thence, North 56°04'53" West, 117.32 feet to a point;

Thence, leaving said easterly line North 34°51'20" East, 213.80 feet to a point;

Thence, North 35°56'16" West, 781.79 feet to a point in the easterly right-of-way of Riverside Industrial Parkway;

Thence, along said easterly right-of-way line North 18°39'48" East, 204.96 feet to a point;

Thence, leaving said easterly right-of-way North 68°40'30" East, 849.45 feet to a point in the westerly sideline of said Portland Terminal Company land;

Thence, along said westerly line along a curve deflecting to the left having a radius of 2,902.78 feet, an arc of 178.13 feet, a chord bearing of South 15°42'18" East, a chord of 178.10 feet to a point;

Thence, along a curve deflecting to the left having a radius of 6,422.46 feet, an arc of 427.82 feet, a chord bearing of South 19°21'10" East, a chord of 427.74 feet to a point;

Thence, South 21°15'40" East, 521.66 feet to a point;

Thence, South 57°03'20" West, 16.85 feet to a point;

Thence, South 21°15'40" East, 619.95 feet to the POINT OF BEGINNING, containing 25.75 acres.

Being the Tract I of the premises conveyed to Grantor by deed of C&S Logistics of Portland LLC, dated as of August 10, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21653, Page 272.

TRACT II:

A certain lot or parcel of land situated Easterly of Riverside Industrial Parkway & Northerly of Milliken Street in the City of Portland, County of Cumberland, Maine to wit:

COMMENCING at a point on the westerly side of land now or formerly of the Portland Terminal Company t the northerly corner of the land now or formerly owned by the Portland Water District;

Thence South 55°14'20" West, 71.28 feet along said Water District Land to a point;

Thence North 21°15'40" West, 17.82 feet along said Water District Land to a point;

Thence South 74°52'45" West, 31.62 feet along said Water District Land to a point near an iron pipe;

Thence South 55°51'08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence North 21°16'37" West, 555.77 feet along said Milliken Street LLC land to a 5/8" rebar;

Thence South 68°44'47" West, 114.56 feet along said Milliken Street LLC land to a point near a 5/8" rebar;

Thence North 14°55'55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2 feet from the terminus of said course, to a point;

Thence South 75°08'46" West, 328.45 feet along said Milliken Street LLC land to a point;

Thence South 13°13'08" West, 61.39 feet along said Milliken Street LLC land to a point;

Thence South 68°44'47" West, 143.78 feet to a point in the easterly line of Milliken Street;

Thence along said easterly line North 56°10'30" West, 92.98 feet to a point;

Thence North 56°04'53" West, 117.32 feet to the true point of beginning;

Thence continuing along the easterly line of Milliken Street North 56°04'53" West, 280.50 feet to a point;

Thence North 63°50'00" West, 258.77 feet to a point at the Intersection of said easterly line and the southern line of land conveyed to ADC Building Fund Inc. by Davis-Greene Co. dated December 18, 1962, recorded in Book 2723, Page 182;

Thence leaving said easterly line along said southern line North 55°47'03" West, 91.92 feet to a point at the intersection of said easterly line and said southern line;

Thence leaving said southern line along said easterly line of Milliken Street along a curve deflecting to the right having a radius of 50.00' and arc of 49.66', a chord bearing of North 06°39'55" East, a chord of 47.64', to a point at the intersection of said easterly line of Milliken Street and the easterly line of Riverside Industrial Parkway;

Thence leaving said easterly line of Milliken Street along said easterly line of Riverside Industrial Parkway along a curve deflecting to the left having a radius of 1171.67', an arc of 336.46, a chord bearing of North 26° 53' 24" East, a chord of 335.31' to a point;

Thence North 18°39'48" East, 147.48 feet to a point;

Thence leaving said easterly line along a line between Tract I and II South 35°56'16" East, 781.79 feet to a point;

Thence South 34°51'20" West, 213.80 feet to the true POINT OF BEGINNING, containing 5.46 acres.

Being Tract II of the premises conveyed to Grantor by deed of C&S Logistics of Portland LLC, dated as of August 10, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21653, Page 272.

Tracts I and II are conveyed SUBJECT TO:

a. Rights and easements granted to Central Maine Power Company and Verizon New England, Inc. in a certain utility easement dated January 21, 2005, recorded in the Cumberland County Registry of Deeds in Book 22575, Page 21.

b. Current zoning restrictions.

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) I-M

All Projects:

	Required	Proposed
Lot Size	None	31.21 acres
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	60 Ft.	841.49 Ft.
Front Yard Minimum	1 Ft. per Bld Ht	458.9 Ft.
Front Yard Maximum	N/A	N/A
Rear Yard	25 Ft.	47.4 Ft.
Yard Right	25 Ft.	186.8 Ft.
Yard Left	25 Ft.	52 Ft.
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	75 %	
Minimum Lot Coverage	N/A	N/A
Maximum Height	75 Ft.	
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	10 Ft.	
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces		
Loading Bays		
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):			

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Standard Section 14-526 (a)(2)(c)	All proposed developments shall provide sidewalks along all frontages in accordance with Sections 14-498 and 14-499 of the City Code, installed to City specifications as described in Section 1 of the Technical Manual.	We are requesting a waiver from the requirement to construct sidewalks on the public frontages.	Neither Milliken Street nor Riverside Industrial Parkway has pedestrian sidewalks, There are not any City sidewalks within 1000 feet or more of the site

Att. E

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

August 8, 2018
Date of Report (Date of earliest event reported)

PLYMOUTH INDUSTRIAL REIT, INC.
(Exact Name of Registrant as Specified in Its Charter)

MARYLAND	001-38106	27-5466153
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

260 Franklin Street, 7th Floor
Boston, MA 02110
(Address of Principal Executive Offices) (Zip Code)

(617) 340-3814
(Registrant's Telephone Number, Including Area Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition

On August 8, 2018, Plymouth Industrial REIT, Inc. (the "Company") issued a press release (the "Earnings Release") announcing, among other things, earnings for the quarter ended June 30, 2018. The text of the Earnings Release is included as Exhibit 99.1 to this Current Report.

The Earnings Release is furnished pursuant to Item 2.02 and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or subject to the liabilities of that Section. The information in this Current Report shall not be incorporated by reference in any filing under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 7.01 Regulation FD Disclosure.

On August 8, 2018, the Company disclosed a supplemental analyst package in connection with its earnings conference call for the quarter ended June 30, 2018 which will take place on August 9, 2018. A copy of the supplemental analyst package is attached hereto as Exhibit 99.2.

The supplemental analyst package is furnished pursuant to Item 7.01 and shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or subject to the liabilities of that Section. The information in this Current Report shall not be incorporated by reference in any filing under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits:

Exhibit No.	Description
99.1	Press Release dated August 8, 2018
99.2	Supplemental Analyst Package – Second Quarter 2018

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PLYMOUTH INDUSTRIAL REIT, INC.

Date: August 8, 2018

By: */s/ Jeffrey E. Witherell*
Jeffrey E. Witherell
Chief Executive Officer

Exhibit 99.1

Contact:
Tripp Sullivan
SCR Partners
(615) 760-1104
TSullivan@scr-ir.com

PLYMOUTH INDUSTRIAL REIT REPORTS SECOND QUARTER RESULTS AND AFFIRMS GUIDANCE

BOSTON, August 8, 2018 – Plymouth Industrial REIT, Inc. (NYSE America: PLYM) (the "Company") today announced its consolidated financial results for the quarter ended June 30, 2018 and other recent developments. A comparison of the reported amounts per share for the second quarter of 2018 to prior-year periods has been affected by an increase in the common stock outstanding resulting from the completion of, and the use of proceeds from, the Company's initial public offering (the "IPO") in June 2017 and its preferred stock offering in October 2017, as discussed below.

Second Quarter and Subsequent Highlights

- Reported results for the second quarter of 2018 reflect a net loss attributable to common stockholders of $7.7 million, or $(2.27) per weighted average common share, including a loss on extinguishment of debt of $3.6 million; net operating income ("NOI") of $8.2 million; Funds from Operations ("FFO") of $2.5 million; FFO attributable to common stockholders and unit holders of $0.39 per weighted average common share and units; and Adjusted FFO ("AFFO") of $0.42 per weighted average common share and units.
- For the second quarter of 2018, declared a regular quarterly cash dividend of $0.375 for the common stock and a regular quarterly cash dividend of $0.46875 per share for the 7.50% Series A Cumulative Redeemable Preferred Stock ("the Preferred Stock").
- On April 9, 2018, the Company acquired two Class B industrial properties totaling 270,000 square feet in the Chicago area for $15.675 million in cash and a projected initial yield of 8.0%.
- From April to July 2018, the Company completed a series of financings totaling $135 million that eliminated variable rate and higher interest rate debt, resulting in 80% of its total debt at fixed rates maturing over the next 5 to 10 years with a weighted average interest rate of 4.13%.
- On July 23, 2018, the Company completed an underwritten registered public offering of 1.1 million shares of common stock that resulted in net proceeds of approximately $16.0 million.

Jeff Witherell, Chairman and Chief Executive Officer of Plymouth Industrial REIT, noted, "Our focus continues to be on improving our portfolio through re-leasing, asset management and acquisitions as well as enhancing our capital structure. We made major strides on all fronts as we had over 857,000 square feet of new and renewal leases commencing this quarter, bringing our occupancy to 93.4%. The reconciliation of the balance sheet was substantial as we completed over $135 million of new financings that locked up 80% of our debt with low, long-term fixed rates and eliminated high interest rate mezzanine debt. The recent overnight follow-on offering also raised $16 million in equity while enabling us to achieve shelf registration eligibility, which should improve our future ability to access capital when the market is appropriately rewarding the embedded value we have created in the portfolio."

Financial Results for the Second Quarter of 2018

The completion of the IPO on June 14, 2017 and a preferred stock offering on October 25, 2017 provided the Company with a meaningfully different capital structure compared to the prior-year period. The Company believes the use of IPO proceeds and related higher share count, makes year-over-year comparisons less meaningful, particularly on a per share basis.

Net loss attributable to common stockholders for the quarter ended June 30, 2018 was $7.7 million, or $(2.27) per weighted average common share outstanding, compared with net loss attributable to common stockholders of $1.2 million, or $(1.26) per weighted average common share, for the same period in 2017. The increase in net loss for the second quarter of 2018 was primarily due to an increase in depreciation and amortization expense of $3.7 million, a Loss on Debt Extinguishment of $3.6 million related to the payoff of the prior mezzanine debt, and, increased general and administrative expense for professional fees related to public company requirements of approximately $160,000.

Consolidated total revenues for the quarter ended June 30, 2018 were $12.0 million, compared with $5.0 million for the same period in 2017.

Net operating income (NOI) for the quarter ended June 30, 2018 was $8.2 million compared with NOI of $3.5 million for the same period in 2017. NOI in the current quarter included a one-time reduction in operating expenses for real estate tax accruals of $520,000.

EBITDA for the quarter ended June 30, 2018 was $6.7 million compared with $2.2 million for the same period in 2017.

FFO for the quarter ended June 30, 2018 was $2.5 million compared with $(583,000) for the same period in 2017, primarily as a result of significantly higher NOI, the adjustment for loss on extinguishment of debt and the increase in weighted average shares following the IPO in June 2017. FFO attributable to common stockholders and unit holders for the quarter ended June 30, 2018 was $1.6 million, or $0.39 per weighted average common share and units, compared with $(583,000), or $(0.63) per weighted average common share, for the same period in 2017. The increase was due to the reasons noted above for FFO, offset by $1.0 million of preferred stock dividends.

AFFO for the quarter ended June 30, 2018 was $1.7 million, or $0.42 per weighted average common share and units, compared with $(399,000), or $(0.43) per weighted average common share, for the same period in 2017, primarily driven by the change in FFO, an increase in deferred finance fees and non-cash interest of $655,000 offset by increased straight line rent and above/below market rent adjustments and recurring capital expenditures and lease commissions of approximately $813,000 incurred in the quarter and the increase in weighted average shares following the IPO in June 2017.

Investment Activity
As of June 30, 2018, the Company had real estate investments comprised of 51 industrial properties totaling 9.5 million square feet with occupancy of 93.4%. On April 9, 2018, the Company completed the acquisition of two single-tenant Class B industrial properties totaling 270,000 square feet in the greater Chicago area for $15.675 million in total consideration. The purchase price is projected to provide an initial yield of 8.0%.

Leasing Activity
Leases commencing during the second quarter totaled an aggregate of 857,000 square feet, of which 812,000 square feet was for leases of at least six months. The leases six months or longer included 147,000 square feet of renewal leases and 665,000 square feet of new leases. The Company will experience an 8.4% increase in rental rates on a cash basis from these leases. The leasing activity for the quarter was heavily influenced by the 527,127-square-foot lease that commenced in April 2018 at the Company's property at 3500 Southwest Boulevard in Columbus, Ohio.

For the six months ended June 30, 2018, leases executed totaled 1,362,000 square feet, of which 1,121,000 square feet was for leases of at least six months. The leases six months or longer included 294,000 square feet of renewal leases and 827,000 square feet of new leases. The Company will experience a 7.7% increase in rental rates, on a cash basis, from all of the leases executed in the first six months of 2018 with a lease term of at least six months.

Capital Markets Activity
On April 30, 2018, the Company closed on a 10-year, $21.5 million mortgage with a fixed interest rate of 3.78% that is secured by seven industrial properties. Proceeds from the new financing were used to pay down outstanding borrowings on the Company's senior secured revolving credit facility.

On May 24, 2018, the Company repaid in full its outstanding mezzanine debt, which was scheduled to mature in October 2023 and had an interest rate of 15.0%, with proceeds from a new $35.7 million senior secured term loan that bears interest at LIBOR plus 700 basis points and matures in August 2021.

On July 10, 2018, the Company closed on a new 10-year $78.0 million loan with a fixed interest rate of 4.35% and secured by 18 Chicago area properties. The proceeds, together with additional working capital, were used to repay in full the Company's $79.8 million variable rate secured term loan that was scheduled to mature in December 2019 and had a floating interest rate of 310 basis points over LIBOR.

On July 23, 2018, the Company closed on an underwritten registered public offering of 1.1 million shares of its common stock, resulting in net proceeds to the Company of approximately $16.2 million.

Quarterly Distributions to Stockholders
On June 1, 2018, the Company's Board of Directors declared a regular quarterly cash dividend of $0.46875 per share for the Company's Preferred Stock for the second quarter of 2018. The dividend was paid on July 2, 2018 to stockholders of record on June 15, 2018.

On June 14, 2018, the Company's Board of Directors declared a regular quarterly cash dividend of $0.375 per share for Company's common stock for the second quarter of 2018. The dividend was payable on July 31, 2018, to stockholders of record on June 29, 2018.

2018 Outlook
The Company affirmed its 2018 guidance for revenues and NOI previously issued on May 3, 2018. The information provided contains estimates based on the Company's anticipated results of operations for 2018. All estimates exclude any potential impact from additional acquisitions:

- Total revenues of $44.8 million to $45.6 million
- Net operating income of $28.9 million to $29.8 million
- General and administrative expenses of $5.0 million to $5.7 million, including non-cash expenses of $0.8 million to $1.0 million
- 5.1 million common shares and operating partnership units outstanding

Earnings Conference Call and Webcast
The Company will host a conference call and live audio webcast, both open for the general public to hear, on Thursday, August 9, 2018 at 10:00 a.m. Eastern Time. The number to call for this interactive teleconference is (412) 717-9587. A replay of the call will be available through August 16, 2018, by dialing (412) 317-0088 and entering the replay access code, 10122697.

The live audio webcast of the Company's quarterly conference call will be available online in the Investor Relations section of the Company's website at www.plymouthreit.com. The online replay will be available approximately one hour after the end of the call and archived for approximately 90 days.

About Plymouth
Plymouth Industrial REIT, Inc. is a vertically integrated and self-managed real estate investment trust focused on the acquisition and operation of single and multi-tenant industrial properties located in secondary and select primary markets across the United States. The Company seeks to acquire properties that provide income and growth that enable the Company to leverage its real estate operating expertise to enhance shareholder value through active asset management, prudent property re-positioning and disciplined capital deployment.

Forward-Looking Statements
This press release includes "forward-looking statements" that are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933 and of Section 21E of the Securities Exchange Act of 1934. The forward-looking statements in this release do not constitute guarantees of future performance. Investors are cautioned that statements in this press release, which are not strictly historical statements, including, without limitation, statements regarding management's plans, objectives and strategies, constitute forward-looking statements. Such forward-looking statements are subject to a number of known and unknown risks and uncertainties that could cause actual results to differ materially from those anticipated by the forward-looking statement, many of which may be beyond our control. Forward-looking statements generally can be identified by the use of forward-looking terminology such as "may," "plan," "seek," "will," "expect," "intend," "estimate," "anticipate," "believe" or "continue" or the negative thereof or variations thereon or similar terminology. Any forward-looking information presented herein is made only as of the date of this press release, and we do not undertake any obligation to update or revise any forward-looking information to reflect changes in assumptions, the occurrence of unanticipated events, or otherwise.

PLYMOUTH INDUSTRIAL REIT, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
UNAUDITED
(In thousands, except share and per share amounts)

	June 30, 2018	December 31, 2017
Assets		
Real estate properties	$ 320,863	$ 303,402
Less accumulated depreciation	(32,809)	(25,013)
Real estate properties, net	288,054	278,389
Cash	4,311	12,915
Cash held in escrow	6,221	5,074
Restricted cash	1,596	1,174
Deferred lease intangibles, net	25,020	27,619
Other assets	7,430	4,782
Total assets	$ 332,632	$ 329,953
Liabilities, Series A Preferred Stock and Equity		
Liabilities:		
Secured debt, net	251,919	195,431
Mezzanine debt, net	—	29,364
Borrowings under line of credit, net	18,678	20,837
Deferred interest	—	1,357
Accounts payable, accrued expenses and other liabilities	16,864	16,015
Deferred lease intangibles, net	6,657	6,807
Total Liabilities	294,118	269,811
Preferred stock, Series A; $0.01 par value, 100,000,000 shares authorized; 2,040,000 shares issued and outstanding (aggregate liquidation preference of $51,000)	48,868	48,931
Equity (Deficit):		
Common stock, $0.01 par value: 900,000,000 shares authorized; 3,556,043 and 3,819,201 shares issued and outstanding at June 30, 2018 and December 31, 2017, respectively	36	39
Additional paid in capital	114,085	123,270
Accumulated deficit	(129,982)	(119,213)
Total stockholders' equity (deficit)	(15,861)	4,096
Non-controlling interest	5,507	7,115
Total equity (deficit)	(10,354)	11,211
Total liabilities, Series A preferred stock and equity	$ 332,632	$ 329,953

PLYMOUTH INDUSTRIAL REIT, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
UNAUDITED
(In thousands, except share and per share amounts)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2018	2017	2018	2017
Rental revenue	$ 9,019	$ 3,650	$ 17,503	$ 7,295
Tenant recoveries	2,957	1,376	5,903	2,669
Other revenue	71	1	521	1
Total revenues	12,047	5,027	23,927	9,965
Operating expenses:				
Property	3,787	1,517	8,240	2,925
Depreciation and amortization	6,444	2,785	12,986	5,557
General and administrative	1,533	1,209	2,905	1,933
Acquisition costs	—	82	—	82
Total operating expenses	11,764	5,593	24,131	10,497
Operating income/(loss)	283	(566)	(204)	(532)
Other expense:				
Interest expense	(4,216)	(2,802)	(8,202)	(5,743)
Loss on debt extinguishment	(3,601)	—	(3,601)	—
Total other expense	(7,817)	(2,802)	(11,803)	(5,743)
Net loss	$ (7,534)	$ (3,368)	$ (12,007)	$ (6,275)
Net loss attributable to non-controlling interest	$ (829)	$ (2,209)	$ (1,292)	$ (4,674)
Net loss attributable to Plymouth Industrial REIT, Inc.	$ (6,705)	$ (1,159)	$ (10,715)	$ (1,601)
Less: Series A preferred stock dividends	956	—	1912	—
Less: amount allocated to participating securities	46	—	107	—
Net loss attributable to common shareholders	$ (7,707)	$ (1,159)	$ (12,734)	$ (1,601)
Net loss per share attributable to Plymouth Industrial REIT, Inc. common stockholders	$ (2.27)	$ (1.26)	$ (3.61)	$ (2.55)
Weighted-average common shares outstanding basic and diluted	3,400,012	922,885	3,522,959	629,057

Non-GAAP Financial Measures Definitions

Net Operating Income (NOI): We consider net operating income, or NOI, to be an appropriate supplemental measure to net income because it helps both investors and management understand the core operations of our properties. We define NOI as total revenue (including rental revenue, tenant reimbursements, management, leasing and development services revenue and other income) less property-level operating expenses including allocated overhead. NOI excludes depreciation and amortization, general and administrative expenses, impairments, gain/loss on sale of real estate, interest expense, and other non-operating items.

EBITDA: We believe that earnings before interest, taxes, depreciation and amortization, or EBITDA, is helpful to investors as a supplemental measure of our operating performance as a real estate company because it is a direct measure of the actual operating results of our industrial properties. We also use this measure in ratios to compare our performance to that of our industry peers. EBITDA as presented herein is equal to EBITDAre as defined by NAREIT.

Funds From Operations attributable to common stockholders ("FFO"): Funds from operations, or FFO, is a non-GAAP financial measure that is widely recognized as a measure of REIT operating performance. We consider FFO to be an appropriate supplemental measure of our operating performance as it is based on a net income analysis of property portfolio performance that excludes non-cash items such as depreciation. The historical accounting convention used for real estate assets requires straight-line depreciation of buildings and improvements, which implies that the value of real estate assets diminishes predictably over time. Since real estate values rise and fall with market conditions, presentations of operating results for a REIT, using historical accounting for depreciation, could be less informative. We define FFO, consistent with the National Association of Real Estate Investment Trusts, or NAREIT, definition, as net income, computed in accordance with GAAP, excluding: gains (or losses) from sales of property, depreciation and amortization of real estate assets, impairment losses, losses on extinguishment of debt and after adjustments for unconsolidated partnerships and joint ventures. Adjustments for unconsolidated partnerships and joint ventures will be calculated to reflect FFO on the same basis. Other equity REITs may not calculate FFO (in accordance with the NAREIT definition) as we do, and, accordingly, our FFO may not be comparable to such other REITs' FFO. FFO should not be used as a measure of our liquidity, and is not indicative of funds available for our cash needs, including our ability to pay dividends.

Adjusted Funds From Operations attributable to common stockholders ("AFFO"): Adjusted funds from operation, or AFFO, is presented in addition to FFO. AFFO is defined as FFO, excluding certain non-cash operating revenues and expenses, acquisition and transaction related costs for transactions not completed and recurring capitalized expenditures. Recurring capitalized expenditures includes expenditures required to maintain and re-tenant our properties, tenant improvements and leasing commissions. AFFO further adjusts FFO for certain other non-cash items, including the amortization or accretion of above or below market rents included in revenues, straight line rent adjustments, impairment losses, non-cash equity compensation and non-cash interest expense.

We believe AFFO provides a useful supplemental measure of our operating performance because it provides a consistent comparison of our operating performance across time periods that is comparable for each type of real estate investment and is consistent with management's analysis of the operating performance of our properties. As a result, we believe that the use of AFFO, together with the required GAAP presentations, provide a more complete understanding of our operating performance.

As with FFO, our reported AFFO may not be comparable to other REITs' AFFO, should not be used as a measure of our liquidity, and is not indicative of our funds available for our cash needs, including our ability to pay dividends.

PLYMOUTH INDUSTRIAL REIT, INC.
SUPPLEMENTAL RECONCILIATION OF NON-GAAP DISCLOSURES
UNAUDITED
(In thousands, except share and per share amounts)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
NOI:	**2018**	**2017**	**2018**	**2017**
Net loss	$ (7,534)	$ (3,368)	$ (12,007)	$ (6,275)
General and administrative	1,533	1,209	2,905	1,933
Acquisition costs	—	82	—	82
Depreciation and amortization	6,444	2,785	12,986	5,557
Interest expense	4,216	2,802	8,202	5,743
Loss on debt extinguishment	3,601	—	3,601	—
Other expense (income)	(71)	(1)	(521)	(1)
NOI	$ 8,189	$ 3,509	$ 15,166	$ 7,039

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
EBITDA:	**2018**	**2017**	**2018**	**2017**
Net loss	$ (7,534)	$ (3,368)	$ (12,007)	$ (6,275)
Depreciation and amortization	6,444	2,785	12,986	5,557
Interest expense	4,216	2,802	8,202	5,743
Loss on debt extinguishment	3,601	—	3,601	—
EBITDA	$ 6,727	$ 2,219	$ 12,782	$ 5,025

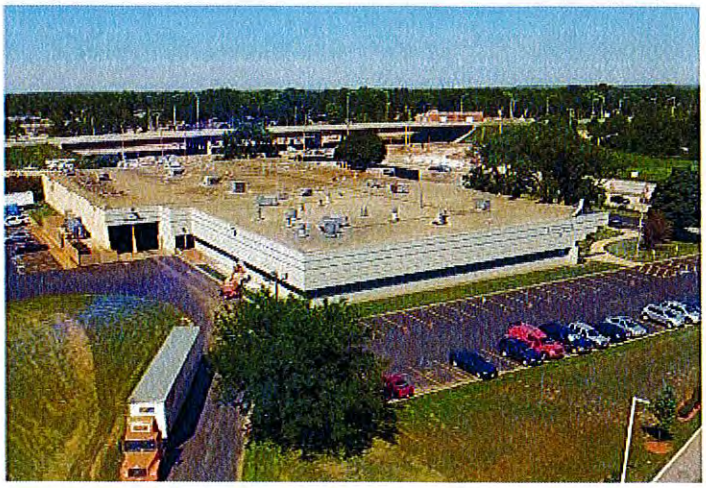
	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
FFO:	**2018**	**2017**	**2018**	**2017**
Net loss	$ (7,534)	$ (3,368)	$ (12,007)	$ (6,275)
Depreciation and amortization	6,444	2,785	12,986	5,557
Loss on debt extinguishment	3,601	—	3,601	—
FFO:	$ 2,511	$ (583)	$ 4,580	$ (718)
Preferred stock dividends	(956)	—	(1,912)	—
FFO attributable to common stockholders and unit holders	$ 1,555	$ (583)	$ 2,668	$ (718)
Weighted average common shares and units outstanding	3,977	923	4,104	629
FFO attributable to common stockholders and unit holders per share	$ 0.39	$ (0.63)	$ 0.65	$ (1.14)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
AFFO:	**2018**	**2017**	**2018**	**2017**
FFO attributable to common stockholders and unit holders	$ 1,555	$ (583)	$ 2,668	$ (718)
Deferred finance fee amortization	466	171	854	765
Non-cash interest expense	560	200	806	200
Acquisition costs	—	82	—	82
Stock compensation	200	35	400	35
Straight line rent	(461)	(32)	(818)	(76)
Above/below market lease rents	(306)	(83)	(717)	(166)
Recurring capital expenditure (1)	(350)	(189)	(1,342)	(232)
AFFO:	$ 1,664	$ (399)	$ 1,851	$ (110)
Weighted average common shares and units outstanding	3,977	923	4,104	629
AFFO per share	$ 0.42	$ (0.43)	$ 0.45	$ (0.17)

(1) Excludes non-recurring capital expenditures of $874 and $13 for the three months ended June 30, 2018 and 2017, respectively, and $1,247 and $13 for the six months ended June 30, 2018 and 2017, respectively.

PLYMOUTH REIT

Second Quarter 2018
Supplemental



Plymouth Industrial REIT, Inc.

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Forward looking statements: This supplemental package contains forward-looking statements within the meaning of the U.S. federal securities laws. We make statements in this supplemental package that are forward-looking statements, which are usually identified by the use of words such as "anticipates," "believes," "estimates," "expects," "intends," "may," "plans" "projects," "seeks," "should," "will," and variations of such words or similar expressions. Our forward-looking statements reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. Although we believe that our plans, intentions, expectations, strategies and prospects as reflected in or suggested by our forward-looking statements are reasonable, we can give no assurance that our plans, intentions, expectations, strategies or prospects will be attained or achieved and you should not place undue reliance on these forward-looking statements. Furthermore, actual results may differ materially from those described in the forward-looking statements and may be affected by a variety of risks and factors. Any forward-looking statement speaks only as of the date on which it is made. New risks and uncertainties arise over time, and it is not possible for us to predict those events or how they may affect us. Except as required by law, we are not obligated to, and do not intend to, update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Definitions and reconciliations: For definitions of certain terms used throughout this supplemental, including certain non-GAAP financial measures, see the Glossary on pages 17. For reconciliations of the non-GAAP financial measures to the most directly comparable GAAP measures, see pages 9-11.

Management, Board of Directors & Investor Contacts

Corporate

260 Franklin Street, Suite 700
Boston, Massachusetts 02110
617.340.3814
www.plymouthreit.com

Executive and Senior Management

Jeffrey E. Witherell
Chief Executive Officer
and Chairman

Pendleton P. White, Jr.
President and Chief Investment
Officer

Daniel C. Wright
Executive Vice President
and Chief Financial Officer

Board of Directors

Martin Barber
Independent Director

Philip S. Cottone
Independent Director

Richard J. DeAgazio
Independent Director

David G. Gaw
Independent Director

Pendleton P. White, Jr.
President and Chief Investment
Officer

Jeffery E. Witherell
Chief Executive Officer
and Chairman

Transfer Agent

Continental Stock Transfer & Trust Company
1 State Street, 30th Floor
New York, New York 10004
212.509.4000

Investor Relations

Tripp Sullivan
SCR Partners
615.760.1104
TSullivan@scr-ir.com

Executive Summary

Company overview: Plymouth Industrial REIT, Inc. (NYSE American: PLYM) is a vertically integrated and self-managed real estate investment trust focused on the acquisition and operation of single and multi-tenant industrial properties located in secondary and select primary markets across the United States. The Company seeks to acquire properties that provide income and growth that enable the Company to leverage its real estate operating expertise to enhance shareholder value through active asset management, prudent property re-positioning and disciplined capital deployment.

Unaudited

Select Portfolio Statistics	As of 06/30/18
Number of Properties	51
Square Footage	9,484,117
Occupancy	93.4%
Weighted Average Lease Term Remaining	3.29

Balance Sheet ($ in thousands)	
Cash	$ 12,128
Gross Assets	$ 381,258
Total Debt	$ 276,150
Net Debt (Total Debt less Cash)	$ 264,022
Net Debt / Gross Assets	69.3%

	For the three months ended June 30,	
Operating results ($ in thousands)	**2018**	**2017**
Total revenue	$ 12,047	$ 5,027
Net operating income	$ 8,189	$ 3,509

2018 Capital Activity ($ in thousands)		
Increased secured line of credit agreement with KeyBank National	3/8/2018	$ 45,000
Secured 10 year term loan with Minnesota Insurance	4/30/2018	$ 21,500
Secured term loan with KeyBank	5/23/2018	$ 35,700
Repaid Torchlight Mezzanine Loan	5/24/2018	$ (35,000)
Subsequent Capital Activity:		
Secured 10 year term loan with Aegon	7/10/2018	$ 78,000
Repaid MWG Portfolio Loan	7/10/2018	$ (79,800)
Issued 1,102,464 common shares @ $15.60 per share	7/23/2018	$ 16,253
Paid down KeyBank Term Loan	7/25/2018	$ (4,064)

Transaction Activity Since IPO

Unaudited ($ in thousands) (at 6/30/2018)

Acquisitions

Location	Acquisition Date	# of Properties	Purchase Price (1)	Square Footage	Projected Initial Yield
Elgin/Arlington Heights, IL	4/9/2018	2	$ 15,675	269,999	8.0%
Elgin, IL	12/22/2017	1	4,050	75,000	9.7%
Atlanta. GA	12/21/2017	3	11,425	330,361	8.3%
Multiple	11/30/2017	15	99,750	3,027,987	8.1%
Memphis, TN	9/8/2017	1	3,700	131,904	8.6%
Memphis, TN	8/16/2017	1	7,825	235,000	10.5%
Columbus, OH	8/16/2017	1	3,700	121,440	9.0%
Indianapolis, IN	8/11/2017	2	16,875	606,871	8.5%
Southbend, IN	7/20/2017	5	26,000	667,000	8.5%
Total - Acquisitions		**31**	**$ 189,000**	**5,465,562**	

(1) Represents total consideration paid rather than GAAP cost basis.

Plymouth Industrial REIT, Inc.

Capitalization Analysis

Unaudited (in thousands except for per-share data and percentages)

	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Common Stock Data				
Weighted-Average Shares Outstanding - Basic	3,400	3,647	3,656	3,636
Weighted-Average Shares Outstanding - Diluted	3,400	3,647	3,656	3,636
High Closing Price	$ 17.91	$ 18.52	$ 18.98	$ 19.00
Low Closing Price	$ 15.09	$ 16.25	$ 17.22	$ 16.50
Average Closing Price	$ 16.99	$ 17.46	$ 18.15	$ 17.90
Closing Price (as of period end)	$ 16.00	$ 17.18	$ 18.48	$ 18.21
Dividends / Share (annualized) (1)	$ 1.50	$ 1.50	$ 1.50	$ 1.50
Dividend Yield (annualized) (2)	9.4%	8.7%	8.1%	8.2%
Common Shares Outstanding (2)	3,556	3,556	3,819	3,813
Market Value of Common Shares (2)	$ 56,896	$ 61,092	$ 70,579	$ 69,433
Total Market Capitalization (2) (3)	$ 333,046	$ 314,217	$ 321,704	$ 243,258

Equity Research Coverage (4)

D.A. Davidson & Co.
Barry Oxford
646.885.5423

National Securities Corporation
John Benda
212.417.8127

Investor Conference Call and Webcast:
The Company will hold a conference call and live audio webcast, both open for the general public to hear, on August 9, 2018 at 10:00 a.m. Eastern Time. The number to call for this interactive teleconference is (412) 717-9587. A replay of the call will be available through August 16, 2018 by dialing (412) 317-0088 and entering the replay access code, 10122697.

(1) Based on annualized dividend declared for the quarter.
(2) Based on closing price and ending shares for the last trading day of the quarter.
(3) Market value of shares plus total debt as of quarter end.
(4) The analysts listed provide research coverage on the Company. Any opinions, estimates or forecasts regarding the Company's performance made by these analysts are theirs alone and do not represent opinions, estimates or forecasts by the Company or its management. The Company does not by reference above imply its endorsement of or concurrence with such information, conclusions or recommendations.

Plymouth Industrial REIT, Inc.

Consolidated Balance Sheets (unaudited)

(in thousands)

	6/30/2018	3/31/2018	12/31/2017 (1)	9/30/2017
Assets:				
Real estate properties:				
Land	$ 63,688	$ 59,799	$ 59,797	$ 25,069
Building and improvements	257,175	244,428	243,605	165,066
Less accumulated depreciation	(32,809)	(28,828)	(25,013)	(22,094)
Total real estate properties, net	**$ 288,054**	**$ 275,399**	**$ 278,389**	**$ 168,041**
Cash and cash equivalents	12,128	13,097	19,163	10,818
Deferred lease intangibles, net	25,020	25,297	27,619	16,446
Other assets	7,430	5,284	4,782	2,286
Total assets	**$ 332,632**	**$ 319,077**	**$ 329,953**	**$ 197,591**
Liabilities:				
Debt, net	$ 270,597	$ 247,753	$ 245,632	$ 169,196
Deferred interest	-	1,575	1,357	765
Accounts payable, accrued expenses and other liabilities	16,864	15,174	16,015	7,476
Deferred lease intangibles, net	6,657	6,261	6,807	1,911
Total liabilities	**$ 294,118**	**$ 270,763**	**$ 269,811**	**$ 179,348**
Preferred Stock - Series A	**$ 48,868**	**$ 48,878**	**$ 48,931**	**$ -**
Equity:				
Common stock	$ 36	$ 36	$ 39	$ 39
Additional paid in capital	114,085	116,183	123,270	125,231
Accumulated deficit	(129,982)	(123,277)	(119,213)	(114,789)
Total Plymouth Industrial REIT, Inc. stockholders' equity	(15,861)	(7,058)	4,096	10,481
Noncontrolling interest	5,507	6,494	7,115	7,762
Total equity	**$ (10,354)**	**$ (564)**	**$ 11,211**	**$ 18,243**
Total liabilities, Series A preferred stock and equity	**$ 332,632**	**$ 319,077**	**$ 329,953**	**$ 197,591**

(1) Audited consolidated financial statements and notes for the year ended December 31, 2017 are available within our 2017 Annual Report on Form 10-K.

Plymouth Industrial REIT, Inc.

Consolidated Statements of Operations - GAAP (unaudited)

(in thousands, except per-share amounts)

	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Revenues:				
Rental income	$ 9,019	$ 8,483	$ 6,379	$ 4,699
Tenant recoveries	2,957	2,946	2,031	1,743
Other revenue	71	450	1	1
Total revenues	**$ 12,047**	**$ 11,879**	**$ 8,411**	**$ 6,443**
Operating expenses:				
Property related	3,787	4,452	3,122	2,159
Depreciation and amortization	6,444	6,542	4,943	3,499
General and administrative	1,533	1,373	2,031	1,224
Acquisition costs	-	-	17	4
Total operating expenses	**$ 11,764**	**$ 12,367**	**$ 10,113**	**$ 6,886**
Operating income	**$ 283**	**$ (488)**	**$ (1,702)**	**$ (443)**
Other income (expense):				
Gain on disposition of equity investment	-	-	8	223
Interest expense	(4,216)	(3,985)	(3,219)	(2,619)
Loss on debt extinguishment	(3,601)	-	-	-
Total other income (expense)	**$ (7,817)**	**$ (3,985)**	**$ (3,211)**	**$ (2,396)**
Net loss	**$ (7,534)**	**$ (4,473)**	**$ (4,913)**	**$ (2,839)**
Less: Net income attributable to noncontrolling interest	(829)	(463)	(489)	(157)
Net loss attributable to Plymouth Industrial REIT, Inc.	**$ (6,705)**	**$ (4,010)**	**$ (4,424)**	**$ (2,682)**
Less: Series A preferred stock dividends (2)	956	956	723	-
Less: Amount allocated to participating securities	46	61	128	-
Net income (loss) attributable to common stockholders	**$ (7,707)**	**$ (5,027)**	**$ (5,275)**	**$ (2,682)**
Net income (loss) attributable to common stockholders per share - basic and diluted	**$ (2.27)**	**$ (1.38)**	**$ (1.44)**	**$ (0.74)**
Weighted-average shares outstanding - basic	3,400	3,647	3,656	3,636
Weighted-average shares outstanding - diluted	3,400	3,647	3,656	3,636

(1) Audited consolidated financial statements and notes for the year ended December 31, 2017 are available within our 2017 Annual Report on Form 10-K.

(2) Preferred stock dividend for the fourth quarter of 2017 of $0.46875, which was pro-rated to $0.3542 per share to reflect the period commencing October 25, 2017 (original issue date) and ending December 31, 2017, was declared in December 2017 and paid in January 2018.

Plymouth Industrial REIT, Inc.

Same Store Net Operating Income (NOI)

Unaudited (in thousands)

Trailing four quarter same store NOI	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Same store properties	20	20	20	20
Revenues:				
Rental income	$ 3,423	$ 3,455	$ 3,626	$ 3,644
Tenant recoveries	1,425	1,382	1,334	1,392
Total operating revenues	$ 4,848	$ 4,837	$ 4,960	$ 5,036
Property expenses	$ 1,388	$ 1,815	$ 2,031	$ 1,606
Same store net operating income	**$ 3,460**	**$ 3,022**	**$ 2,929**	**$ 3,430**

Trailing two quarter same store NOI	Three Months Ended	
	6/30/2018	3/31/2018
Same store properties	49	49
Revenues:		
Rental income	$ 8,657	$ 8,483
Tenant recoveries	2,945	2,946
Total operating revenues	$ 11,602	$ 11,429
Property expenses	$ 3,707	$ 4,452
Same store net operating income	**$ 7,895**	**$ 6,977**

Plymouth Industrial REIT, Inc.

NOI

Unaudited (in thousands)

	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Net loss	**$ (7,534)**	**$ (4,473)**	**$ (4,913)**	**$ (2,839)**
General and administrative	1,533	1,373	2,031	1,224
Acquisition expense	-	-	17	4
Interest expense	4,216	3,985	3,219	2,619
Depreciation and amortization	6,444	6,542	4,943	3,499
Loss on debt extinguishment	3,601	-	-	-
Other income	(71)	(450)	(9)	(224)
Net Operating Income	**$ 8,189**	**$ 6,977**	**$ 5,288**	**$ 4,283**

Plymouth Industrial REIT, Inc.

Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)

Unaudited (in thousands)

	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Net loss	**$ (7,534)**	**$ (4,473)**	**$ (4,913)**	**$ (2,839)**
Depreciation and amortization	6,444	6,542	4,943	3,499
Interest expense	4,216	3,985	3,219	2,619
Loss on debt extinguishment	3,601	-	-	-
EBITDA	**$ 6,727**	**$ 6,054**	**$ 3,249**	**$ 3,279**

Plymouth Industrial REIT, Inc.

Funds from Operations (FFO) & Adjusted Funds from Operations (AFFO)

Unaudited (in thousands, except per-share amounts)

	Three Months Ended			
	6/30/2018	3/31/2018	12/31/2017	9/30/2017
Net loss	$ (7,534)	$ (4,473)	$ (4,913)	$ (2,839)
Depreciation and amortization	6,444	6,542	4,943	3,499
Loss on debt extinguishment	3,601	-	-	-
Gain on disposition of equity investment	-	-	(8)	(223)
FFO	$ 2,511	$ 2,069	$ 22	$ 437
Preferred stock dividend	(956)	(956)	(723)	-
FFO attributable to common stockholders and unit holders	$ 1,555	$ 1,113	$ (701)	$ 437
Deferred finance fee amortization	466	387	259	202
Acquisition costs	-	-	17	4
Non-cash interest expense	560	247	900	565
Stock compensation	200	200	192	208
Straight line rent	(461)	(357)	(82)	(32)
Above/below market lease rents	(306)	(411)	(168)	(89)
Recurring capital expenditures (1)	(350)	(992)	(227)	(63)
AFFO	$ 1,664	$ 187	$ 190	$ 1,232
Weighted average common shares and units outstanding	3,977	4,232	4,234	3,913
FFO attributable to common stockholders and unit holders per share	$ 0.39	$ 0.26	$ (0.17)	$ 0.11
AFFO attributable to common stockholders and unit holders per share	$ 0.42	$ 0.04	$ 0.04	$ 0.31

(1) Excludes non-recurring capital expenditures of $874, $373, $819 and $440 for the three months ending June 30, March 31, 2018, December 31, and September 30, 2017, respectively.

Plymouth Industrial REIT, Inc.

Debt Overview

Unaudited ($ in thousands) at 6/30/2018

Debt Instrument - Secured Facility	Maturity	Rate	Rate Type	Properties Encumbered	Balance	% of Total Debt
$45 million line of credit	August-21	4.75%(1)	Floating	9	$ 19,150	6.9%
$120 million AIG Loan	October-23	4.08%	Fixed	20	$ 120,000	43.5%
$79.8 million MWG Loan	November-19	5.08% (2)	Floating	15	$ 79,800	28.9%
$35.7 million KeyBank Term Loan (4)	August-21	9.09% (3)	Floating	-	$ 35,700	12.9%
$21.5 million Minnesota Life Loan	May-28	3.78%	Fixed	6	$ 21,500	7.8%
				50	**$ 276,150**	**100.0%**

Balance Sheet ($ in thousands) at 6/30/2018	
Cash	$ 12,128
Gross Assets (5)	$ 381,258
Total Debt	$ 276,150
Net Debt	$ 264,022

Subsquent Event

On July 10, 2018, we entered into a secured loan agreement with Aegon USA Realty Advisors, as agent for one of its affiliated life insurance companies, or the Aegon Lender, in the original principal amount of $78,000. The Aegon Secured Term Loan bears interest at 4.35% per annum and has a ten-year term, maturing on August 1, 2028. The Aegon Secured Term Loan provides for monthly payments of interest only for the first year of the term and thereafter monthly principal and interest payments based on a 30-year amortization period. The borrowings under the Aegon Secured Term Loan are secured by first lien mortgages on eighteen of the Company's properties. Proceeds from the Aegon Secured Term Loan were used to retire the outstanding borrowings under the MWG Portfolio Secured Loan.

(1) Interest rate paid for the month of June 30, 2018. Borrowings under the Line of Credit Agreement bear interest at either (1) the base rate (determined from the highest of (a) KeyBank's prime rate, (b) the federal funds rate plus 0.50% and (c) the one month LIBOR rate plus 1.0%) or (2) LIBOR, plus, in either case, a spread between 250 and 300 basis points depending on our total leverage ratio.
(2) Interest rate paid for the month of June 30, 2018. Interest for the first year at a rate per annum equal to LIBOR plus 3.10% and for the second year at a rate per annum equal to LIBOR plus 3.35%.
(3) Interest rate for the month of June 30, 2018. Borrowings under the KeyBank Term Loan bear interest at either (1) LIBOR plus 7% or (2) KeyBank's base rate plus 6%.
(4) The KeyBank Term Loan is secured by Plymouth Industrial REIT's equity interest within the Plymouth 20 and each of its property owning subsidiaries.
(5) The carrying amount of total assets plus accumulated depreciation and amortization, as reported in the Company's consolidated financial statements.

Plymouth Industrial REIT, Inc.

Property Overview - Square Feet & Occupancy

Unaudited ($ in thousands) at 6/30/18

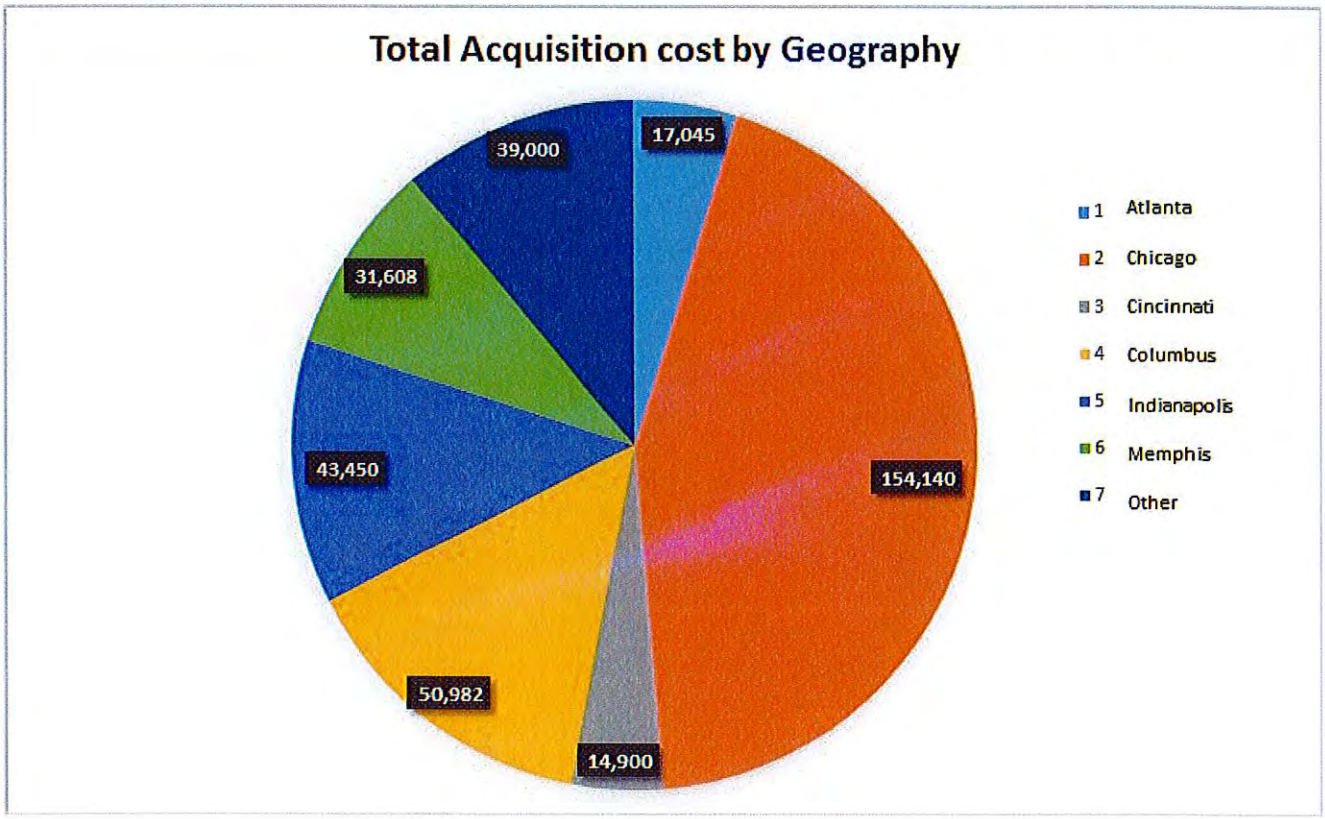
Property	Market	Rentable Square Feet	Leased Square Feet	Occupancy
32 Dart Road	Atlanta	194,800	194,800	100.0%
1665 Dogwood Drive SW	Atlanta	198,000	198,000	100.0%
1715 Dogwood Drive	Atlanta	100,000	100,000	100.0%
11236 Harland Drive	Atlanta	32,361	32,361	100.0%
Subtotal - Atlanta		**525,161**	**525,161**	**100.0%**
11351 W 183rd Street	Chicago	18,768	18,768	100.0%
11601 Central Avenue	Chicago	260,000	260,000	100.0%
13040 South Pulaski Avenue	Chicago	395,466	395,466	100.0%
1355 Holmes Road	Chicago	82,456	82,456	100.0%
13970 West Laurel Drive	Chicago	70,196	70,196	100.0%
1455-1645 Greenleaf Avenue	Chicago	150,000	150,000	100.0%
1600 Fleetwood Drive	Chicago	247,000	247,000	100.0%
1750 South Lincoln Drive	Chicago	499,200	499,200	100.0%
1796 Sherwin Avenue	Chicago	98,879	98,879	100.0%
1875 Holmes Road	Chicago	134,415	134,415	100.0%
189 Seegers Road	Chicago	25,000	25,000	100.0%
2401 Commerce Drive	Chicago	78,574	78,574	100.0%
28160 North Keith Drive	Chicago	77,924	77,924	100.0%
3 West College Drive	Chicago	33,263	33,263	100.0%
3841-3865 Swanson Court	Chicago	99,625	99,625	100.0%
3940 Stern Avenue	Chicago	146,798	146,798	100.0%
440 South McLean	Chicago	74,613	74,613	100.0%
6000 West 73rd Street	Chicago	148,091	148,091	100.0%
6510 West 73rd Street	Chicago	306,552	306,552	100.0%
6558 West 73rd Street	Chicago	301,000	301,000	100.0%
6751 Sayre Avenue	Chicago	242,690	242,690	100.0%
7200 Mason Ave	Chicago	207,345	207,345	100.0%
5110 South 6th Street	Milwaukee	58,500	58,500	100.0%
525 West Marquette Avenue	Milwaukee	112,144	40,000	35.7%
Subtotal - Chicago		**3,868,499**	**3,796,355**	**98.1%**
Mosteller Distribution Center	Cincinnati	358,386	358,386	100.0%
4115 Thunderbird Lane	Cincinnati	70,000	70,000	100.0%
Subtotal - Cincinnati		**428,386**	**428,386**	**100.0%**
3500 Southwest Boulevard	Columbus	527,127	527,127	100.0%
3100 Creekside Parkway	Columbus	340,000	-	0.0%
8288 Green Meadows Dr.	Columbus	300,000	300,000	100.0%
8273 Green Meadows Dr.	Columbus	77,271	77,271	100.0%
7001 American Pkwy	Columbus	54,100	54,100	100.0%
2120 - 2138 New World Drive	Columbus	121,200	121,200	100.0%
Subtotal - Columbus		**1,419,698**	**1,079,698**	**76.1%**
3035 North Shadeland Ave	Indianapolis	562,497	537,497	95.6%
3169 North Shadeland Ave	Indianapolis	44,374	41,960	94.6%
5861 W Cleveland Road	South Bend	62,550	62,550	100.0%
West Brick Road	South Bend	101,450	101,450	100.0%
4491 N Mayflower Road	South Bend	77,000	77,000	100.0%
5855 West Carbonmill Road	South Bend	198,000	198,000	100.0%
4955 Ameritech Drive	South Bend	228,000	228,000	100.0%
Subtotal - Indianapolis/South Bend		**1,273,871**	**1,246,457**	**97.8%**
6005, 6045 & 6075 Shelby Dr.	Memphis	202,303	167,018	82.6%
210 American Dr.	Jackson	638,400	638,400	100.0%
3635 Knight Road	Memphis	131,904	131,904	100.0%
Business Park Drive	Memphis	235,006	128,457	54.7%
Subtotal - Memphis/Jackson		**1,207,613**	**1,065,779**	**88.3%**
7585 Empire Drive	Florence, KY	148,415	148,415	100.0%

56 Milliken Road	Portland, ME	200,625	200,625	100.0%
4 East Stow Road	Marlton, NJ	156,279	134,959	86.4%
1755 Enterprise Parkway	Cleveland, OH	255,570	234,370	91.7%
Subtotal - Others		**760,889**	**718,369**	**94.4%**
Total - All Properties		**9,484,117**	**8,860,205**	**93.4%**

Market Summary

Unaudited (SF and $ in thousands) (at 6/30/2018)

Geography	State	Properties	Total Acquisition Cost (1)	Gross Real Estate Assets (2)	% Gross Real Estate Assets
Atlanta	GA	4	$ 17,045	$ 15,765	4.9%
Chicago	IL, WI	24	154,140	143,179	44.6%
Cincinnati	OH	2	14,900	13,349	4.2%
Columbus	OH	6	50,982	48,427	15.1%
Indianapolis/South Bend	IN	7	43,450	38,358	12.0%
Memphis/Jackson	TN	4	31,608	26,345	8.2%
Other	Various	4	39,000	35,163	11.0%
Total		**51**	**$ 351,125**	**$ 320,586**	**100%**



(1) Total acquisition cost prior to allocations per US GAAP.
(2) The gross book value of real estate assets as of June 30, 2018 excluding $277 in leasehold improvements related to our Corporate office. Gross book value of real estate assets excludes depreciation and the allocation of the acquisition cost towards intangible asset and liabilities required by US GAAP.

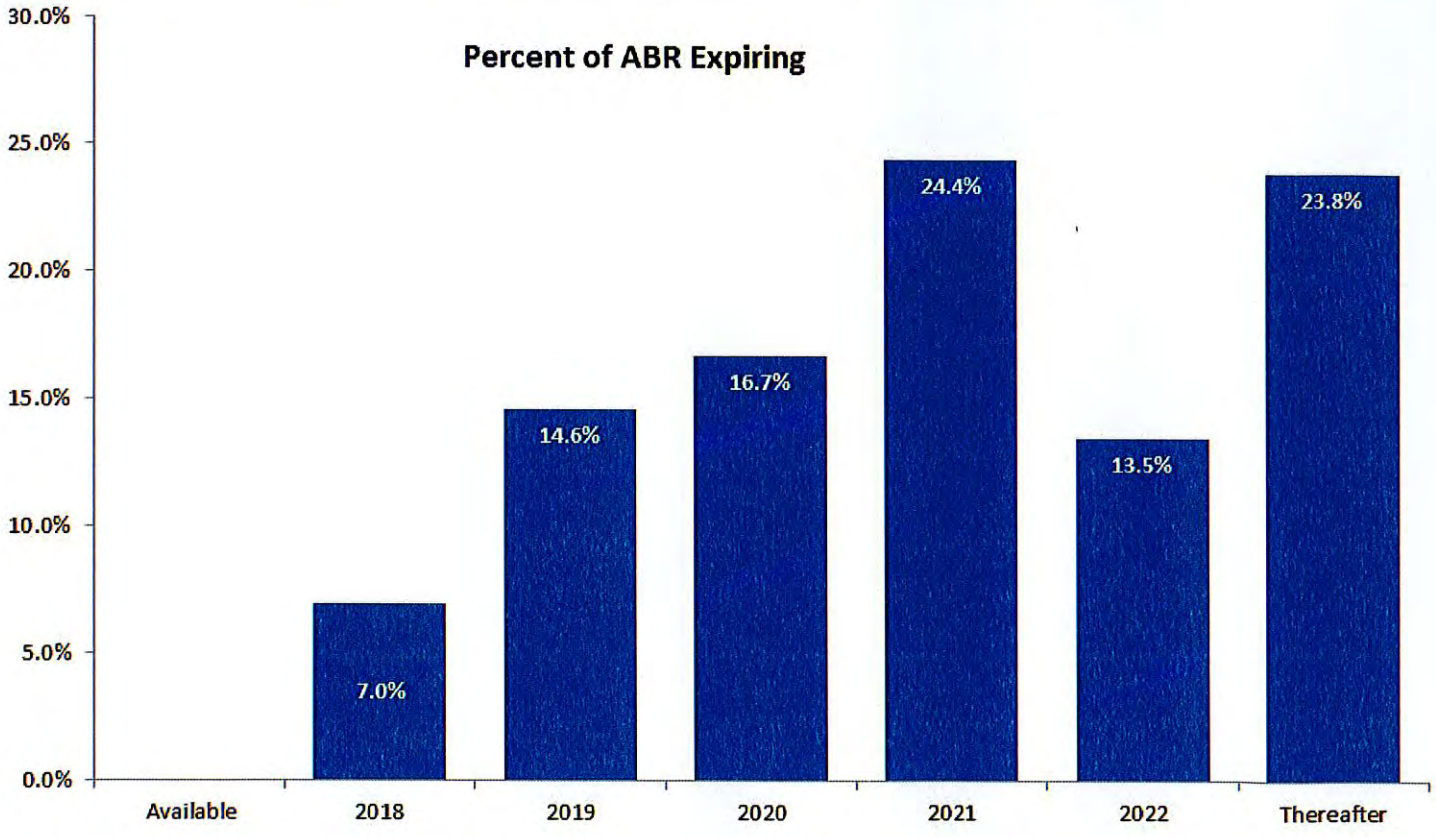
Leasing Activity

Year	Type	Square Footage	Percent	Expiring Rent	New Rent	% Change	Tenant Improvements $/SF/YR	Lease Commissions $/SF/YR
2017	Renewals	234,679	84.1%	$ 4.25	$ 4.51	6.2%	$ 0.07	$ 0.13
	New Leases	44,268	15.9%	$ 2.16	$ 3.00	38.7%	$ 0.41	$ 0.27
	Total	**278,947**	**100.0%**	**$ 3.92**	**$ 4.27**	**9.1%**	**$ 0.13**	**$ 0.15**
Q1 2018	Renewals	146,798	47.5%	$ 4.25	$ 4.30	1.2%	$ -	$ 0.11
	New Leases	162,119	52.5%	$ 3.17	$ 3.99	26.1%	$ 0.09	$ 0.04
	Total	**308,917**	**100.0%**	**$ 3.68**	**$ 4.07**	**10.6%**	**$ 0.05**	**$ 0.07**
Q2 2018	Renewals	146,874	13.1%	$ 4.83	$ 5.00	3.6%	$ 0.14	$ 0.13
	New Leases	664,828	59.3%	$ 3.67	$ 3.92	6.9%	$ 0.42	$ 0.25
	Total	**811,702**	**100.0%**	**$ 3.88**	**$ 4.21**	**8.4%**	**$ 0.37**	**$ 0.23**
2018	Renewals	293,672	26.2%	$ 4.54	$ 4.65	2.4%	$ 0.07	$ 0.11
	New Leases	826,947	73.8%	$ 3.58	$ 3.94	10.0%	$ 0.35	$ 0.21
	Total	**1,120,619**	**100.0%**	**$ 3.83**	**$ 4.13**	**7.7%**	**$ 0.28**	**$ 0.18**
Total	Renewals	528,351	37.8%	$ 4.41	$ 4.59	4.1%	$ 0.07	$ 0.12
	New Leases	871,215	62.2%	$ 3.51	$ 3.89	10.9%	$ 0.36	$ 0.22
	Total	**1,399,566**	**100%**	**$ 3.85**	**$ 4.16**	**8.0%**	**$ 0.25**	**$ 0.18**

Lease Expiration Schedule

Unaudited ($ in thousands) (at 6/30/2018)

Year	Square Footage	Annualized Base Rent (ABR) (1)	% of ABR Expiring (2)
Available	623,911	$ -	-
2018	439,676	2,345	7.0%
2019	1,480,835	4,897	14.6%
2020	1,613,610	5,596	16.7%
2021	2,173,308	8,190	24.4%
2022	963,685	4,510	13.5%
Thereafter	2,189,092	7,996	23.8%
Total	**9,484,117**	**$ 33,534**	**100.0%**



(1) Annualized base rent is calculated as monthly contracted base rent per the terms of such lease, as of June 30, 2018, multiplied by 12. Excludes billboard and antenna revenue and rent abatements.
(2) Calculated as annualized base rent set forth in this table divided by total annualized base rent for the Company Portfolio as of June 30, 2018.

Plymouth Industrial REIT, Inc.

Glossary

Non-GAAP Financial Measures Definitions:

Net Operating Income (NOI) : We consider net operating income, or NOI, to be an appropriate supplemental measure to net income because it helps both investors and management understand the core operations of our properties. We define NOI as total revenue (including rental revenue, tenant reimbursements, management, leasing and development services revenue and other income) less property-level operating expenses including allocated overhead. NOI excludes depreciation and amortization, general and administrative expenses, impairments, gain/loss on sale of real estate, interest expense, and other non-operating items.

EBITDA : We believe that earnings before interest, taxes, depreciation and amortization, or EBITDA, is helpful to investors as a supplemental measure of our operating performance as a real estate company because it is a direct measure of the actual operating results of our industrial properties. We also use this measure in ratios to compare our performance to that of our industry peers. EBITDA as presented herein is equal to EBITDAre as defined by NAREIT.

Funds From Operations attributable to common stockholders ("FFO") : Funds from operations, or FFO, is a non-GAAP financial measure that is widely recognized as a measure of REIT operating performance. We consider FFO to be an appropriate supplemental measure of our operating performance as it is based on a net income analysis of property portfolio performance that excludes non-cash items such as depreciation. The historical accounting convention used for real estate assets requires straight-line depreciation of buildings and improvements, which implies that the value of real estate assets diminishes predictably over time. Since real estate values rise and fall with market conditions, presentations of operating results for a REIT, using historical accounting for depreciation, could be less informative. We define FFO, consistent with the National Association of Real Estate Investment Trusts, or NAREIT, definition, as net income, computed in accordance with GAAP, excluding gains (or losses) from sales of property, depreciation and amortization of real estate assets, impairment losses, loss on extinguishment of debt and after adjustments for unconsolidated partnerships and joint ventures. Adjustments for unconsolidated partnerships and joint ventures will be calculated to reflect FFO on the same basis. Other equity REITs may not calculate FFO (in accordance with the NAREIT definition) as we do, and, accordingly, our FFO may not be comparable to such other REITs' FFO. FFO should not be used as a measure of our liquidity, and is not indicative of funds available for our cash needs, including our ability to pay dividends.

Adjusted Funds From Operations attributable to common stockholders ("AFFO") : Adjusted funds from operation, or AFFO, is presented in addition to FFO. AFFO is defined as FFO, excluding certain non-cash operating revenues and expenses, acquisition and transaction related costs for transactions not completed and recurring capitalized expenditures. Recurring capitalized expenditures includes expenditures required to maintain and re-tenant our properties, tenant improvements and leasing commissions. AFFO further adjusts FFO for certain other non-cash items, including the amortization or accretion of above or below market rents included in revenues, straight line rent adjustments, impairment losses, non-cash equity compensation and non-cash interest expense. We believe AFFO provides a useful supplemental measure of our operating performance because it provides a consistent comparison of our operating performance across time periods that is comparable for each type of real estate investment and is consistent with management's analysis of the operating performance of our properties. As a result, we believe that the use of AFFO, together with the required GAAP presentations, provide a more complete understanding of our operating performance. As with FFO, our reported AFFO may not be comparable to other REITs' AFFO, should not be used as a measure of our liquidity, and is not indicative of our funds available for our cash needs, including our ability to pay dividends.

Other Definitions:

GAAP : U.S generally accepted accounting principles.

Gross Assets : the carrying amount of total assets plus accumulated depreciation and amortization, as reported in the Company's consolidated financial statements. For gross assets as of June 30, 2018 and December 31, 2017, the calculation is as follows:

	6/30/2018
Total Assets	$332,632
Add back depreciation expense	32,809
Add back intangible asset amortization	15,817
Gross assets	$381,258

Non-Recurring Capital Expenditures : Non-recurring capital expenditures include capital expenditures of long lived improvements required to upgrade/replace existing systems or items that previously did not exist.

Occupancy : We define occupany as the percentage of total leasable square footage in which either the sooner of lease term commencement or revenue recognition in accordance to GAAP has commenced as of the close of the reporting period.

Recurring Capital Expenditures : Recurring capitalized expenditures includes capital expenditures required to maintain and re-tenant our properties, tenant improvements and leasing commissions.

Same Store Portfolio: Our Same Property Portfolio is a subset of our consolidated portfolio and includes properties that were wholly-owned by us for the entire period presented. The trailing 4 quarters same store portfolio includes properties owned as of April 1, 2017, and still owned by us as of June 30, 2018. Therefore, we excluded from our Same Store Portfolio any properties that were acquired or sold during the period from April 1, 2017 through June 30, 2018. The trailing 2 quarters same store portfolio includes properties owned as of January 1, 2018, and still owned by us as of June 30, 2018. Therefore, we excluded from our Same Store Portfolio any properties that were acquired or sold during the period from January 1, 2018 through June 30, 2018. The Company's computation of same store NOI may not be comparable to other REITs.

Weighted average lease term remaining : The average contractual lease term remaining as of the close of the reporting period (in years) weighted by square footage.

TECHNICAL ABILITY

CES, Inc. has prepared numerous Site Location of Development Applications, Amendments, and Modifications to existing permits. John Kuchinski, P.E. has overseen the preparation of this application. John has been involved in the preparation of many Site Location of Development Applications for various clients.

Some Site Location of Development Act (SLODA) Projects completed by John Kuchinski:

Saccarappa Elementary School, Westbrook, ME 2017
Mildred L. Day School Arundel, Maine 2016
Maine Maritime Academy, American Bureau of Shipping Engineering Center, Castine 2013
Wentworth Intermediate School, Scarborough 2012

JOHN KUCHINSKI
SENIOR PROJECT ENGINEER

John Kuchinski comes to CES, Inc. with over 30 years' experience in the design of large scale commercial, industrial, and residential land development projects. His responsibilities included the layout of roads, parking lots, site circulation and pedestrian ways in an integrated design. John was instrumental to the design process with obtaining environmental and land use permits. His work with the design team requires effective communication skills and project management expertise. John has worked with site design and the permitting for site development on projects, including grading, stormwater drainage, spill control, utilities, and erosion control. He also has experience with construction phase services.

CORE EXPERTISE

Site Design

Project Engineer

Commercial/ Residential Land Development

Professional History
2012 – 2018 | Harriman Associates, Auburn, Maine | Senior Civil Engineer
2005 – 2011 | Amec Foster Wheeler, Portland, Maine | Senior Civil Engineer/Project Manager
2001 – 2005 | BH2M Engineers, Gorham, Maine | Senior Civil Engineer
1998 – 2001 | JK Holmgren Engineering, Inc., Brockton, MA | Project Manager
1997 – 1998 | Gale Associates, Inc., Weymouth, MA | Project Engineer
1989 – 1997 | Town of Yarmouth, Yarmouth, MA | Civil Engineer

Education
BS in Civil Engineering | University of Massachusetts, Dartmouth, MA

Registrations
Professional Engineer License # ME #9759, NH #14498, MA #35862

Affiliations
American Society of Civil Engineers

Project Experience

Westbrook Saccarappa Elementary School | Westbrook, Maine
Designed site improvements for a 50,000 square foot addition to the elementary school including stormwater, grading, utilities and erosion control. Site design provide new play fields and a new parking lot to accommodate the increase in staff. Permitting required a modification of an existing SLODA permit.

Sanford Middle School and Sanford High School | Sanford, Maine
Developed site plans for the conversion of the existing Sanford High School to be a middle school and the Conversion of the Middle School to be an elementary school.

Mildred L. Day School | Arundel, Maine
Developed plans and specifications for site improvements for reconstruction of a portion of the Mildred L. Day School. This included modification to the SLODA permit under the 2015 version of Chapter 500 redevelopment rules. Provided separate bus loop, parent drop off and parking areas.

Kennebunkport Consolidated School | Kennebunkport, Maine
Site design for expansion of the school to include improving stormwater management, site circulation and pedestrian access to the building. An improved parking lot and separate parent drop off.

Wentworth Intermediate School | Scarborough, ME
Senior Civil Engineer for the site design and permitting of a new intermediate school for the Town of Scarborough, Maine. The new school contains 164,000 square feet of floor area. Design included stormwater management, grading, and utilities. This site also included a geothermal well field to provide heating and cooling of the building. Permitting involved a modification the Site Location of Development permit of the Scarborough Municipal Complex and a Natural Resource Protection permit to impact 1.3 acres of wooded wetlands.

Maine Army National Guard Reserve Center | Bangor, Maine
Civil Engineer to design reconstruction of the existing parking lot paving and Drainage. Prepared detailed site plans and bid specifications. Attended pre-bid meeting. Reviewed and processed Contractor submittals and requests for information. Conducted site observations during construction to verify work is in accordance with the design documents. Developed a comprehensive punch list at the completion of construction.

Maine Army National Guard Regional Training Institute | Bangor, Maine
While working for AMEC Foster Wheeler, John designed stormwater, grading utilities and erosion control for site development for a new Regional Training Institute located on Hildreth Road North in Bangor. Other duties included the preparation of bidding plans and specifications, as well as the construction phase oversite.

Maine Army National Guard Training Facility | Auburn, ME
Senior Civil Engineer that prepared the site plan for four proposed controlled humidity buildings for storage. This facility provides long term storage of unit equipment in a controlled atmosphere to reduce degradation of the equipment. Design also included a stormwater management plan and Site Location of Development Law permitting to the Maine DEP for the entire facility.

Presque Isle Community Center | Presque Isle, Maine
Designed site improvements to an existing brownfield site for a new community recreational facility. Stormwater permit and local permitting.

Old County Road | Scarborough, Maine
Reconstruction of Old County Road in Scarborough included full depth reconstruction of the pavement and new stormwater drainage. Design reconfigured the vertical alignment of the road

to facilitate runoff to drainage structures. Consideration given to revising road to accommodate existing driveways. Meeting with the neighbors and getting their feedback.

Maritime Village | Wiscasset, ME
Senior Civil Engineer participated in the civil engineering design of phase one of Maritime Village, a project involving the redevelopment of the decommissioned Mason Station electric power generating facility. The Mason Station was decommissioned and was a Brownfield industrial site. The redevelopment of the property was envisioned to include single family homes, condominiums, shops and restaurants, a 350-slip marina, the Hinckley Boat yard and possible cultural and educational uses. Phase one consisted of 80 single family homes and a 7,120 SF addition to the Mason Station for a Hinckley Boatyard. The first phase also included 52 marina slips.

Topsham Crossing | Topsham, ME
Senior Civil Engineer designer of a 68-lot residential subdivision which included 20 units reserved for affordable housing. This development is the first "Great American Neighborhood" development in Maine that emphasized small lots and dense development while preserving a significant area of land as open space. This project incorporated stormwater Best Management Practices to control stormwater quantity and quality. The design also included sewer collection with some lots requiring low pressure sewer collection system, roadway alignment, utilities and presentation to the local planning board.

Milton CAT Service Facility Expansion | Scarborough, ME
Civil Engineer for the master planning and permitting for this facility expansion, John developed the site layout for building expansion and outside equipment storage, grading, drainage and erosion control. This site was originally designed and permitted by OEST in 1983. A 1987 amendment to the permit greatly expanded the facility. This is yet another expansion to meet Milton CAT's growing business needs.

Mashpee Medical Center | Mashpee, MA
Project Engineer for this design/build project working in conjunction with the general contractor on the project. The civil design included developing plans for the 30,000 SF medical office building. An essential element of this project included the design of a denitrifying onsite waste water treatment and disposal system to reduce the total nitrogen concentration of the wastewater below 10 PPM because it was in a zone of contribution to a public water supply well. Stormwater design included LID techniques including infiltration and bio-retention. Design also included site grading, layout, utilities, stormwater management and design of an on-site treatment and disposal system for the sanitary sewage. Landscaping consisted of plants that did not require irrigation.

New Well Pad and Infield Pipeline Planning, Design, and Permitting Confidential | Client North Central Region, PA
Senior Civil Engineer for the planning, design, and permitting of over 30 new well pad and associated infield gathering lines. The planning process involves an initial field review of potential pad locations and pipeline routes, including an assessment of engineering and environmental limitations and restrictions, and concept level development plans are prepared for further

evaluation and input from client land, geology/geophysics, and operational personnel. Once the concept plan has been refined, preliminary design plans are prepared for final client approval and subsequently developed into final design drawings, including access roads, well locations, production facilities, impoundments, as well as design narratives, and associated permit application packages, including Pennsylvania DEP's ESCGP-1. Most projects involve interagency coordination are fast-tracked such that they are completed within two weeks of confirmation of design.

Southwest Harbor Fire Station | Southwest Harbor, ME
Civil Engineer for the design site improvements for a new 10,000 SF fire station, urban stormwater management, site grading and utility connections for the building, new access road, parking, and utilities.

Town Engineering Review Services | Wells, ME
Civil Engineer responsible for multiple subdivision and site plan reviews for the Town of Wells. He was responsible for reviews of plans for compliance with zoning and subdivision regulations as well as good engineering practice.

Salt/Sand Storage Building | Town of Dayton, ME
Senior Project Engineer for the Town of Dayton on this project. His responsibilities included determining the best type of building to meet the Town's needs, providing engineering services for the site design, hiring sub-consultants for the structural and building design, completing the construction bid documents, providing construction management services, and submitting a reimbursement request to MDOT for a portion of the building costs through the Maine Sand/Salt Storage Building Program.

Solid Waste Management Facility | Town of Yarmouth, MA
As a civil engineer for the Town, Mr. Kuchinski provided a full range of services for the design and construction of a solid waste management facility to accommodate an increased demand of residential solid waste capacity, including a facility for yard waste, composting and commercial/residential construction debris. He served as supervisor of Town staff who provided the general construction services, and prepared and supervised the bidding and awarding of specialty construction items. He also provided overall construction management and budget control for the project.

CES INC

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND

TAB 2 - TRANSPORTATION

Traffic Impact

Traffic impact from the proposed warehouse is minimal. The estimated peak hour AM trip generation from the use is estimated to be 41 and the PM trip generation is estimated to be 44. FAADT of Riverside Industrial Parkway is 2678 north of Milliken Street and it is 2848 south of Milliken Street, and the estimated peak hour AM and PM generation from the project will not have a significant impact to adjacent street traffic and will not cause traffic congestion which would reduce the level of service below the Level "D" as described in the 1985 Highway Capacity Manual.

Crash data for the area was requested and obtained from the Maine Department of Transportation (MaineDOT). Crash data for the last three years was provided by the MaineDOT for the intersections of Forest Avenue and Riverside Industrial Park, Milliken Street and Riverside Industrial Park, and Riverside Street and Riverside Industrial Park. The accident data output has been included with the application.

Access and Circulation

Site circulation is primarily designed for tractor trailer trucks servicing the proposed warehouse building. Cars and trucks will enter from the existing Milliken Street entrance and traverse the site to the new driveway off the existing site circulation. A new driveway is proposed for truck traffic to exit onto Riverside Industrial Parkway. No drive-up features are proposed with this project.

Loading and Servicing

The new warehouse will have four loading docks on the westerly side of the building for full size trucks with trailers. An additional four at-grade loading doors are proposed on the southerly side opposite loading docks on the existing building. These loading doors are designed for single unit box trucks and delivery van type vehicles.

Sidewalks

The project is located off Riverside Industrial Parkway and is not a pedestrian destination. The surrounding streets, including Riverside Industrial Parkway and Milliken Street do not have sidewalks. The applicant is requesting a waiver from providing a sidewalk along the frontage.

Public Transit

Riverside Industrial Parkway is not currently served by Portland Area public transit. The nearest public transportation stop is located at the intersection of Riverside Industrial Parkway and Route 302/Forrest Avenue. This is approximately 0.7 miles away from the site driveway. Riverside Industrial Parkway does not have sidewalks for pedestrian traffic.

Off-Street Parking

The site currently has 188 parking spaces, 49 trailer spaces, and 24 loading bays. Existing use of the site includes Paradigm Windows and Tyson /Advance Pierre. Paradigm Windows has approximately 100 employees. Not all employees drive their own car. Tyson/Advance Pierre has approximately 5 employees. A parking study was performed by CES, Inc. at 10:00 AM on October 3, 2018. The main parking lot utilized a total of 122 out of the 147 spaces available, while the side and rear of the existing building utilized 7 out of the total 13 spaces available. The existing site also provides trailer parking spaces, of which a total of 18 out of the 49 available were being used. Inside the fenced area four passenger vehicles and two truck cabs were utilizing the available 28 parking spaces. The available parking spaces within the fenced area were also being used for storage.

According to the Institute of Transportation Engineers, Parking Generation, 4th Edition, and based on the Land Use: 150 – Warehousing, the average peak parking demand for the proposed 72,000 square foot warehousing with office space is 37 spaces. The project proposes to use 37 spaces of the remaining 41 passenger vehicle parking spaces not currently being utilized. Under section 14-332.2(c), the planning board has the authority to establish the parking requirement for site plans over 50,000 square feet. The parking requirement is determined based on the analysis contained within this application and upon the recommendation of the city transportation engineer. As the proposed use is warehousing and based on the parking study performed, CES, Inc. believes that there is sufficient on-site parking and no additional parking spaces are required.

Bicycle Parking

Southwest of the proposed building, a bike rack for 10 bicycles is proposed. According to the ordinance two bicycle parking spaces are required for every 10 vehicle parking spaces for the first one hundred required parking spaces. For the proposed warehousing project 37 parking spaces are required, so a minimum of seven bicycle parking spaces is required.

Snow Storage

The existing site has lawn areas and open areas that are used for snow storage. Additional areas around the proposed warehouse expansion have been identified on the site plan as snow storage areas.

Transportation Demand Management

The site is located in an industrial area outside the multimodal transportation system for the City and other than the proposed bicycle parking spaces provided, other Transportation Demand Management measures would not be utilized.

Cumberland

TOWN	STA	ROAD-PN	LOCATION	GROUP	AADT12	AADT13	AADT14	AADT15	AADT16	AADT17
PORTLAND	29907	60583-6	PLEASANT AVE W/O SR 100/US 302 (FOREST)	I	-	-	-	-	1950 C	-
PORTLAND	30402	60584-6	PLEASANT ST NE/O SR 77 (HIGH ST)	I	-	-	-	-	1390 C	-
PORTLAND	30406	60584-6	PLEASANT ST SW/O SR 77 (HIGH ST)	I	-	-	-	-	650 C	-
PORTLAND	17107	60584-6	PLEASANT ST W/O YORK ST	I	-	1440 C	-	-	1210 C	-
PORTLAND	21107	60593-5	PORTLAND ST (OW) W/O PREBLE ST	I	-	2540 C	-	-	2320 C	-
PORTLAND	07908	60597-3	PREBLE ST (OW) NW/O CONGRESS ST	I	-	3030 C	-	-	3070 C	-
PORTLAND	13205	60597-3	PREBLE ST (OW) S/O MARGINAL WAY	I	-	-	-	-	3330 C	-
PORTLAND	13208	60818-3	PREBLE ST EXT NW/O MARGINAL WAY	I	-	17480 C	-	-	16730 C	-
PORTLAND	13403	60818-3	PREBLE ST EXT(NB) E/O SR100/US302(FOREST	I	-	6280 C	-	-	5120 C	-
PORTLAND	16101	60599-5	PRESUMPSCOT ST N/O SR 26(WASHINGTON AVE)	I	-	-	-	-	7040 C	-
PORTLAND	11904	60599-5	PRESUMPSCOT ST SE/O SR 9 (OCEAN AVE)	I	-	-	-	-	4400 C	-
PORTLAND	28703	60601-6	PROSPECT ST E/O HIGHLAND ST	I	-	-	-	-	970 C	-
PORTLAND	29203	60601-6	PROSPECT ST E/O SR 9 (STEVENS AVE)	I	-	-	-	-	790 C	-
PORTLAND	02007	60601-6	PROSPECT ST W/O DEERING AVE @ RR XING	I	-	980 C	-	-	990 C	-
PORTLAND	28707	60601-6	PROSPECT ST W/O HIGHLAND ST	I	-	-	-	-	1030 C	-
PORTLAND	11404	60605-6	PYA RD SE/O SR 9 (OCEAN AVE)	I	-	-	-	-	440 C	-
PORTLAND	26902	60606-6	QUEBEC ST NE/O MERRILL ST	I	-	-	-	-	400 C	-
PORTLAND	26906	60606-6	QUEBEC ST SW/O MERRILL ST	I	-	-	-	-	470 C	-
PORTLAND	16302	60612-6	RAY ST NE/O SR 26 (WASHINGTON AVE)	I	-	1720 C	-	-	1750 S	-
PORTLAND	20308	60612-6	RAY ST NW/O PENN AVE	I	-	-	-	-	1200 S	-
PORTLAND	05108	60614-5	READ ST NW/O SR 9 (OCEAN AVE)	I	-	6060 C	-	-	6090 C	-
PORTLAND	04904	60614-5	READ ST SE/O BELL ST @ RR XING	I	-	6200 C	-	-	-	-
PORTLAND	07404	60614-5	READ ST SE/O SR 100/US 302 (FOREST AVE)	I	-	4780 C	-	-	4640 C	-
PORTLAND	20406	60842-6	RIVERSIDE IND'L PKWY SW/O RIVERSIDE ST	I	-	-	-	-	2430 C	-
PORTLAND	12301	60842-6	RIVERSIDE INDUSTRIAL PKWY N/O US 302	I	-	-	-	-	2800 C	-
PORTLAND	19101	60621-2	RIVERSIDE ST N/O LARRABEE RD	I	-	25260 C	-	-	24950 S	-
PORTLAND	10901	60621-2	RIVERSIDE ST N/O RIVERSIDE CT	I	-	24720 C	-	-	-	-
PORTLAND	07601	60621-3	RIVERSIDE ST N/O SR 25B (BRIGHTON AVE)	I	-	11200 C	-	-	11520 C	-
PORTLAND	04401	60621-2	RIVERSIDE ST N/O WARREN AVE	I	-	16780 C	-	-	17350 S	-
PORTLAND	04502	60621-4	RIVERSIDE ST NE/O US 302 (FOREST AVE)	I	-	8130 C	-	-	8300 C	-
PORTLAND	05708	60621-4	RIVERSIDE ST NW/O WASHINGTON AVE	I	-	7010 C	-	-	6890 C	-
PORTLAND	04506	60621-2	RIVERSIDE ST SW/O US 302 (FOREST AVE)	I	-	15440 C	-	-	15940 C	-

Cumberland

TOWN	STA	ROAD-PN	LOCATION	GROUP	AADT12	AADT13	AADT14	AADT15	AADT16	AADT17
PORTLAND	04708	0302X-1	US 302 (FOREST AVE) NW/O SR 100 (ALLEN)	I	-	-	-	-	28910 C	-
PORTLAND	04608	0302X-1	US 302 (FOREST AVE) NW/O WARREN AVE	I	-	19820 C	-	-	18140 C	-
PORTLAND	12308	0302X-1	US 302 (FOREST) NW/O RIVERSIDE IND PKWY	I	-	-	-	-	14820 C	-
PORTLAND	02605	01019-3	VALLEY ST S/O "D" ST	I	-	-	-	-	3440 C	-
PORTLAND	03303	60748-5	VANNAH AVE E/O SR 9/100/US 302(FOREST)	I	-	2700 C	2650 T	-	2630 C	-
PORTLAND	16607	60748-5	VANNAH AVE W/O BAXTER BLVD	I	-	-	-	-	10830 C	-
PORTLAND	13701	60751-6	VAUGHAN ST N/O BRACKETT ST	I	-	4790 C	-	-	-	-
PORTLAND	15201	60751-6	VAUGHAN ST N/O CARROLL ST	I	-	1560 C	-	-	-	-
PORTLAND	15608	60751-6	VAUGHAN ST NW/O SPRING ST	I	-	1790 C	-	-	-	-
PORTLAND	00308	60751-6	VAUGHAN ST NW/O WESTERN PROM	I	-	2550 C	-	-	2510 C	-
PORTLAND	13705	60751-6	VAUGHAN ST S/O BRACKETT ST	I	-	3830 C	-	-	3460 C	-
PORTLAND	31602	00501-5	VERANDA ST (NB) NE/O OLYMPIA ST	I	-	-	-	-	990 T	-
PORTLAND	31606	00501-5	VERANDA ST (NB) SW/O OLYMPIA ST	I	-	-	-	-	1140 T	-
PORTLAND	05302	60753-5	VERANDA ST NE/O SR 26 (WASHINGTON AVE)	I	-	5740 C	-	-	5290 C	-
PORTLAND	22206	60753-5	VERANDA ST SW/O KENSINGTON ST @BR# 5052	I	-	3860 C	-	-	3960 C	-
PORTLAND	12216	1019S-1	VETERANS BR3945(WB) SW/O US 1A(FORE RV)	I	12750 C	12440 C	12052 C	-	11240 C	-
PORTLAND	06305	60763-6	WALDO ST S/O SR 9/22 (CONGRESS ST)	I	-	500 C	-	-	-	-
PORTLAND	09602	60766-6	WALNUT ST NE/O NORTH ST	I	-	-	-	-	680 C	-
PORTLAND	31102	60766-6	WALNUT ST NE/O SR 26 (WASHINGTON ST)	I	-	-	-	-	2270 C	-
PORTLAND	09606	60766-6	WALNUT ST SW/O NORTH ST	I	-	-	-	-	1860 C	-
PORTLAND	04204	00987-6	WALTON ST SE/O SR 100/US 302(FOREST AVE)	I	-	3790 C	-	-	3100 C	-
PORTLAND	04207	00987-6	WALTON ST W/O SR 100/US 302(FOREST AVE)	I	-	3120 C	-	-	2580 C	-
PORTLAND	04403	60767-3	WARREN AVE E/O RIVERSIDE ST	I	-	17290 C	-	-	17360 C	-
PORTLAND	04606	60767-3	WARREN AVE SW/O US 302 (FOREST AVE)	I	-	13130 C	-	-	11390 C	-
PORTLAND	04407	60767-3	WARREN AVE W/O RIVERSIDE ST	I	-	10330 C	-	-	9540 C	-
PORTLAND	07501	60768-6	WARWICK RD N/O SR 25 (BRIGHTON AVE)	I	-	-	-	-	1980 C	-
PORTLAND	09702	60768-6	WARWICK ST NE/O STARLIGHT RD	I	-	-	-	-	600 C	-
PORTLAND	09706	60768-6	WARWICK ST SW/O SUNSET LN	I	-	-	-	-	1510 C	-
PORTLAND	21807	61148-5	WASHINGTON AVE EXT W/O SR 26/100(AUBURN)	I	-	-	-	-	3190 C	-
PORTLAND	05701	60770-5	WASHINGTON AVE N/O RIVERSIDE ST	I	-	4360 C	-	-	4460 C	-
PORTLAND	21708	60770-4	WASHINGTON AVE NW/O SANBORN ST	I	-	5570 C	-	-	5710 C	-
PORTLAND	05705	60770-4	WASHINGTON AVE S/O RIVERSIDE ST	I	-	4480 C	-	-	4740 C	-

MaineDOT Maine Public Crash Query Tool

Set Search Criteria

Set Search Criteria

Now that you have created a query and viewed the map results, simply modify the search criteria again to create a new set of crashes to map.

Step 1: Select a location (i.e. state-wide, city/town, county **OR** a police dept.)

State-Wide City/Town

County Police Dept.

Portland

Step 2: Select single year or multi-year.

Single Year Multi-Year

Step 3: Select Year(s).

2015 2018

Step 4: Select Type of Crash.

All Types of Crash

Step 5: Select what to view.

All Crashes

Fatal Crashes

Injury Crashes

Property Damage Only Crashes

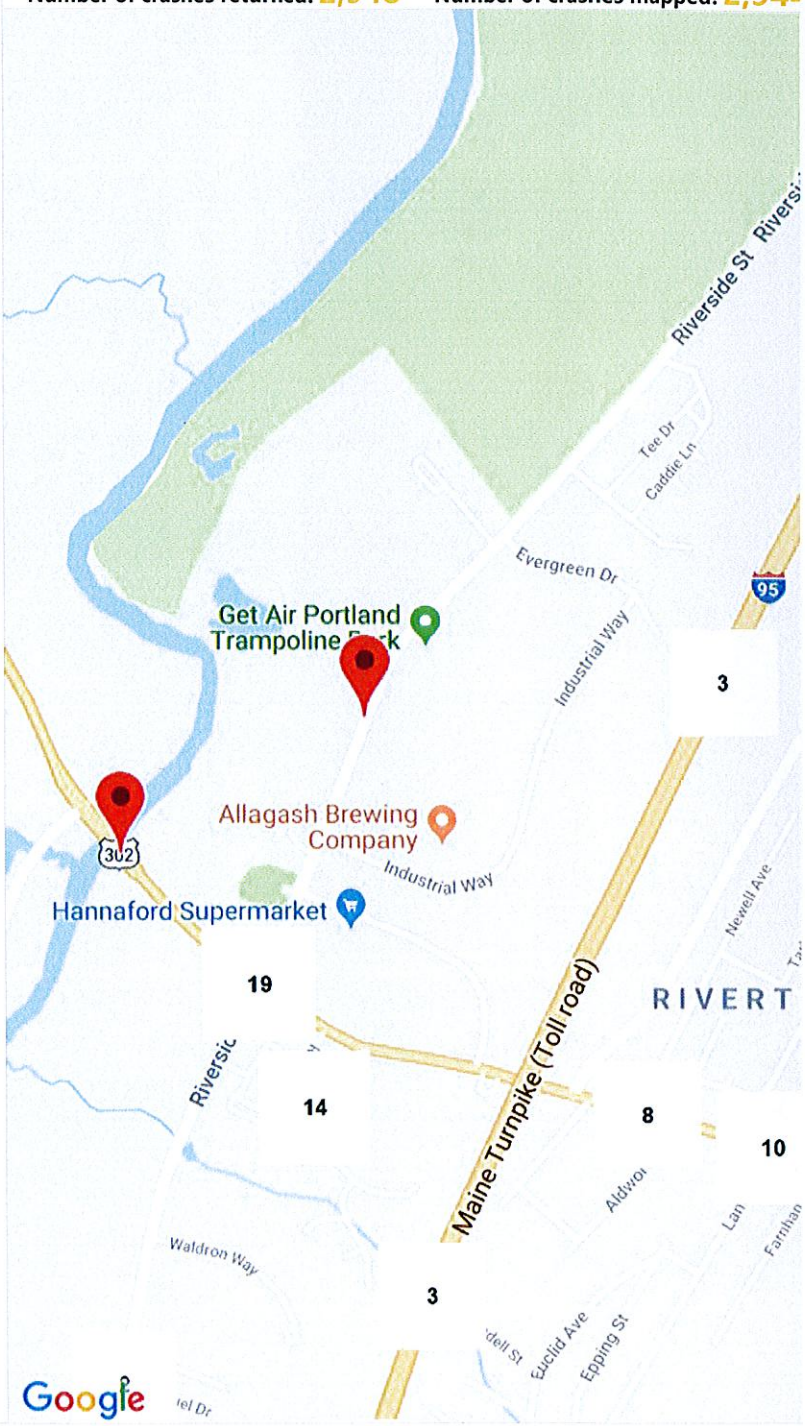
Step 6: Submit Query. Press the button below to submit your query and view results.

Submit Query

Helpful Tips

All/All Types of Crash Crashes - Year: 2015 City or Town: Portland

Number of crashes returned: 2,948 **Number of crashes mapped:** 2,94



From: Daniel Heffernan
To: John Kuchinski
Cc: Jeff Witherell; Sean Thies
Subject: Fwd: 56 Milliken Street Portland
Date: Tuesday, August 21, 2018 2:06:52 PM

Hi John - For your parking ratio calculation, I would estimate that there are approximately 105 persons on site during the day.

Paradigm Windows takes up the bulk of the auto parking, which we would guess as +/- 100 people. Not all of them bring a vehicle. For Tyson/Advance Pierre, there are usually 4-5 people at work.

I hope that helps. Feel free to contact me if I can assist.

Dan Heffernan
Vice President - Asset Management

Plymouth Industrial REIT, Inc.
260 Franklin Street
Suite 700
Boston, MA 02110
617-340-6539
dan.heffernan@plymouthREI.com

---------- Forwarded message ----------
From: **Jeff Witherell** <jeff.witherell@plymouthrei.com>
Date: Tue, Aug 21, 2018 at 11:35 AM
Subject: Fwd: 56 Milliken Street Portland
To: Daniel Heffernan <dan.heffernan@plymouthrei.com>

As discussed.

Jeff Witherell, ***CEO***
Plymouth Industrial REIT, Inc.
260 Franklin Street, 7th Floor
Boston, MA 02110
617-340-3826 direct

jeff.witherell@plymouthREI.com

---------- Forwarded message ----------
From: **John Kuchinski** <jkuchinski@ces-maine.com>
Date: Tue, Aug 21, 2018 at 11:26 AM
Subject: 56 Milliken Street Portland
To: "jeff.witherell@plymouthREI.com" <jeff.witherell@plymouthrei.com>
Cc: Sean Thies <sthies@ces-maine.com>

Jeff

As we discussed on the phone, I have had some follow up with the City of Portland. The current proposal would typically require Maine DEP review but there is a waiver process. I am in the process of requesting that the City continue review of the site through their delegated authority.

For the permit application with the City we will need a concept level floor plan and elevations. I understand you are working with Port City Architects on this.

We will also need information on number of employees on per shift for your tenants as park of a parking study. The intention is to demonstrate that the site has adequate parking for the the existing uses and the proposed building.

Thank you,

John

John Kuchinski, P.E. ◆ Senior Project Engineer

P 207.283.9151 | **F** 207.283.9151 | **C** 207.899.5307

CESINC

Engineers ◆ Environmental Scientists ◆ Surveyors

146 Main Street, Suite 300, Saco, ME 04072 | www.ces-maine.com

This e-mail may be confidential and is intended solely for the use of the individual to whom it is addressed. Any views or opinions expressed are solely those of the author and do not necessarily represent those of CES, Inc. If you are not the intended recipient (or responsible for delivery of the message to such person), you may not use, copy, distribute or deliver to anyone this message (or any part of its contents) or take any action in reliance on it. In such case, you should delete this message, and notify us immediately at 207 989 4824 or by email brewer@ces-maine.com.

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

TAB 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES NARRATIVE

Preservation of Significant Natural Features
The site does not contain any significant or endangered wildlife or plant species. Letters requesting review were sent to both Maine Department of Inland Fisheries and Wildlife and the Maine Natural Areas Program. We have included the agency response to our request for review.

Maine Natural Areas Program responded to our request for information on significant plant species returned with no mapped species on the site. Inland Fisheries and Wildlife also responded with no known habitats or water fowl areas on the site.

We are enclosing a copy of the Sand and Gravel Aquifer Map for western Portland area. The site does not contain a significant aquifer.

CES, Inc. has performed an on-site wetland evaluation and mapping. The results of that mapping are shown on the site plan. A Tier 1 Natural Resources Protection Act application is being filed with the Maine Department of Environmental Protection for filling of approximately 7,391 square feet of forested wetland.

Landscaping and Landscape Preservation
Site landscaping will include preservation of existing trees and vegetation. Except for the clearing required for the new access driveway, existing trees and vegetation between Riverside Industrial Parkway and the proposed warehouse building will be preserved and maintained. Tree protection measures will be utilized during construction to minimize the possibility of damaging trees beyond the work limit. Approximately 8.5 acres of the site will remain wooded. Site impervious cover will be approximately 46 percent. The preserved wooded areas provide sufficient landscaping for the proposed development.

Site Landscaping
Landscaping is proposed at the main entrance of the building. This is an industrial building in an industrial zone. Abutter to the east is the railroad. Between the railroad and the residential area further to the east is an existing screen of dense native vegetation. Existing vegetation is being maintained in building set back areas to the extent practicable.

We are not proposing any additional passenger car parking (See Tab 2) because the site currently has adequate parking spaces for the existing uses and the proposed warehouse expansion. If parking does become an issue there is adequate space in the existing impervious surface to convert underutilized trailer parking into automobile parking. Most of the existing parking areas have adequate landscaping to with the requirements of Zoning.

We are not proposing any additional street trees because we will preserve and protect existing vegetation along Riverside Industrial Parkway to the extent practicable. Disturbance along Riverside Industrial Parkway will be limited to what is needed for the exit drive way and stormwater treatment systems.

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

August 21, 2018

Ms. Lisa St. Hilaire, Information Manager
Maine Natural Areas Program
93 State House Station
Augusta, ME 04333-0093
Lisa.St.Hilaire@maine.gov

Re: Plymouth Industrial REIT | 56 Milliken Road | Portland, Maine

Ms. St. Hilaire,

Plymouth Industrial REIT is currently in the process of preparing a Site Location of Development Permit Amendment Application for the construction of a 72,000 square foot building at 56 Milliken Drive in Portland, Maine. The facility is an addition to and existing industrial manufacturing facility at 56 Milliken Road, Portland.

As required for permitting requirements, we are submitting this request to your office to determine if there are any potential impacts to fisheries or wildlife habitats located at the site or in the immediate surroundings. Any response can be forwarded to our office located at 146 Main Street, Saco, ME 04072 or by email at jkuchinski@ces-maine.com.

Thank you for your assistance in this matter.

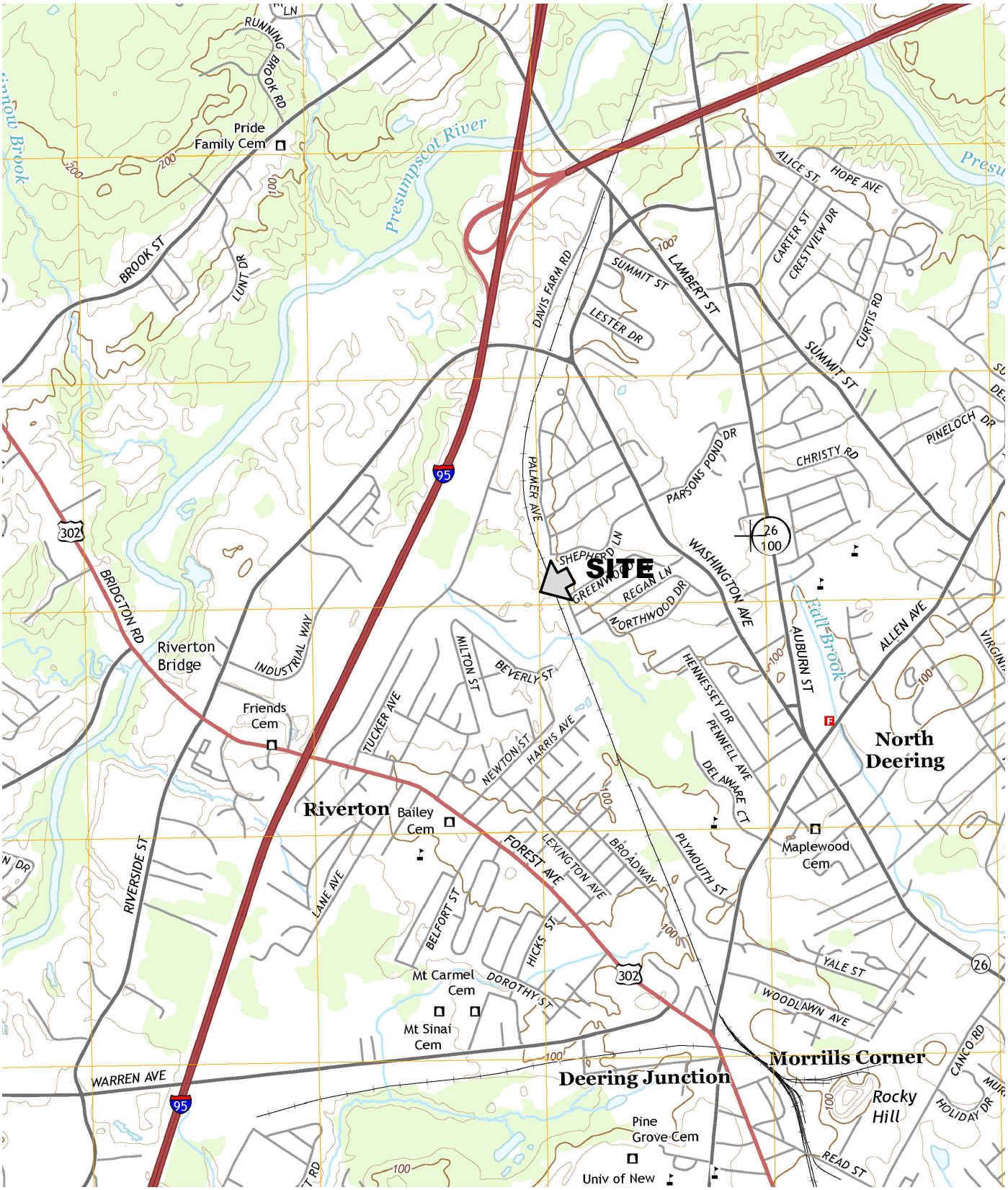
Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/cmc
Encl.

Seven Locations in Maine | www.ces-maine.com

146 Main Street
Suite 300
Saco, Maine 04072
T 207.283.9151
F 207.283.9136



SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTLAND WEST
@ 1:24,000

CES INC

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND, MAINE
LOCATION MAP

2018-07-06
12254.003

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

August 21, 2018

John Kuchinski
CES
146 Main Street, Suite 300
Saco, ME 04072

Via email: jkuchinski@ces-maine.com

Re: Rare and exemplary botanical features in proximity to: Job #1254.003, Plymouth Industrial REIT, 56 Milliken Road, Portland, Maine

Dear Mr. Kuchinski:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received August 21, 2018 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

DEPARTMENT OF Agriculture Conservation & Forestry

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,

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

August 21, 2018

Mr. Scott Lindsey
Maine Department of Inland Fisheries and Wildlife
15 Game Farm Road
Gray, ME 04039
Scott.Lindsay@maine.gov

Re: Plymouth Industrial REIT | 56 Milliken Road | Portland, Maine

Dear Mr. Lindsey,

Plymouth Industrial REIT is currently in the process of preparing a Site Location of Development Permit Amendment Application for the construction of a 72,000 square foot building at 56 Milliken Drive in Portland, Maine. The facility is an addition to and existing industrial manufacturing facility at 56 Milliken Road, Portland.

As required for permitting requirements, we are submitting this request to your office to determine if there are any potential impacts to fisheries or wildlife habitats located at the site or in the immediate surroundings. Any response can be forwarded to our office located at 146 Main Street, Saco, ME 04072 or by email at jkuchinski@ces-maine.com.

Thank you for your assistance in this matter.

Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/cmc
Encl.

Seven Locations in Maine | www.ces-maine.com

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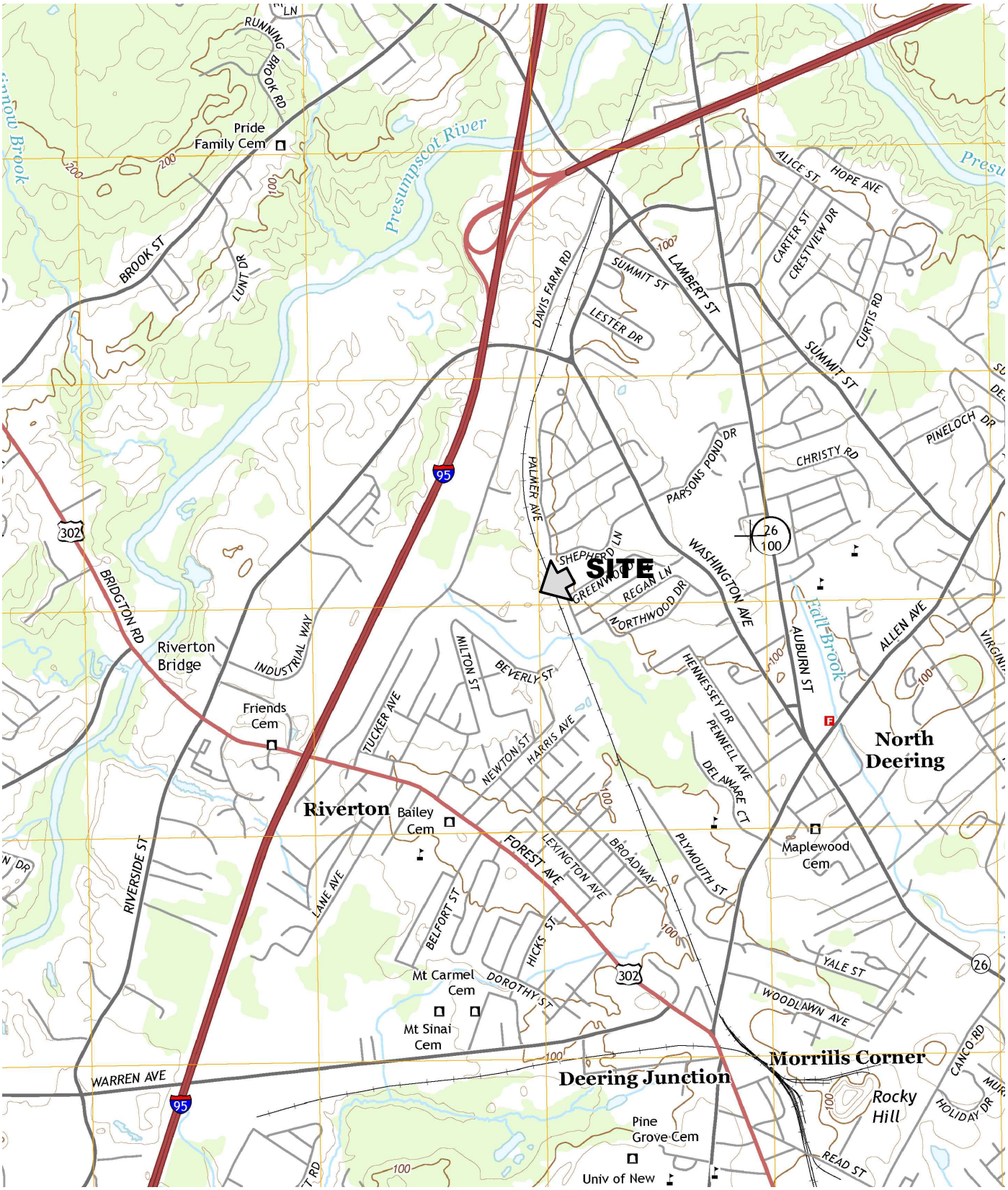


SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTLAND WEST
@ 1:24,000

CES INC

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND, MAINE
LOCATION MAP

2018-07-06
12254.003

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA, ME 04333-0041
TEL: 207-287-8000

PAUL R. LEPAGE
GOVERNOR

CHANDLER E. WOODCOCK
COMMISSIONER

Wildlife Division – Region A
15 Game Farm Rd.
Gray, ME 04039
Phone: (207) – 657-5745
Fax: (207) – 657-2980
Scott.Lindsay@maine.gov

October 4, 2018

John Kuchinski
CES, Inc.
146 Main St., Suite 300
Saco, ME 04072

Dear John,

You have contacted this office requesting information on any known wildlife habitat of management concern occurring at the site of a proposed addition to an existing commercial development located at 56 Milliken Rd. in Portland.

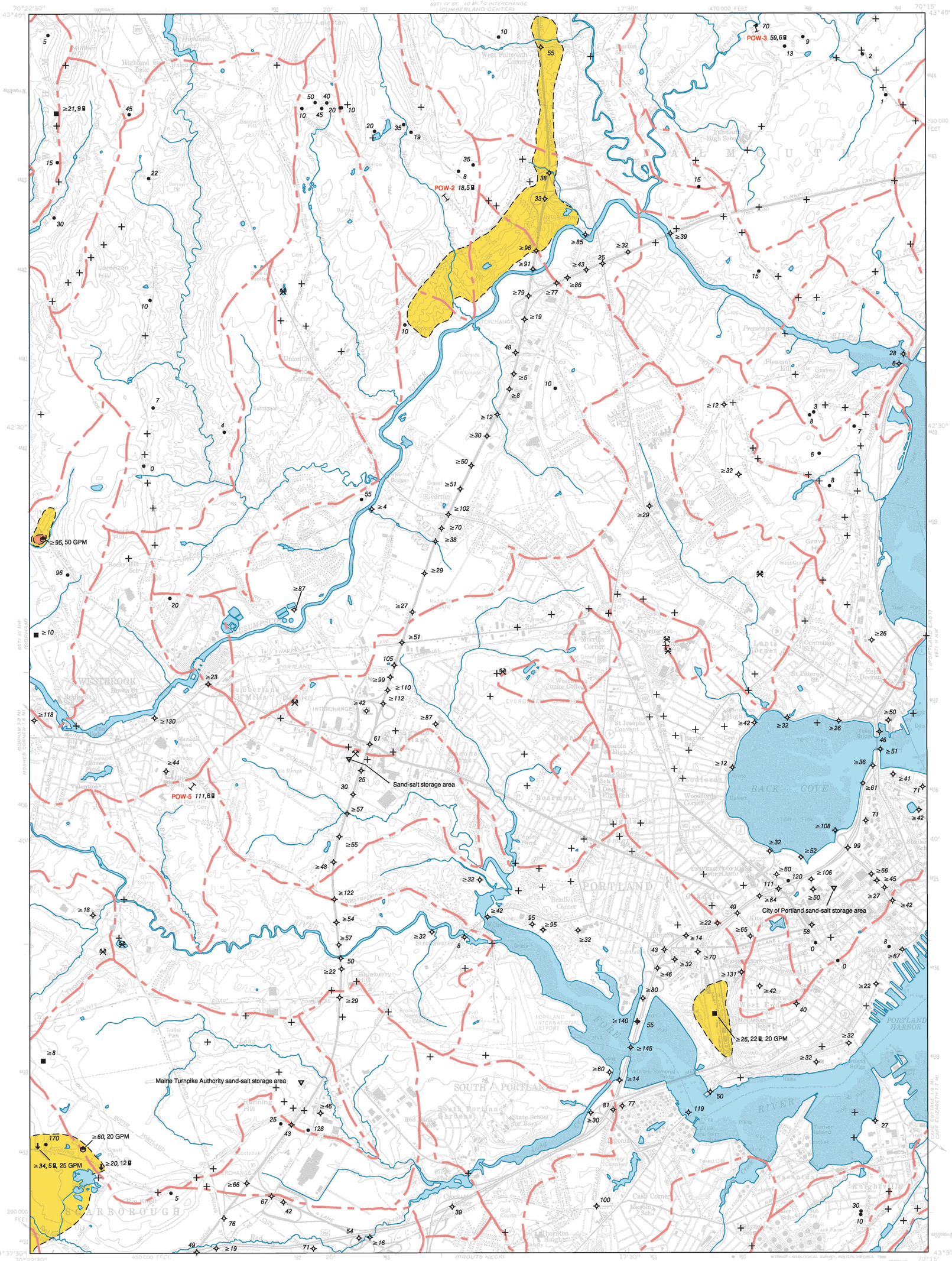
Based upon a review of the most current data available, there are no known essential or significant wildlife habitats, nor any documented occurrences of rare, threatened or endangered species at or adjacent to this property.

Sincerely,

Scott Lindsay

Scott Lindsay
Regional Wildlife Biologist

Significant Sand and Gravel Aquifers



SIGNIFICANT SAND AND GRAVEL AQUIFERS (yields greater than 10 gallons per minute)

Approximate boundary of surficial deposits with significant saturated thickness where potential ground-water yield is moderate to excellent.

Surficial deposits with good to excellent potential ground-water yield; yields generally greater than 50 gallons per minute to a properly constructed well. Deposits consist primarily of glacial sand and gravel, but can include areas of sandy till and alluvium; yield zones are based on subsurface data where available, and may vary from mapped extent in areas where data are unavailable.

Surficial deposits with moderate to good potential ground-water yield; yields generally greater than 10 gallons per minute to a properly constructed well. Deposits consist primarily of glacial sand and gravel, but can include areas of sandy till and alluvium; yields may exceed 50 gallons per minute in deposits hydraulically connected with surface-water bodies, or in extensive deposits where subsurface data are available.

SURFICIAL DEPOSITS WITH LESS FAVORABLE AQUIFER CHARACTERISTICS (yields less than 10 gallons per minute)

Areas with moderate to low or no potential ground-water yield (includes areas underlain by till, marine deposits, colian deposits, alluvium, swamps, thin glacial sand and gravel deposits, or bedrock); yields in surficial deposits generally less than 10 gallons per minute to a properly constructed well.

SEISMIC-LINE INFORMATION

Profiles for 12-channel seismic lines may be viewed at the Maine Geological Survey. Length of 12-channel seismic lines as shown on the map is to scale. All single-channel lines ranged from 80 to 300 feet long and are not shown to scale.

53 — Depth to bedrock, in feet below land surface.

≥53 — Depth to bedrock exceeds depth shown (based on calculations).

12 — Depth to water level, in feet below land surface.

MAP-7 *131*, 23 — Twelve-channel seismic line, with depth to bedrock and depth to water shown at the midpoint of the line, in feet below land surface.

69, 12 / MAP-E / *72*, 12 — Single-channel seismic line, with depth to bedrock and depth to water shown at each end of the line, in feet below land surface. Unless otherwise indicated, data shown above the line-identifier box refers to the northern end of the seismic line.

The 3-letter identifier for a line is an abbreviation for the topographic quadrangle. If the 3-letter identifier for the line is followed by a number (ex: MAP - 7, MAP - 4), the line is a 12-channel line. If the identifier is followed by a letter (ex: MAP - E, MAP- P), the line is a single-channel line. Twelve-channel seismic interpretations by C. D. Neil.

OTHER SOURCES OF INFORMATION

1. Thompson, W. B., 1999, Surficial materials of the Portland West quadrangle, Maine: Maine Geological Survey Open-File Map 99-38.
2. Thompson, W. B., 1997, Surficial geology of the Portland West quadrangle, Maine: Maine Geological Survey, Open-File Map 97-51.
3. Caswell, W. B., 1987, Ground water handbook for the state of Maine, Second Edition: Maine Geological Survey, Bulletin 39, 135 p.
4. Thompson, W. B., 1979, Surficial geology handbook for coastal Maine: Maine Geological Survey, 68 p. (out of print)
5. Kendall, D. L., 1987, Glaciers and granite: A guide to Maine's landscape and geology: Down East Books, Camden, Maine, 240 p.
6. Thompson, W. B., and Borns, H. W., Jr., 1985, Surficial geologic map of Maine: Maine Geological Survey, scale 1:500,000.

GEOLOGIC AND WELL INFORMATION

50 — Depth to bedrock, in feet below land surface

≥13 — Penetration depth of boring; ≥ symbol refers to minimum depth to bedrock based on boring depth or refusal

6 — Depth to water level in feet below land surface (observed in well, spring, test boring, pit, or seismic line)

Gravel pit (overburden thickness noted in feet, e.g. 5-12')

Quarry

4 GPM — Yield (flow) of well or spring in gallons per minute (GPM)

Spring, with general direction of flow

Drilled overburden well

Dug well

Observation well (project well if labeled; nonproject well if unlabeled)

Test boring (project boring if labeled; nonproject boring if unlabeled)

Driven point

Test pit

Drilled bedrock well

Potential point source of ground-water contamination

Bedrock outcrop

Surface-water drainage-basin boundary; surface-water divides generally correspond to ground-water divides. Horizontal direction of ground-water flow generally is away from divides and toward surface-water bodies.

Portland West Quadrangle, Maine

Compiled by
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Preliminary aquifer boundaries mapped by:
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Digital cartography by:
Michael E. Foley

Robert G. Marvinney
State Geologist

Cartographic design and editing by:
Robert D. Tucker
Bennett J. Wilson, Jr.

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WHAT IS AN AQUIFER?

Ground water, as the name implies, is water found below the land surface in the pore spaces between sand grains and in fractures in the bedrock (see diagrams below). An *aquifer* is a water-bearing geologic formation capable of yielding a usable amount of ground water to a well. In Maine there are two types of aquifers; loose soil materials (such as sand, gravel, and other sediments) and fractured bedrock. A sand and gravel deposit is considered a *significant aquifer* when a well in that deposit is capable of being continuously pumped at a rate of 10 gallons per minute (gpm) or more. To sustain a yield of 10 gpm or more, a deposit must be permeable enough for water to flow readily into the well as it is pumped (see section on *porosity* and *permeability* below), and there must be a sufficient depth of water in the well so that it will not be pumped dry.

The diagram below shows a schematic cross section of a sand and gravel aquifer in Maine. The symbols above the diagram correspond to the well symbols shown on the map at left. Information typically shown for these wells includes type of well, depth to bedrock, depth to water, and well yield. The blue line in the diagram is the *water table*. The area below the water table is called the *saturated zone*, where all pore spaces between the sediment particles are filled with water. In order to yield water, a well must extend below the water table into the saturated zone. Notice that the water table corresponds to the water level in most wells and in the stream.

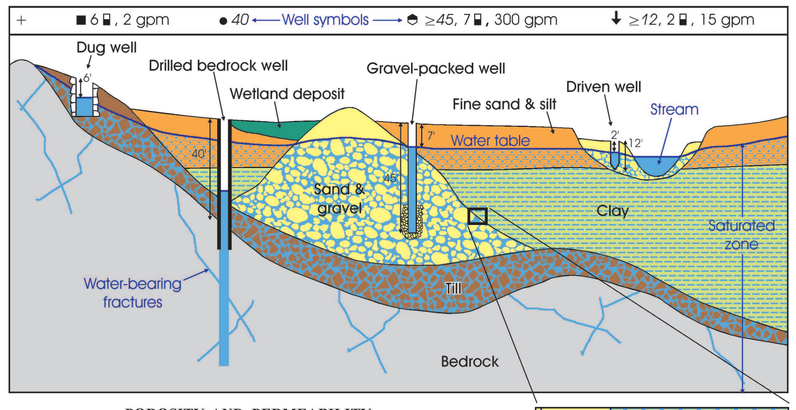
Several types of wells, common in Maine, are shown in the diagram. A *dug well* is a large diameter hole excavated by hand or backhoe. The hole is kept from caving in by installing a lining that may be stone, tile, or cement blocks. The hole must be deep enough to extend below the water table. The shallow dug well in the diagram has a yield of 2 gpm. Although the yield is often low, dug wells generally supply enough ground water for a household because of the large amount of water stored in the well.

A *gravel-packed* well is usually installed into coarse-grained sediment and is drilled with a much larger diameter than the final casing and screen diameter. To increase the yield and pumping efficiency of the well, the space around the well screen is filled with selected gravel that increases the permeability in the immediate vicinity of the well. The gravel-packed well in the diagram has a high yield of 300 gpm. Such high-yielding gravel-packed wells are commonly drilled for municipal or industrial water systems.

A *driven well* or *well point* can be installed into sand and gravel where the water table is within about 20 feet of the ground surface. A 2 to 3 inch diameter pipe, equipped with a well screen at its lower end, is driven into the deposit until the screen is below the water table. This pipe acts as a casing, and water is pumped directly from the aquifer. The driven well in the diagram has a significant yield of 15 gpm. Although the yield is relatively high, driven wells generally only supply a single household because very little water is stored in the well casing.

Wells of any type constructed in the other sediments shown in the diagram (clay or fine sand and silt) would yield some water, but yields would be lower than for wells in coarse-grained sand and gravel deposits.

Another type of well common in Maine is the *drilled bedrock well*. This well is drilled into the underlying rock with steel casing to isolate the well from potential surface-water contamination. In this type of well, water is found when the well hole intersects water-bearing fractures in the bedrock. Notice how the water level in this well is not the same level as the water table. The well casing isolates the bedrock well from the overlying sediments. The water level is controlled by water pressure in the fractures in the bedrock and is not related to the water table in the overlying materials.

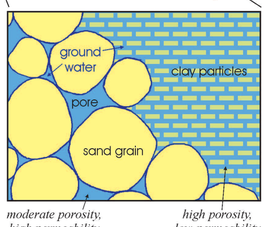


POROSITY AND PERMEABILITY

The diagram at right is an enlarged view of a section of the diagram above. Note that the section shown is below the water table and that ground water completely fills the pore spaces between the sediment grains. In an aquifer, the more pore space there is, the more water the aquifer can hold. This is called the *porosity* of a deposit. *Permeability* refers to the ability of a surficial deposit to transmit water. Permeability depends on the size of the spaces between the sediment grains.

Permeability is related to porosity, but is not the same. Porosity determines the capacity of the material to hold water. Permeability determines its ability to yield water. For example, clay is made of tiny particles with a large amount of pore space between them. However, the pore spaces are so small that they create a resistance to flow which reduces ground water permeability. Sand and gravel may not be as porous as clay, but the pore spaces are larger and better connected and the materials are much more permeable.

Permeability is an important characteristic since it determines whether ground water can actually be drawn into a pumping well.



moderate porosity, high permeability — *high porosity, low permeability*

HOW ARE AQUIFERS MAPPED?

Operating a twelve-channel seismograph, Piscataquis County, Maine.

When mapping sand and gravel aquifers, geologists visit gravel pits, stream banks, road cuts, and other surface exposures to describe materials and identify deposits. This surficial geology mapping is supplemented with seismic-refraction studies and the installation of observation wells and test borings. In addition, much information about an aquifer may already be available from water-company exploration, large construction projects, town well inventories, and other sources. This information, along with aerial photography and previously published maps, allows the geologist to define the boundaries of favorable surficial deposits and estimate how well the deposits will yield water to a well.

The boundaries of favorable surficial deposits do not necessarily coincide with the aquifer boundaries. In some areas, a thin cover of favorable coarse-grained material may overlie fine-grained sediments, till, or bedrock. A well in that material would not be able to sustain a yield of 10 gpm, so the area would not be mapped as an aquifer. In other areas, fine-grained sediments or till may overlie favorable coarse-grained sediments and the subsurface deposit may not be recognized as an aquifer.

Single- and 12-channel seismic-refraction studies are conducted to determine the saturated thickness of a deposit by establishing the depth to water table and bedrock surface. The 12-channel seismic survey has the additional advantage of providing the topography of the buried bedrock surface at a site.

Installing monitoring wells and drilling test borings provide direct information about the aquifer characteristics of a deposit. This work provides information on the depth to water table and bedrock surface, water quality, and how easily the sediment transmits water.

GROUND-WATER FLOW AND CONTAMINATION

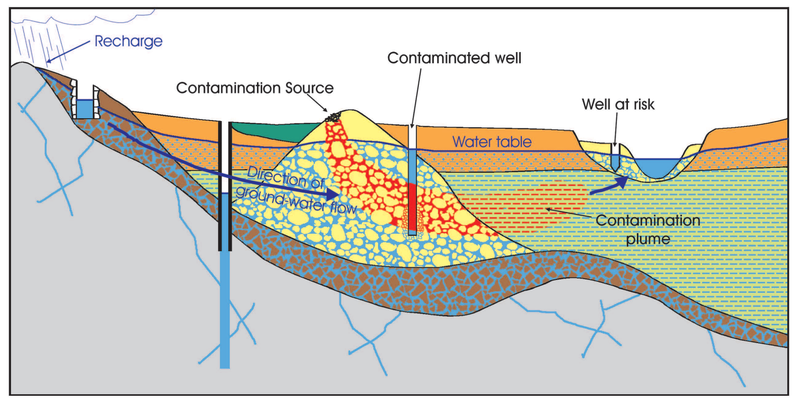
Ground water is replenished or *recharged* by rainwater and melting snow that soak into the soil. This water percolates downward and eventually reaches the water table. When recharge is high during spring snowmelt and fall rains, the amount of ground water increases and the water table rises. When recharge is low during the late summer or when the ground is frozen during the winter, the water table becomes lower.

Notice in the diagram below that ground water is not static; it flows. This concept is very important, especially when ground water becomes contaminated. Once in the ground-water system, contaminants usually travel along the paths followed by ground water and are sometimes able to migrate considerable distances over time.

In the diagram below, a plume of contamination originates at the source in the sand and gravel deposit. This source could be a landfill, a leaking fuel storage tank, or an accidental spill. As the contaminant seeps into the subsurface system and enters the aquifer, it flows with the ground water. In the diagram, the plume contaminated the gravel-packed well as it passed by. The driven well near the stream is not contaminated, but is at risk since the plume is flowing in that direction. The dug well on the hillside, however, is not affected because it is upgradient of the source, hence the contaminated ground water flows away from this well.

Once ground water is contaminated, it is very difficult and expensive to correct. To design a clean-up plan, monitoring wells are installed under the direction of a hydrogeologist or other specialist. These wells define the three-dimensional extent of the affected area. Sometimes it is possible to pump contaminants to the surface using remediation wells within the plume. Often the only solution for a homeowner is to install filtering devices or to abandon the well and find an alternative water supply.

Installing a monitoring well, Washington County, Maine.



HOW TO USE THIS MAP

Types of Information Shown on this Map: The yellow and red colored areas on the map indicate significant aquifers, zones where ground-water yield is estimated to be 10 gpm or greater. The boundaries of the aquifers are drawn by a geologist based, in part, on the well data shown on the map. Areas not mapped as aquifer may be thin or unsaturated sand and gravel deposits, surficial deposits other than sand and gravel, or bedrock.

The well data on the map provide information about the type of well, depth to water table, depth to bedrock, and yield of the wells in the area. This information is useful when making decisions about water supply, a drainage plan, or the need for blasting.

Information from seismic refraction studies also is shown on the map. Seismic studies give detailed information about depth to water table and depth to and shape of the bedrock surface. Geologic cross sections generated from seismic information are shown in associated reports listed in the references below the map at left.

Surface-water drainage-basin boundaries are also shown on the map. Horizontal direction of ground-water flow generally is away from drainage divides and toward surface-water bodies.

Uses of this Map: Sand and gravel aquifer maps are useful in two major categories of decision-making: ground-water supply and ground-water protection. For ground-water supply, these maps are useful in locating areas favorable for developing water supplies for municipal, industrial, or residential use. Information on the map, such as depth to bedrock and well yield, indicate the potential for ground-water production.

Ground-water protection is another important function of these maps. Knowledge of the location and extent of sand and gravel aquifers is critical when siting potential contamination sites such as landfills and salt storage facilities. When used in conjunction with other geologic information, this map can help planners and municipal officials make much more informed decisions to guide industrial growth or residential development.

If ground-water contamination occurs, the general trend of the plume migration can be deduced from these maps by analyzing the drainage basin boundaries and the local surface water bodies.

For further assistance in interpreting this map, contact a geologist at the Maine Geological Survey.

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

TAB 4 - ENVIRONMENTAL AND STORMWATER NARRATIVE
REVISED

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

TAB 4 - ENVIRONMENTAL AND STORMWATER NARRATIVE

A. NARRATIVE

The intent of this Stormwater Management Plan is to comply with the requirements of the City of Portland Stormwater Management Technical Manual and the Maine Department of Environmental Protection (MDEP) Chapter 500 regulations. The MDEP has delegated review authority to the City of Portland, as discussed in the enclosed correspondence between the MDEP and CES, Inc. This project involves the development of approximately five acres for the construction of a 72,000 square foot (SF) warehousing facility. Additional impervious area includes approximately 57,600 SF of new driveway and maneuvering areas and 26,700 SF of existing impervious area to be conveyed to a new stormwater treatment structure. The stormwater management plan proposes treatment for 100% of the impervious area and 100% of the 178,897 SF of developed area in this project.

The Project is located on an existing developed site consisting of Tax Map parcels 334 A014001 and 354A A006. Total site area is approximately 31.21 acres. The site was originally developed in 1966. In 1995 an expansion of the building and expansion of the truck and car parking areas triggered a Site Location of Development Act (SLODA) permit (L-18722-26-B-D). Since 1975 approximately 5.7 acres of impervious area (Structure) was added to the site. The proposed development will add approximately 2.98 acres of impervious area bring the total impervious area since 1975 to 9.29 acres. MDEP has not asserted jurisdiction. Total existing impervious areas is approximately 11.40 acres. The proposed project will bring the total site impervious area to 14.38 acres.

Erosion control measures will be in place prior to the start of any construction. Temporary and permanent measures will be installed in accordance with Section 4C of this application. Upon completion of the construction and stabilization of all disturbed areas, the temporary erosion control measures will be removed.

Development within Urban Impaired Stream Watersheds: The proposed development is within the watershed of urban impaired stream Dole Brook. The compensation fee for the proposed impact to Dole Brook is $42,775, in accordance with Chapter 501.

Basic Erosion and Sedimentation Control Standards for all Development: Information is provided as required in Section 4C – Basic Standard Submission.

Flooding Standard Submission: The following information is provided in accordance with the Flooding Standard Submission, as required by the City of Portland Stormwater Management Technical Manual – Stormwater Management Plans for New Development.

1. Control of Peak Flows: The project is required to meet Flooding Standards in accordance with Chapter 500 requirements. The Pre and Post-Development Hydrology models and narrative are located in Section 4B.

2. Details, Design, and Specifications: The model runoff calculations are performed using a HydroCAD model. Sizing of the required stormwater treatment methods are included in Section 4A.

General Standards Submission: The following Information is provided as required in the General Standard Submission.

1. Narrative: The proposed project will occupy approximately five acres of the 31.21-ac site. Most of the remaining land to the east has been developed. The driveway, parking area and vehicular maneuvering areas account for approximately 84,300 SF of new impervious area. The facility's roof system accounts for 72,000 SF of new impervious area. Treatment methods also account for 26,700 SF of existing impervious area, as the current treatment is in the location of the proposed building. Proposed treatment methods include a roof drip edge and three underdrained soil filters adjacent to the proposed impervious areas.

2. Drainage Plans: A plan set is provided as part of Section 4 requirements and Pre- and Post-Development Hydrology Plans are provided in Section 4B under the Stormwater Management Quantity Report portion of this Application. The plan set includes the locations of BMP's used to treat the stormwater from this development, and a site detail sheet is included in Section 4B that provides detail information on the grassed underdrained soil filters.

3. Calculations: Underdrained soil filter sizes were determined in accordance with Chapter 500 and the MDEP Stormwater BMP Technical Design Manual, Volume III.

4. Details, Designs, and Specifications: The project is currently proposing to control runoff quality issues using a roof drip edge and three grassed underdrained soil filters (GUSF).

5. Phosphorus Standards Submission: The proposed development is not in a lake watershed, and is therefore not required to meet the Phosphorus Standards Submission.

SECTION 4A

STORMWATER QUALITY CONTROL NARRATIVE

The proposed Plymouth REIT is being developed for the construction of a warehousing facility in Portland, Maine. The site will be accessed by a 400-foot driveway off of Riverside Industrial Parkway. The approximately 5-acre development will involve the installation of about 129,600 SF of new impervious area. The development also proposes the removal of an existing underdrained soil filter as it interferes with the new building footprint. The filter treated runoff from approximately 26,700 SF of existing impervious area. Stormwater from the area will be conveyed through catch basins to a new underdrained soil filter. As a result of these improvements, the project is required to comply with the City of Portland Stormwater Management Technical Manual – Stormwater Management Plans for New Development. According to Maine DEP Chapter 500 regulations, 95% of proposed impervious surfaces and 80% of the developed area must be treated.

To treat stormwater associated with the proposed development, Plymouth REIT is proposing the construction of a roof drip edge and three grassed underdrained soil filters (GUSF) to meet stormwater quality standards. The GUSFs will be located in the south edge of the facility entrance to maximize the treatment of runoff. The locations of these BMP's are shown on the plan set.

The following tables summarize the impervious and developed area created by the project as well as the treatment structure, area treated, and relationship with the total developed and impervious areas for the project.

PROJECT SITE AREA

PROJECT AREA	IMPERVIOUS AREA	DEVELOPED AREA
New Site Area	129,596 SF	152,197 SF
Existing Site Area	26,700 SF	26,700 SF
TOTAL	156,296 SF	178,897 SF

STORMWATER TREATMENT SYSTEMS

TREATMENT METHOD	SITE AREA TREATED	
	IMPERVIOUS	DEVELOPED
GUSF 1	58,335 SF	69,830 SF
GUSF 2	3,232 SF	7,431 SF
GUSF 3	6,529 SF	13,436 SF
Roof Drip Edge	88,200	88,200
TOTAL	156,296 SF	178,897 SF
PERCENT OF TOTAL AREA TREATED	**100.0 %**	**100.0 %**

A description of the treatment type is as follows:

1. **Grass Underdrained Soil Filter (GUSF):** Three GUSF's have been proposed to treat stormwater runoff from the site. Runoff from paved areas will be conveyed through ditches along proposed pavements to the corresponding GUSF along the driveway. The proposed stormwater quality control devices have been designed according to the standards outlined in the Stormwater Management for Maine, Volume III BMP Manual, January 2006 and revised May 2016. Construction and maintenance will be according to standards outlined in this manual.

   GUSF 1:
   Impervious Area: 58,335 SF
   Landscape Area: 5,244 SF

   Chapter 500 sizing is based on 1" of the impervious area + 0.4" of the landscaped area.

   55,335 SF x 1" = 4,861 CF or Required Storage
   11,495 SF x 0.4" = 383 CF of Required Storage

   5,244 CF of Required Storage @ 18" Deep = 3,496 SF of Filter Area.
   3,900 SF was provided by design.

   GUSF 2:
   Impervious Area: 3,232 SF
   Landscape Area: 4,199 SF

   Chapter 500 sizing is based on 1" of the impervious area + 0.4" of the landscaped area.

   3,232 SF x 1" = 269 CF or Required Storage
   4,199 SF x 0.4" = 140 CF of Required Storage

   409 CF of Required Storage @ 18" Deep = 273 SF of Filter Area.
   370 SF was provided by design.

   GUSF 3:
   Impervious Area: 6,529 SF
   Landscape Area: 6,907 SF

   Chapter 500 sizing is based on 1" of the impervious area + 0.4" of the landscaped area.

   6,529 SF x 1" = 544 CF or Required Storage
   6,907 SF x 0.4" = 230 CF of Required Storage

   774 CF of Required Storage @ 18" Deep = 516 SF of Filter Area.
   620 SF was provided by design.

2. **Roof Drip Edge:** A roof drip edge has been proposed to treat impervious area from Subarea 5. The drip edge has been sized in accordance with the BMP Manual. The stone's porosity of 0.4 will allow enough runoff to be stored to meet the flooding standard, as presented in the HydroCAD model. The proposed stormwater quality control device has been designed according to the standards outlined in the Stormwater Management for Maine, Volume III BMP Manual, January 2006 and revised May 2016. Construction and maintenance will be according to standards outlined in this manual.

   Roof Area: 72,000 SF

   Chapter 500 sizing is based on 1" of the roof area

   72,000 SF x 1" = 6,000 CF of Required Storage
   6,000 CF of Required Storage @ Porosity of 0.4 = 15,000 CF Stone Required
   Drip Edge Stone Volume Provided to Meet Flooding Standard = 28,500 CF

SECTION 4B

STORMWATER MANAGEMENT QUANTITY NARRATIVE

As previously stated, the project is required to meet the flooding standard under Chapter 500 Section 4.E(2)(a). To meet the flooding standard, HydroCAD calculations were performed to compare pre-development and post-development conditions to determine curve numbers and peak runoff flows.

The undeveloped portion of the property is primarily forested with a mix of softwoods and hardwoods. Terrain is relatively flat, but two streams bisect the area, one entirely on the property and the other primarily on the adjacent property to the North. Both streams are located within steep-sided gullies. There is an additional low area near the north end of the property. Soils on the site are classified by the USDA web soil survey as cut and fill material in the existing development and a combination of Type C and D in the undeveloped portion of the property. A majority of the area proposed for development drains to the stream inside the property boundary. The overall runoff from the site drains south to Dole Brook. The post-development hydrology plan was broken into eight subareas encompassing the same footprint as the pre-development hydrology plan. Runoff from the rooftop of the proposed warehouse is stored in the voids of a crushed stone drip edge with an underdrain. This stormwater is conveyed through a storm drainage pipe before outletting to the on-site stream. The existing turnaround is currently treated by an underdrained soil filter to be removed upon construction of the warehouse. To replace this treatment method, stormwater is captured by two catch basins and conveyed through piping to GUSF 1. A majority of new pavements will be contained and treated by a combination of the three proposed underdrained soil filter. These structures will outlet controlled and treated stormwater to the adjacent stream.

A summation point was chosen in the same location between pre-development and post-development to compare peak flow runoff for the 2-year, 10-year, and 25-year storm events. The summation point is located to the south of the site. Based on results of the HydroCAD, it is expected that stormwater runoff from the site will be similar or lessened in post-development conditions as in pre-development conditions. The drip edge and GUSFs detain stormwater runoff to allow a controlled flow before exiting the project site. A comparison of each of the watershed areas in both Pre- and Post-Development is organized in the table below.

		2 Year (cfs)	10 Year (cfs)	25 Year (cfs)	25 Year Net Change
Summation Point	Pre	50.44	86.21	115.35	**-2.18**
	Post	49.42	83.98	113.17	

SECTION 4C

BASIC STANDARDS SUBMISSION

An Erosion and Sedimentation Plan was prepared for Plymouth REIT. The erosion control notes address permanent stabilization measures, seeding, and mulching rates, as well as the timing of installation. Construction and installation details are also provided for the project. Additional descriptions and specifications are provided in Erosion and Sedimentation Control.

An Inspection and Maintenance Plan has been included in this Section. This plan includes a list of measures to be inspected and maintained. It also includes the frequency and responsible parties to implement the plan. A Housekeeping Plan has also been included in this Section. This plan provides controls to address spill prevention and possible contamination of the site.

EROSION AND SEDIMENTATION CONTROL

The proposed construction will require the implementation of temporary and permanent erosion control measures. These measures will be implemented in accordance with the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual, prior to removal of any on-site vegetation or disturbance of any on-site soil. The general erosion and sediment control specifications and details, as provided within this section, are intended to describe measures to be used by contractors working on the site to maintain compliance with the standards established in the BMPs.

The proposed location and use of erosion control measures on-site are shown on the plan located in Section 4 of this application. There are no known existing erosion control concerns with the site. Implementation of proper erosion control measures will be required by site contractors to confine sediment and debris within the limit of soil disturbance. Proper use and maintenance of erosion control measures provide protection against off-site transport of sediment and discharge of sediment to undisturbed areas of the development.

EROSION AND SEDIMENTATION CONTROL PLAN

1. Pollution Prevention: The proposed project includes the construction of a warehousing facility in Portland, Maine. The facility will be approximately 72,000 square feet (SF), with associated roads and parking lots totaling approximately 84,300 SF. All disturbed areas, with the exception of the building and parking/maneuvering areas, will be stabilized with vegetation or riprap. Proposed down-gradient wooded areas and streams will be protected with the use of silt fence or additional control devices if necessary during construction.

2. Sediment Barriers: Prior to construction, sediment barriers will be installed downgradient of all disturbed areas. Sediment barriers will include silt fence, bark mulch berms, hay bales or additional measures which may become necessary.

Sediment barriers will also be installed adjacent to any significant natural drainage channel, not otherwise protected. All installed sediment barriers will be maintained until disturbed areas are permanently stabilized.

3. Temporary Stabilization: Disturbed areas, which have lost natural vegetation cover, and will not be worked for more than seven days, will be temporarily stabilized. Areas within 75 feet of a wetland or waterbody will be stabilized within 48 hours of the initial disturbance or prior to any significant storm event, whichever comes first.

Temporary stabilization will include mulch or other non-erodible material such as erosion control mesh mats. In some instances, temporary stabilization may include temporary mulch and seeding, based on the time until the area will be worked or permanently stabilized.

4. Removal of Temporary Sediment Control Measures: After permanent stabilization of disturbed areas has been completed, temporary measures, such as silt fence, will be removed within 30 days. Any accumulated sediments will be removed and any disturbed areas permanently stabilized.

5. Permanent Stabilization: Once proposed construction is completed all disturbed areas, not otherwise permanently stabilized, will be permanently stabilized with vegetation, seeding, or permanent mulch.

Vegetation plantings and seeding will include species which are suitable for the light, soil, and moisture conditions of the area. Seeded areas will be protected with temporary mulch or erosion control blankets.

Concentrated flows will not be allowed on newly seeded areas until an adequate catch of vegetation is established. It may be necessary to reseed and mulch again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. For seeded areas, permanent stabilization means a 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.

Other permanent measures associated with the project include the following:

A. Permanent Mulch: Permanent mulching means total coverage of exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

B. Permanent Riprap: Permanent riprap means that slopes and ditches stabilized with riprap have an appropriate backing of well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Properly sized angular stones will be utilized.

C. Permanent Ditches, Channels, and Swales: Permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation or with a well-graded riprap lining. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

6. Winter Construction: Winter construction is not anticipated at this time. If Winter construction occurs, additional provision will be made to protect disturbed areas from runoff. Winter construction includes the time between November 1 and April 15.

7. Stormwater Channels: Ditches, swales, and open stormwater channels are planned as part of this project. They will be stabilized with either vegetation or rip rap depending on the situation to prevent soil erosion.

8. Roads: The proposed roadways will vary in width, cross section and surface. These roads will be graded to collect water in various proposed BMP's. Some sections of roadway will be super-elevated to send runoff to the desired BMP.

9. Culverts: Culverts utilized in this project will be protected on both ends and the outlet pool to prevent scour.

10. Parking Areas: The proposed project includes parking areas graded to collect runoff in the various proposed BMP's.

11. Additional Requirements: No additional requirements are proposed at this time.

INSPECTION AND MAINTENANCE

The Owner and their Contractor will be responsible for maintenance during construction. The Owner will be responsible for post construction maintenance of the site and the devices that provide treatment for the stormwater from the site.

A Pre- and Post-Construction Maintenance Plan for the stormwater management system is included in this section. Any questions regarding the design and maintenance of the Stormwater Management and Erosion and Sedimentation Control Systems should be directed to:

John Kuchinski, P.E.
CES, Inc.
146 Main Street, Suite 300
Saco, ME 04072

MAINTENANCE PLAN OF STORMWATER MANAGEMENT SYSTEM

The Maine Department of Environmental Protection's (MDEP) Stormwater Management for Maine: Best Management Practices latest edition and the MDEP's Chapter 500: Stormwater Management were used as guidelines in the development of this Maintenance Plan. General maintenance requirements are listed below.

A. DURING CONSTRUCTION

The general contractor will be responsible for the inspection and maintenance of all stormwater management system components during construction.

Inspection: Inspection of disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site will be performed at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. Inspections shall be conducted by a person with knowledge of erosion and stormwater control, including the standards and conditions in the permit.

Maintenance: All erosion control measures will be kept in effective operating condition until areas are permanently stabilized. If BMPs need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation will be completed within 7 calendar days and prior to any rainfall event.

Documentation: A log shall be kept summarizing the inspections and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, Log of Inspections During Construction.

B. POST-CONSTRUCTION

The Owner will be responsible for the inspection and maintenance of all stormwater management system components associated with the proposed project. A list of corrective actions titled Inspection and Maintenance Plan for Stormwater Management Structures (BMPs) is provided at the end of this section.

Inspection and Corrective Action

1. **Vegetated Areas:** Inspections and maintenance of vegetated areas will be performed early in the growing season or after significant rainfall to identify any erosion problems. Areas where erosion is evident will be covered with an appropriate lining, or erosive flows will be diverted to an area able to handle the flows. Any bare areas or areas with sparse growth will be replanted.

2. **Ditches, Swales, and Culverts:** Inspections and maintenance of ditches, culverts, and swales will be performed in the Spring, late Fall, and after rain events greater than 1-inch in depth to remove any obstructions to flow, to remove any accumulated sediments within the structures, and to repair any erosion of channel linings, check dams, inlet protection, or outlet protection. Vegetated ditches and swales must be mowed no more than twice per year and cut no less than 6-inch in height.

3. **Grassed Underdrained Soil Filter (GUSF):** Inspections and maintenance of GUSF's will be performed annually in the spring and late fall to clean the basins of debris, sediment and hydrocarbons. Accumulated sediments within the basin shall be removed and disposed of, and basin media shall be renewed if it fails to drain within 72 hours after a one-inch rainfall event. GUSF's are to be tilled, seeded and mulched if vegetation is sparse. Repair all riprap where underlying filter fabric or gravel is showing or where stones have dislodged.

4. **Roof Drip Edge:** Inspections and maintenance of the roof drip edge will be performed annually in the spring and late fall to clean the basins of debris, sediment and hydrocarbons. Accumulated sediments within the filtration system shall be removed and disposed of, and basin media shall be renewed if it fails to drain within 72 hours after a one-inch rainfall event. Repair all stone where underlying filter fabric or gravel is showing or where stones have dislodged.

C. DOCUMENTATION

A log shall be kept summarizing the inspections, maintenance, and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, BMP Inspection Log

HOUSEKEEPING

1. **Spill Prevention** - During construction, controls will be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. **Groundwater Protection**- During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater will not be stored or handled in areas of the site draining to an infiltration area. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

3. **Fugitive Sediment and Dust** - Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil will not be used for dust control. Water will be used for dust control during construction. Operations during wet months that cause mud to be tracked off the site onto public roads will provide sweeping of the road areas at least once per week and prior to significant storm events.

4. **Debris and Other Materials** - Litter, construction debris, and chemicals exposed to stormwater will be prevented from becoming a pollutant source.

5. **Trench or Foundation De-Watering** - If de-watering is necessary, the collected water will be removed from the ponded area and spread through natural wooded buffers or discharged into a construction sedimentation basin. The water will not be allowed to flow over disturbed areas to the site.

6. **Non Stormwater Discharges** – Identify and prevent contamination by non-stormwater discharges.

7. **Additional Requirements** – Additional requirements may be applied on a site-specific basis.

PLYMOUTH REIT
LOG OF INSPECTIONS DURING CONSTRUCTION

Inspection Date	Inspector (Name and Qualifications)	Major Observations	Work Performed

Notes

1) Major Observations include the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle 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 locations(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.
2) Work Performed will include a description of the corrective action taken, the date the corrective action was taken, and the name and qualifications of the person taking the corrective actions
3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
4) The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

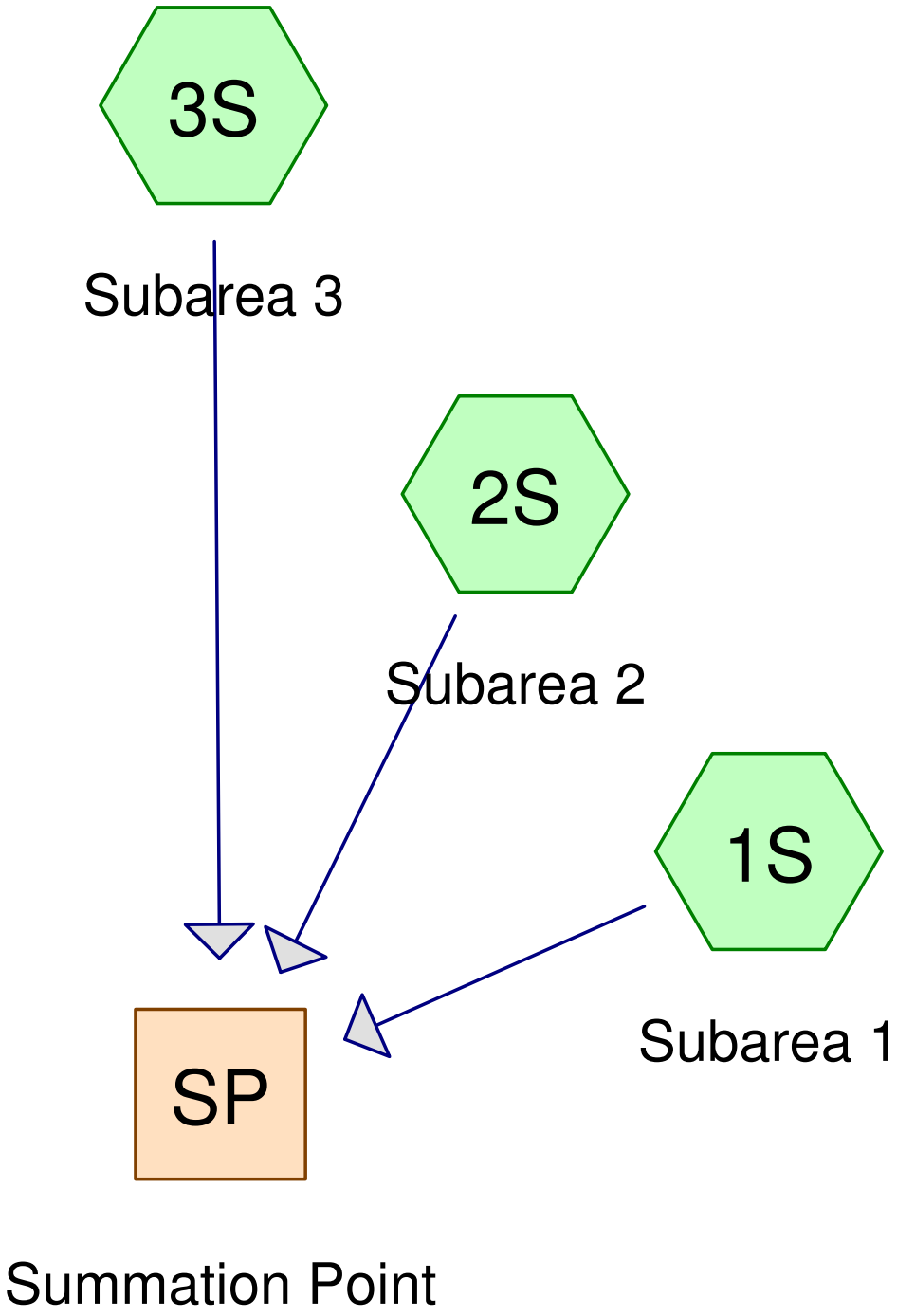
PLYMOUTH REIT
BMP INSPECTION LOG

Date	Inspector (Name and Qualifications)	ID Number	BMP Structure	Work Performed	Comments

Notes

1) If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.
2) BMP structures shall be numbered sequentially and located on attached site map.
3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
4) The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)		
	INSPECTION SCHEDULE	**CORRECTIVE ACTIONS**
VEGETATED AREAS	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor rill erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Mow vegetation as specified for the area
DITCHES, SWALES AND OPEN STORMWATER CHANNELS	Annually spring and late fall and after heavy rains	Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
		Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
		Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodged
CULVERTS	Spring and late fall and after heavy rains	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
		Repair any erosion damage at the culvert's inlet and outlet
CATCHBASINS	Annually in the spring	Remove sediments and debris from the bottom of the basin and inlet grates
		Remove floating debris and oils (using oil absorptive pads) from any trap
ROADWAYS AND PARKING AREAS	Annually in the spring or as needed	Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
		Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean-out the sediment within water bars or open-top culverts
		Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
RESOURCE AND TREATEMENT BUFFERS	Annually in the spring	Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
		Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
		Clean-out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
WETPONDS AND DETENTION BASINS	Annually in fall and after heavy rains	Inspect the embankments for settlement, slope erosion, piping, and slumping
		Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
		Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
FILTRATION AND INFILTRATION BASINS	Annually in the spring and late fall	Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
		Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
PROPRIETARY DEVICES	As specified by manufacturer	Contract with a third-party for inspection and maintenance
		Follow the manufacturer's plan for cleaning of devices
OTHER PRACTICES	As specified for devices	Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.



Subcat Reach Pond Link

Routing Diagram for 12254.003 Pre-Developmentr1
Prepared by CES, INC., Printed 2/12/2019
HydroCAD® 10.00-24 s/n 00641 © 2018 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=665,147 sf 36.39% Impervious Runoff Depth>1.47"
Flow Length=1,215' Tc=11.7 min CN=84 Runoff=35.37 cfs 1.871 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>2.65"
Tc=6.0 min CN=98 Runoff=17.42 cfs 0.882 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>2.65"
Tc=6.0 min CN=98 Runoff=1.53 cfs 0.077 af

Reach SP: Summation Point Inflow=50.44 cfs 2.830 af
Outflow=50.44 cfs 2.830 af

Total Runoff Area = 19.609 ac Runoff Volume = 2.830 af Average Runoff Depth = 1.73"
49.53% Pervious = 9.713 ac 50.47% Impervious = 9.896 ac

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=665,147 sf 36.39% Impervious Runoff Depth>2.70"
Flow Length=1,215' Tc=11.7 min CN=84 Runoff=63.54 cfs 3.434 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=98 Runoff=26.02 cfs 1.332 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=98 Runoff=2.28 cfs 0.117 af

Reach SP: Summation Point Inflow=86.21 cfs 4.883 af
Outflow=86.21 cfs 4.883 af

Total Runoff Area = 19.609 ac Runoff Volume = 4.883 af Average Runoff Depth = 2.99"
49.53% Pervious = 9.713 ac 50.47% Impervious = 9.896 ac

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=665,147 sf 36.39% Impervious Runoff Depth>3.74"
Flow Length=1,215' Tc=11.7 min CN=84 Runoff=86.57 cfs 4.757 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>5.09"
Tc=6.0 min CN=98 Runoff=32.88 cfs 1.691 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>5.09"
Tc=6.0 min CN=98 Runoff=2.89 cfs 0.148 af

Reach SP: Summation Point Inflow=115.35 cfs 6.596 af
Outflow=115.35 cfs 6.596 af

Total Runoff Area = 19.609 ac Runoff Volume = 6.596 af Average Runoff Depth = 4.04"
49.53% Pervious = 9.713 ac 50.47% Impervious = 9.896 ac

Summary for Subcatchment 1S: Subarea 1

Runoff = 86.57 cfs @ 12.03 hrs, Volume= 4.757 af, Depth> 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
30,736	78	Meadow, non-grazed, HSG D
111,998	82	Woods/grass comb., Fair, HSG D
11,049	98	Roofs, HSG C
230,999	98	Paved parking, HSG C
123,625	76	Woods/grass comb., Fair, HSG C
156,740	71	Meadow, non-grazed, HSG C
665,147	84	Weighted Average
423,099		63.61% Pervious Area
242,048		36.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0210	1.38		**Sheet Flow, SF 1-1** Smooth surfaces n= 0.011 P2= 3.10"
2.9	520	0.0210	2.94		**Shallow Concentrated Flow, SCF 1-1** Paved Kv= 20.3 fps
7.6	595	0.0350	1.31		**Shallow Concentrated Flow, SCF 1-2** Short Grass Pasture Kv= 7.0 fps
11.7	1,215	Total			

Summary for Subcatchment 2S: Subarea 2

Runoff = 32.88 cfs @ 11.97 hrs, Volume= 1.691 af, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
173,753	98	Roofs, HSG C
173,753		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 2**

Summary for Subcatchment 3S: Subarea 3

Runoff = 2.89 cfs @ 11.97 hrs, Volume= 0.148 af, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

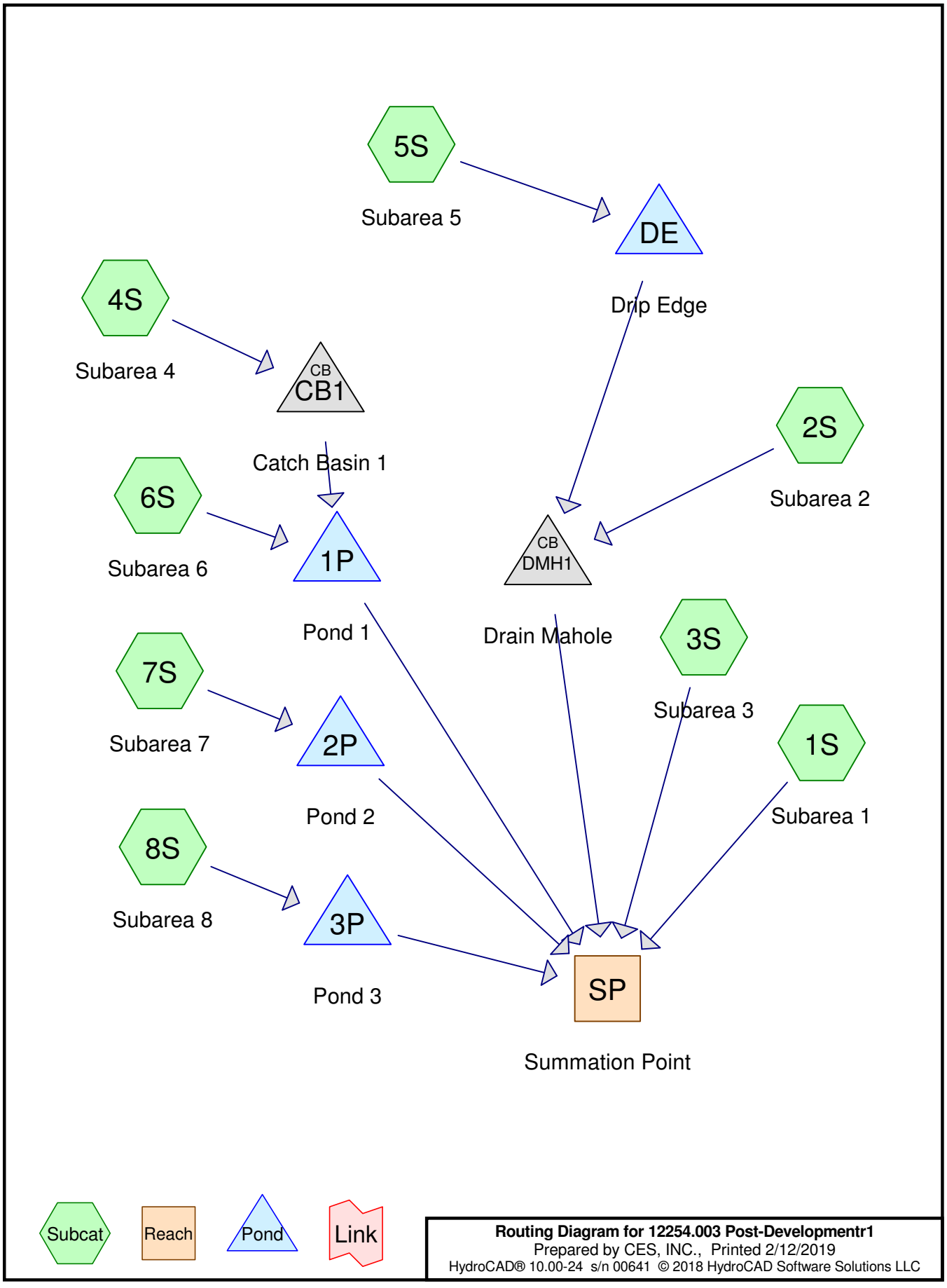
Area (sf)	CN	Description
15,247	98	Roofs, HSG C
15,247		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 3**

Summary for Reach SP: Summation Point

Inflow Area = 19.609 ac, 50.47% Impervious, Inflow Depth > 4.04" for 25-yr event
Inflow = 115.35 cfs @ 12.00 hrs, Volume= 6.596 af
Outflow = 115.35 cfs @ 12.00 hrs, Volume= 6.596 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs



Routing Diagram for 12254.003 Post-Developmentr1
Prepared by CES, INC., Printed 2/12/2019
HydroCAD® 10.00-24 s/n 00641 © 2018 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=448,435 sf 48.10% Impervious Runoff Depth>1.54"
Flow Length=1,215' Tc=11.7 min CN=85 Runoff=24.92 cfs 1.322 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>2.65"
Tc=6.0 min CN=98 Runoff=17.42 cfs 0.882 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>2.65"
Tc=6.0 min CN=98 Runoff=1.53 cfs 0.077 af

Subcatchment 4S: Subarea 4 Runoff Area=44,955 sf 62.82% Impervious Runoff Depth>1.85"
Flow Length=217' Slope=0.0220 '/' Tc=9.2 min CN=89 Runoff=3.20 cfs 0.159 af

Subcatchment 5S: Subarea 5 Runoff Area=93,335 sf 94.50% Impervious Runoff Depth>2.57"
Tc=6.0 min CN=97 Runoff=9.22 cfs 0.459 af

Subcatchment 6S: Subarea 6 Runoff Area=45,394 sf 66.29% Impervious Runoff Depth>1.85"
Tc=6.0 min CN=89 Runoff=3.60 cfs 0.161 af

Subcatchment 7S: Subarea 7 Runoff Area=10,526 sf 30.70% Impervious Runoff Depth>1.21"
Tc=6.0 min CN=80 Runoff=0.57 cfs 0.024 af

Subcatchment 8S: Subarea 8 Runoff Area=22,538 sf 28.97% Impervious Runoff Depth>1.21"
Tc=6.0 min CN=80 Runoff=1.23 cfs 0.052 af

Reach SP: Summation Point Inflow=49.42 cfs 2.686 af
Outflow=49.42 cfs 2.686 af

Pond 1P: Pond 1 Peak Elev=68.59' Storage=8,244 cf Inflow=6.65 cfs 0.320 af
Discarded=0.11 cfs 0.092 af Primary=0.22 cfs 0.091 af Outflow=0.33 cfs 0.183 af

Pond 2P: Pond 2 Peak Elev=60.91' Storage=774 cf Inflow=0.57 cfs 0.024 af
Outflow=0.02 cfs 0.007 af

Pond 3P: Pond 3 Peak Elev=56.95' Storage=1,099 cf Inflow=1.23 cfs 0.052 af
Outflow=0.27 cfs 0.028 af

Pond CB1: Catch Basin 1 Peak Elev=76.12' Inflow=3.20 cfs 0.159 af
15.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=3.20 cfs 0.159 af

Pond DE: Drip Edge Peak Elev=81.33' Storage=8,912 cf Inflow=9.22 cfs 0.459 af
Outflow=8.69 cfs 0.279 af

Pond DMH1: Drain Mahole Peak Elev=84.44' Inflow=25.72 cfs 1.161 af
24.0" Round Culvert n=0.013 L=150.0' S=0.5303 '/' Outflow=25.72 cfs 1.161 af

Total Runoff Area = 19.609 ac Runoff Volume = 3.137 af Average Runoff Depth = 1.92"
34.32% Pervious = 6.730 ac 65.68% Impervious = 12.879 ac

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=448,435 sf 48.10% Impervious Runoff Depth>2.79"
Flow Length=1,215' Tc=11.7 min CN=85 Runoff=44.05 cfs 2.393 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=98 Runoff=26.02 cfs 1.332 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=98 Runoff=2.28 cfs 0.117 af

Subcatchment 4S: Subarea 4 Runoff Area=44,955 sf 62.82% Impervious Runoff Depth>3.17"
Flow Length=217' Slope=0.0220 '/' Tc=9.2 min CN=89 Runoff=5.30 cfs 0.273 af

Subcatchment 5S: Subarea 5 Runoff Area=93,335 sf 94.50% Impervious Runoff Depth>3.93"
Tc=6.0 min CN=97 Runoff=13.88 cfs 0.702 af

Subcatchment 6S: Subarea 6 Runoff Area=45,394 sf 66.29% Impervious Runoff Depth>3.17"
Tc=6.0 min CN=89 Runoff=5.95 cfs 0.276 af

Subcatchment 7S: Subarea 7 Runoff Area=10,526 sf 30.70% Impervious Runoff Depth>2.35"
Tc=6.0 min CN=80 Runoff=1.09 cfs 0.047 af

Subcatchment 8S: Subarea 8 Runoff Area=22,538 sf 28.97% Impervious Runoff Depth>2.35"
Tc=6.0 min CN=80 Runoff=2.33 cfs 0.102 af

Reach SP: Summation Point Inflow=83.98 cfs 4.729 af
Outflow=83.98 cfs 4.729 af

Pond 1P: Pond 1 Peak Elev=69.62' Storage=13,129 cf Inflow=11.03 cfs 0.549 af
Discarded=0.14 cfs 0.114 af Primary=1.50 cfs 0.257 af Outflow=1.64 cfs 0.371 af

Pond 2P: Pond 2 Peak Elev=61.03' Storage=859 cf Inflow=1.09 cfs 0.047 af
Outflow=0.86 cfs 0.030 af

Pond 3P: Pond 3 Peak Elev=57.12' Storage=1,232 cf Inflow=2.33 cfs 0.102 af
Outflow=2.29 cfs 0.077 af

Pond CB1: Catch Basin 1 Peak Elev=76.98' Inflow=5.30 cfs 0.273 af
15.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=5.30 cfs 0.273 af

Pond DE: Drip Edge Peak Elev=81.49' Storage=9,339 cf Inflow=13.88 cfs 0.702 af
Outflow=13.12 cfs 0.522 af

Pond DMH1: Drain Mahole Peak Elev=90.38' Inflow=38.85 cfs 1.854 af
24.0" Round Culvert n=0.013 L=150.0' S=0.5303 '/' Outflow=38.85 cfs 1.854 af

Total Runoff Area = 19.609 ac Runoff Volume = 5.242 af Average Runoff Depth = 3.21"
34.32% Pervious = 6.730 ac 65.68% Impervious = 12.879 ac

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea 1 Runoff Area=448,435 sf 48.10% Impervious Runoff Depth>3.84"
Flow Length=1,215' Tc=11.7 min CN=85 Runoff=59.61 cfs 3.295 af

Subcatchment 2S: Subarea 2 Runoff Area=173,753 sf 100.00% Impervious Runoff Depth>5.09"
Tc=6.0 min CN=98 Runoff=32.88 cfs 1.691 af

Subcatchment 3S: Subarea 3 Runoff Area=15,247 sf 100.00% Impervious Runoff Depth>5.09"
Tc=6.0 min CN=98 Runoff=2.89 cfs 0.148 af

Subcatchment 4S: Subarea 4 Runoff Area=44,955 sf 62.82% Impervious Runoff Depth>4.26"
Flow Length=217' Slope=0.0220 '/' Tc=9.2 min CN=89 Runoff=6.98 cfs 0.366 af

Subcatchment 5S: Subarea 5 Runoff Area=93,335 sf 94.50% Impervious Runoff Depth>5.02"
Tc=6.0 min CN=97 Runoff=17.58 cfs 0.896 af

Subcatchment 6S: Subarea 6 Runoff Area=45,394 sf 66.29% Impervious Runoff Depth>4.26"
Tc=6.0 min CN=89 Runoff=7.83 cfs 0.370 af

Subcatchment 7S: Subarea 7 Runoff Area=10,526 sf 30.70% Impervious Runoff Depth>3.35"
Tc=6.0 min CN=80 Runoff=1.52 cfs 0.067 af

Subcatchment 8S: Subarea 8 Runoff Area=22,538 sf 28.97% Impervious Runoff Depth>3.35"
Tc=6.0 min CN=80 Runoff=3.25 cfs 0.144 af

Reach SP: Summation Point Inflow=113.17 cfs 6.437 af
Outflow=113.17 cfs 6.437 af

Pond 1P: Pond 1 Peak Elev=69.94' Storage=14,861 cf Inflow=14.52 cfs 0.736 af
Discarded=0.15 cfs 0.123 af Primary=8.06 cfs 0.418 af Outflow=8.21 cfs 0.541 af

Pond 2P: Pond 2 Peak Elev=61.09' Storage=900 cf Inflow=1.52 cfs 0.067 af
Outflow=1.48 cfs 0.050 af

Pond 3P: Pond 3 Peak Elev=57.17' Storage=1,277 cf Inflow=3.25 cfs 0.144 af
Outflow=3.21 cfs 0.120 af

Pond CB1: Catch Basin 1 Peak Elev=77.88' Inflow=6.98 cfs 0.366 af
15.0" Round Culvert n=0.013 L=100.0' S=0.0050 '/' Outflow=6.98 cfs 0.366 af

Pond DE: Drip Edge Peak Elev=81.67' Storage=9,827 cf Inflow=17.58 cfs 0.896 af
Outflow=16.35 cfs 0.715 af

Pond DMH1: Drain Mahole Peak Elev=96.41' Inflow=48.67 cfs 2.406 af
24.0" Round Culvert n=0.013 L=150.0' S=0.5303 '/' Outflow=48.67 cfs 2.406 af

Total Runoff Area = 19.609 ac Runoff Volume = 6.977 af Average Runoff Depth = 4.27"
34.32% Pervious = 6.730 ac 65.68% Impervious = 12.879 ac

Summary for Subcatchment 1S: Subarea 1

Runoff = 59.61 cfs @ 12.03 hrs, Volume= 3.295 af, Depth> 3.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
11,049	98	Roofs, HSG C
204,658	98	Paved parking, HSG C
15,335	82	Woods/grass comb., Fair, HSG D
92,772	73	Woods, Fair, HSG C
7,805	78	Meadow, non-grazed, HSG D
116,816	71	Meadow, non-grazed, HSG C
448,435	85	Weighted Average
232,728		51.90% Pervious Area
215,707		48.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0210	1.38		**Sheet Flow, SF 1-1** Smooth surfaces n= 0.011 P2= 3.10"
2.9	520	0.0210	2.94		**Shallow Concentrated Flow, SCF 1-1** Paved Kv= 20.3 fps
7.6	595	0.0350	1.31		**Shallow Concentrated Flow, SCF 1-2** Short Grass Pasture Kv= 7.0 fps
11.7	1,215	Total			

Summary for Subcatchment 2S: Subarea 2

Runoff = 32.88 cfs @ 11.97 hrs, Volume= 1.691 af, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
173,753	98	Roofs, HSG C
173,753		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 2**

Summary for Subcatchment 3S: Subarea 3

Runoff = 2.89 cfs @ 11.97 hrs, Volume= 0.148 af, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
15,247	98	Roofs, HSG C
15,247		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 3**

Summary for Subcatchment 4S: Subarea 4

Runoff = 6.98 cfs @ 12.00 hrs, Volume= 0.366 af, Depth> 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
23,905	98	Paved parking, HSG C
4,337	98	Paved parking, HSG D
3,033	82	Woods/grass comb., Fair, HSG D
8,788	71	Meadow, non-grazed, HSG C
4,892	78	Meadow, non-grazed, HSG D
44,955	89	Weighted Average
16,713		37.18% Pervious Area
28,242		62.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	65	0.0220	0.16		**Sheet Flow, SF 4-1** Grass: Short n= 0.150 P2= 3.10"
0.5	35	0.0220	1.14		**Sheet Flow, SF 4-2** Smooth surfaces n= 0.011 P2= 3.10"
1.9	117	0.0220	1.04		**Shallow Concentrated Flow, SCF 4-1** Short Grass Pasture Kv= 7.0 fps
9.2	217	Total			

Summary for Subcatchment 5S: Subarea 5

Runoff = 17.58 cfs @ 11.97 hrs, Volume= 0.896 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
72,000	98	Roofs, HSG D
16,200	98	Paved parking, HSG D
3,478	79	Woods, Fair, HSG D
1,657	78	Meadow, non-grazed, HSG D
93,335	97	Weighted Average
5,135		5.50% Pervious Area
88,200		94.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 5**

Summary for Subcatchment 6S: Subarea 6

Runoff = 7.83 cfs @ 11.97 hrs, Volume= 0.370 af, Depth> 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
13,298	98	Paved parking, HSG D
16,795	98	Paved parking, HSG C
708	78	Meadow, non-grazed, HSG D
14,593	71	Meadow, non-grazed, HSG C
45,394	89	Weighted Average
15,301		33.71% Pervious Area
30,093		66.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6**

Summary for Subcatchment 7S: Subarea 7

Runoff = 1.52 cfs @ 11.97 hrs, Volume= 0.067 af, Depth> 3.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
551	76	Woods/grass comb., Fair, HSG C
3,232	98	Paved parking, HSG C
6,743	71	Meadow, non-grazed, HSG C
10,526	80	Weighted Average
7,294		69.30% Pervious Area
3,232		30.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 7**

Summary for Subcatchment 8S: Subarea 8

Runoff = 3.25 cfs @ 11.97 hrs, Volume= 0.144 af, Depth> 3.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Type II 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
6,529	98	Paved parking, HSG C
4,143	76	Woods/grass comb., Fair, HSG C
11,866	71	Meadow, non-grazed, HSG C
22,538	80	Weighted Average
16,009		71.03% Pervious Area
6,529		28.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 8**

Summary for Reach SP: Summation Point

Inflow Area = 19.609 ac, 65.68% Impervious, Inflow Depth > 3.94" for 25-yr event
Inflow = 113.17 cfs @ 12.01 hrs, Volume= 6.437 af
Outflow = 113.17 cfs @ 12.01 hrs, Volume= 6.437 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Summary for Pond 1P: Pond 1

Inflow Area = 2.074 ac, 64.57% Impervious, Inflow Depth > 4.26" for 25-yr event
Inflow = 14.52 cfs @ 11.98 hrs, Volume= 0.736 af
Outflow = 8.21 cfs @ 12.08 hrs, Volume= 0.541 af, Atten= 43%, Lag= 5.8 min
Discarded = 0.15 cfs @ 12.08 hrs, Volume= 0.123 af
Primary = 8.06 cfs @ 12.08 hrs, Volume= 0.418 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 69.94' @ 12.08 hrs Surf.Area= 5,634 sf Storage= 14,861 cf

Plug-Flow detention time= 150.4 min calculated for 0.541 af (74% of inflow)
Center-of-Mass det. time= 88.3 min (842.3 - 753.9)

Volume	Invert	Avail.Storage	Storage Description
#1	66.40'	15,203 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
66.40	2,631	0	0
67.40	3,899	3,265	3,265
68.00	4,181	2,424	5,689
69.00	4,573	4,377	10,066
70.00	5,702	5,138	15,203

Device	Routing	Invert	Outlet Devices
#1	Discarded	66.40'	**1.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 50.00'
#2	Device 3	66.40'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	67.90'	**4.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 67.90' / 67.85' S= 0.0017 '/' Cc= 0.900 n= 0.010, Flow Area= 0.09 sf
#4	Primary	69.50'	**10.0' long x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Discarded OutFlow Max=0.15 cfs @ 12.08 hrs HW=69.94' (Free Discharge)
└**1=Exfiltration** (Controls 0.15 cfs)

Primary OutFlow Max=8.02 cfs @ 12.08 hrs HW=69.94' (Free Discharge)
└**3=Culvert** (Barrel Controls 0.45 cfs @ 5.12 fps)
└**2=Orifice/Grate** (Passes 0.45 cfs of 5.40 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 7.57 cfs @ 1.73 fps)

Summary for Pond 2P: Pond 2

Inflow Area = 0.242 ac, 30.70% Impervious, Inflow Depth > 3.35" for 25-yr event
Inflow = 1.52 cfs @ 11.97 hrs, Volume= 0.067 af
Outflow = 1.48 cfs @ 11.99 hrs, Volume= 0.050 af, Atten= 3%, Lag= 1.0 min
Primary = 1.48 cfs @ 11.99 hrs, Volume= 0.050 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 61.09' @ 11.99 hrs Surf.Area= 720 sf Storage= 900 cf

Plug-Flow detention time= 99.6 min calculated for 0.050 af (74% of inflow)
Center-of-Mass det. time= 36.9 min (810.8 - 773.9)

Volume	Invert	Avail.Storage	Storage Description
#1	59.40'	1,664 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
59.40	348	0	0
60.00	479	248	248
61.00	696	588	836
62.00	960	828	1,664

Device	Routing	Invert	Outlet Devices
#1	Primary	60.90'	**7.0' long x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.47 cfs @ 11.99 hrs HW=61.09' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.47 cfs @ 1.11 fps)

Summary for Pond 3P: Pond 3

Inflow Area = 0.517 ac, 28.97% Impervious, Inflow Depth > 3.35" for 25-yr event
Inflow = 3.25 cfs @ 11.97 hrs, Volume= 0.144 af
Outflow = 3.21 cfs @ 11.98 hrs, Volume= 0.120 af, Atten= 1%, Lag= 0.7 min
Primary = 3.21 cfs @ 11.98 hrs, Volume= 0.120 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 57.17' @ 11.98 hrs Surf.Area= 857 sf Storage= 1,277 cf

Plug-Flow detention time= 75.1 min calculated for 0.120 af (83% of inflow)
Center-of-Mass det. time= 25.4 min (799.3 - 773.9)

Volume	Invert	Avail.Storage	Storage Description
#1	55.40'	2,102 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.40	619	0	0
57.00	803	1,138	1,138
57.50	963	442	1,579
58.00	1,129	523	2,102

Device	Routing	Invert	Outlet Devices
#1	Primary	56.90'	**9.0' long x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=3.19 cfs @ 11.98 hrs HW=57.17' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 3.19 cfs @ 1.33 fps)

Summary for Pond CB1: Catch Basin 1

Inflow Area = 1.032 ac, 62.82% Impervious, Inflow Depth > 4.26" for 25-yr event
Inflow = 6.98 cfs @ 12.00 hrs, Volume= 0.366 af
Outflow = 6.98 cfs @ 12.00 hrs, Volume= 0.366 af, Atten= 0%, Lag= 0.0 min
Primary = 6.98 cfs @ 12.00 hrs, Volume= 0.366 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 77.88' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	75.00'	**15.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 75.00' / 74.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=6.96 cfs @ 12.00 hrs HW=77.87' (Free Discharge)
↑**1=Culvert** (Barrel Controls 6.96 cfs @ 5.67 fps)

Summary for Pond DE: Drip Edge

Inflow Area = 2.143 ac, 94.50% Impervious, Inflow Depth > 5.02" for 25-yr event
Inflow = 17.58 cfs @ 11.97 hrs, Volume= 0.896 af
Outflow = 16.35 cfs @ 12.00 hrs, Volume= 0.715 af, Atten= 7%, Lag= 1.8 min
Primary = 16.35 cfs @ 12.00 hrs, Volume= 0.715 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 81.67' @ 12.00 hrs Surf.Area= 6,696 sf Storage= 9,827 cf

Plug-Flow detention time= 103.5 min calculated for 0.714 af (80% of inflow)
Center-of-Mass det. time= 49.0 min (780.7 - 731.7)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	12,722 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 31,806 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	6,696	0	0
79.00	6,696	6,696	6,696
80.00	6,696	6,696	13,392
81.00	6,696	6,696	20,088
82.00	6,696	6,696	26,784
82.75	6,696	5,022	31,806

Device	Routing	Invert	Outlet Devices
#1	Primary	78.00'	**15.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 78.00' / 77.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Device 1	80.90'	**24.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#3	Primary	80.95'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=16.28 cfs @ 12.00 hrs HW=81.67' (Free Discharge)
- **1=Culvert** (Inlet Controls 8.13 cfs @ 6.63 fps)
  - **2=Orifice/Grate** (Passes 8.13 cfs of 13.23 cfs potential flow)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 8.15 cfs @ 2.28 fps)

Summary for Pond DMH1: Drain Mahole

Inflow Area = 6.131 ac, 98.08% Impervious, Inflow Depth > 4.71" for 25-yr event
Inflow = 48.67 cfs @ 11.97 hrs, Volume= 2.406 af
Outflow = 48.67 cfs @ 11.97 hrs, Volume= 2.406 af, Atten= 0%, Lag= 0.0 min
Primary = 48.67 cfs @ 11.97 hrs, Volume= 2.406 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 96.41' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	78.80'	**24.0" Round Culvert**
			L= 150.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 78.80' / -0.75' S= 0.5303 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=48.37 cfs @ 11.97 hrs HW=96.21' (Free Discharge)
- **1=Culvert** (Inlet Controls 48.37 cfs @ 15.40 fps)

From: Sirois, Alison
To: John Kuchinski
Cc: Sean Thies; Barbara Barhydt
Subject: RE: 56 Milliken Street, Portland
Date: Wednesday, August 22, 2018 9:56:21 AM

Hello John

Based on the information provided and acknowledgement from the City of Portland, the Department is waiving state jurisdiction and delegating review to the City of Portland as the municipality pursuant to §489-A. Municipal review of development (1-A) (B). The City is required to submit a copy of the project to the Department under delegated review and if there are any questions the Department will work with the City to discuss it.

Alison Sirois
Regional Licensing and Compliance Manager, Southern Maine
Bureau of Land Resources, Maine Department of Environmental Protection
Phone (207)699-7028 Office (207)822-6300
www.maine.gov/dep

From: John Kuchinski [mailto:jkuchinski@ces-maine.com]
Sent: Monday, August 20, 2018 7:05 AM
To: Sirois, Alison <Alison.Sirois@maine.gov>
Cc: Sean Thies <sthies@ces-maine.com>; Barbara Barhydt <bab@portlandmaine.gov>
Subject: RE: 56 Milliken Street, Portland

Alison

As a follow up to our phone conversation on Friday the following is the summary of the development history at 56 Milliken St:
The original structure and site was constructed in 1966. By 1975 the site contained approximately 5.7 acres of impervious area. In 1993 the City of Portland issued a SLODA permit for expansion of the building and parking. There have been several small amendments until the last permit issued by the City of Portland in 2013. The total impervious area on the site is currently 11.4 acres. The amount of "structure" under Site Law is approximately 5.7 acres. Our proposal will add approximately 2.8 acres of "Structure" to bring the total area to 8.5 acres.

We are requesting that DEP grant a waiver of the 7 acre threshold to allow the City of Portland to continue to review and permit the site.

John Kuchinski, P.E. ◆ Senior Project Engineer
P 207.283.9151 | **F** 207.283.9151 | **C** 207.899.5307 | www.ces-maine.com

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From: Sirois, Alison <Alison.Sirois@maine.gov>

Sent: Monday, August 6, 2018 4:22 PM
To: John Kuchinski <jkuchinski@ces-maine.com>
Cc: Sean Thies <sthies@ces-maine.com>; Barbara Barhydt <bab@portlandmaine.gov>
Subject: RE: 56 Milliken Street, Portland

Hi John,

Does the proposed project with the combination of previous projects for this location, exceed 7 acres of structure? If it does, the Department generally takes jurisdiction over that review but can waive it under certain circumstances. Let me know if you have any further questions.

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Regional Licensing and Compliance Manager, Southern Maine
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Cc: Sean Thies <sthies@ces-maine.com>; Barbara Barhydt <bab@portlandmaine.gov>
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CES INC
Engineers ◆ Environmental Scientists ◆ Surveyors
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CES INC
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146 Main Street, Suite 300, Saco, ME 04072 | www.ces-maine.com

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CES INC

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

TAB 5 - PUBLIC INFRASTRUCTURE AND SAFETY NARRATIVE

Consistency with City Master Plans

The proposed warehouse expansion at 56 Milliken Street is consistent with current City of Portland Master Plans. This development supports economic expansion in an outlying area close to major transportation corridors. The building is an infill development in existing Industrial zoned land with adequate provision for water and wastewater. A warehouse expansion will have minimal traffic impact.

All existing easements are shown on the site survey by SGC. No new easements are proposed.

Public Safety and Fire Prevention

The proposed warehouse building has fire access on all four sides of the building more than 90-percent of the exterior building walls accessible to fire fighting apparatus. In addition, the building will have a sprinkler system. A code study is included on the architectural plans including building construction type and egress.

The site has adequate water supply mains and fire hydrants to aid in firefighting activities. Existing hydrants are located throughout the site. A new hydrant is proposed near the front entrance of the warehouse.

Site lighting is proposed as shown on the photometric plan. Cut sheets of LED fixtures are attached.

Adequacy of Public Utilities

Underground electric service will be provided to the new warehouse from Riverside Industrial Parkway as shown on the site plan.

Sanitary sewer connection is proposed at an existing sanitary manhole located at the Milliken Street entrance to the site. An application for capacity to serve was submitted to the City of Portland Public Works via email. A copy of the application is attached.

An Ability to Serve letter has been received from Portland Water District and is attached.
Solid waste will be disposed in an on-site dumpster. Another dumpster will be for recycled materials.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: 10/2/2018

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

Site Address: 56 Milliken Street

Chart Block Lot Number: 334 A014001

Proposed Use: Warehouse
Previous Use: _____
Existing Sanitary Flows: 7,100 GPD
Existing Process Flows: _____ GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Connection to sanitary sewer in Milliken St

Site Category		
	Commercial *(see part 4 below)*	X
	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: Barbara Barhydt Phone: _____
Owner/Developer Name: Plymouth Industrial REIT
Owner/Developer Address: 260 Franklin St., 7th Floor, Boston, MA 02110
Phone: 617 340-3826 Fax: _____ E-mail: jeff.witherell@plymouthrei.com
Engineering Consultant Name: CES, Inc., John Kuchinski
Engineering Consultant Address: 146 Main Street, Saco ME 04072
Phone: 207 283-9151 Fax: _____ E-mail: jkuchinski@ces-maine.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: 100 GPD
Peaking Factor/ Peak Times: 20 gpm
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: N/A

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: 0 GPD

Do you currently hold Federal or State discharge permits? Yes ____ No X

Is the process wastewater termed categorical under CFR 40? Yes ____ No X

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.

Domestic use for office in the warehouse. see attached PWD fixture calculation worksheet.

Portland, Maine Yes. Life's good here.

Christopher C. Branch, P.E.
Director of Public Works

Date: December 12, 2018

Re: Wastewater Capacity Authorization

Address: 56 Milliken Street
Applicant: Plymouth Industrial REIT

Planner: Jean Fraser

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Vacant				0
Proposed flow				
Warehouse	Lump Sum or # Employees	1	100 GPD or 12 GPD/Employee	100
			Net Change	**+ 100**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,
CITY OF PORTLAND

Bradley A. Roland, P.E.
Senior Project Engineer

CC:
Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland
Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland
Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

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

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

October 5, 2018

John Kuchinski
CES Inc.
465 Main Street
Brewer, ME 04412

Re: 56 Milliken Street, PO
Ability to Serve with PWD Water

Dear Mr. Kuchinski:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on August 23, 2018. Based on the information provided per Progress Print plans dated October 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 service and 1-inch domestic service may be installed from the water main in Riverside Industrial Parkway. The service should enter through the properties frontage on Riverside Industrial Parkway at least 10-feet from any side property lines.

- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

- An approved backflow prevention device must be installed on each service line directly after the meter or a the service entrance for the fire sprinkler system prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.

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 not currently have existing water service.

Water System Characteristics

According to District records, there is an 16-inch diameter cement lined cast iron water main in Riverside Industrial Parkway and a public fire hydrant located approximately 800 feet from the site. The most recent static pressure reading was 82 psi on June 18, 2018.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the 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

Robert A. Bartels, P.E.
Senior Project Engineer

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

Tab 6 - SITE DESIGN NARRATIVE

Massing, Ventilation, and Wind Impact
The proposed building height is less than 30 feet along most of the front (westerly) and less than 25 feet in the rear. The exposed height at the loading docks is less than 35 feet. The roof slopes from front to rear. There is an entrance canopy on the front. The height of the building will not result in health or safety problems or cause a reduction in ventilation to abutting structures. The building will not cause a change in the wind climate that will result in unsafe wind conditions for users of the site or adjacent public spaces.

The bulk, location, and height of the proposed building will not result any substantial diminution in value or utility of neighboring structures.

All heating, ventilation or air conditioning mechanical equipment will be designed to prevent direct exhaust into public spaces.

Shadows
The building height will not cause significant shadows on any public open space.

Snow and Ice Loading
The building roof is sloped from front to back. A stormwater roof drip line filter is designed along the rear wall of the proposed building. In winter time, snow and ice will accumulate in the stormwater Best Management Practice and not accumulate on adjacent properties or public ways.

View Corridors
No public views will be impacted by the proposed building.

Historic Resources
The site is not a historic site. The existing warehouse building was constructed in 1966. We have also contacted the Maine Historic Preservation Commission regarding this site and have received a letter from them indicating that there are no known historic resources on this site.

Exterior Lighting
The site design includes a photometric plan with light intensities. All light fixtures will be LED with full cut off fixtures. Light limits comply with the City of Portland Technical Manual.

Noise and Vibration
The proposed use is warehousing. Noise and vibration will be minimal. The building is also located away from the public road and will be screened by native vegetation. The only appreciable noise will be truck traffic to and from the site.

Mechanical equipment will either be roof top units or ground units that are screened from public view. Mechanical equipment will comply with state and federal requirements.

Signage and Wayfinding

The site plan shows signage for the new driveway to include “DO NOT ENTER” facing the Riverside Industrial Parkway and “STOP” for traffic exiting the site. Any business sign will be located on Milliken Road and will comply with applicable City of Portland sign codes.

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

August 21, 2018

Mr. Kirk Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street
Augusta, ME 04333-0065

Re: Plymouth Industrial REIT | 56 Milliken Road | Portland, Maine

Dear Mr. Mohney,

Plymouth Industrial REIT is currently in the process of preparing a Site Location of Development Permit Amendment Application for the construction of a 72,000 square foot building at 56 Milliken Drive in Portland, Maine. The facility is an addition to and existing industrial manufacturing facility at 56 Milliken Road, Portland.

As required for permitting requirements, we are submitting this request to your office to determine if there are any potential impacts to fisheries or wildlife habitats located at the site or in the immediate surroundings. Any response can be forwarded to our office located at 146 Main Street, Saco, ME 04072 or by email at jkuchinski@ces-maine.com.

Thank you for your assistance in this matter.

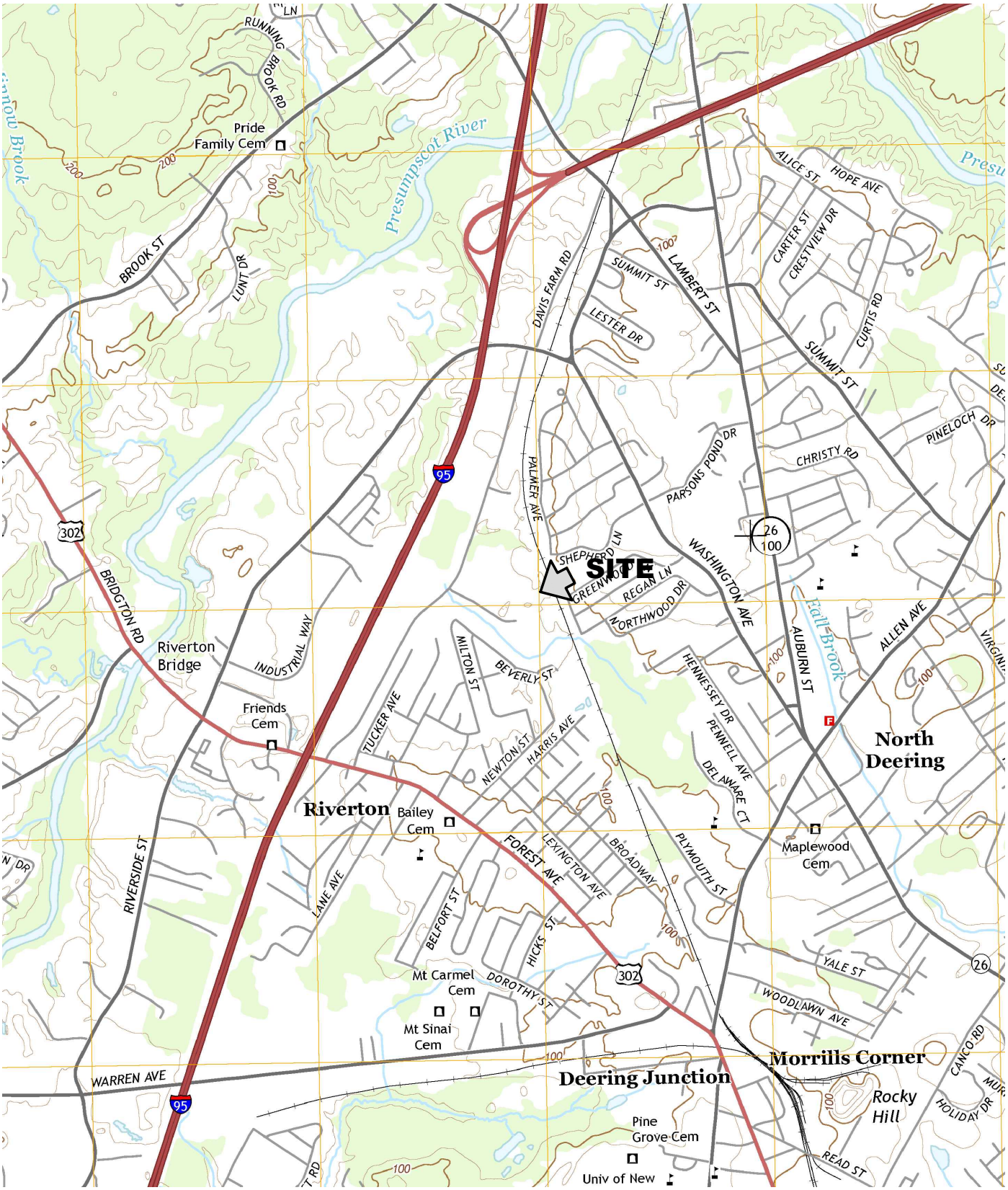
Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/cmc
Encl.

Seven Locations in Maine | www.ces-maine.com

146 Main Street
Suite 300
Saco, Maine 04072
T 207.283.9151
F 207.283.9136



SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTLAND WEST
@ 1:24,000

CES INC

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND, MAINE
LOCATION MAP

2018-07-06
12254.003

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

RECEIVED
SEP 05 2018
AND SCANNED

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

August 29, 2018

Mr. John D. Kuchinski
CES Inc
146 Main St, Suite 300
Saco, ME 04072

Project: MHPC #1141-18 Plymouth Industrial Reit; 56 Milliken Rd
Construction of a 72,000 Sq Ft Building

Town: Portland, ME

Dear Mr. Kuchinski:

In response to your recent request, I have reviewed the information received August 23, 2018 to initiate consultation on the above referenced project in accordance with the requirements of the Maine Department of Environmental Protection.

Based on the information submitted, I have concluded that there will be no historic properties (archaeological or architectural) affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney

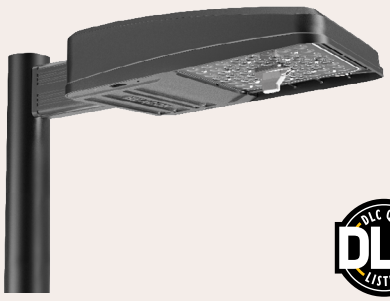
Kirk F. Mohney
State Historic Preservation Officer

PHONE: (207) 287-2132 FAX: (207) 287-2335

VP-S OPTICS STRIKE

Viper (Small)

TYPE A
12254.003
PLYMOUTH REIT - 56 MILLIKEN ST



FEATURES

- The Beacon Viper luminaire is available in two sizes with a wide choice of different LED wattage configurations and optical distributions designed to replace HID lighting up to 1000W MH or HPS and with 4 different mounting options for application in a wide variety of new and existing installations.
- Each Viper luminaire is supplied with an one piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- A thermal circuit, LIFESHIELD™, shall protect the luminaire from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary.
- Aluminum thermal clad board with 0.062" thick aluminum base layer, thermally conductive dielectric layer, 0.0014" thick copper circuit layer circuit layer designed with copper pours to minimize thermal impedance across dielectric.

ORDERING INFORMATION

VPS	48L-110	4K7	4		UNV	A	DBT	7PR-TL	
SERIES	LED ENGINE	CCT/CRI	ROTATION		VOLTAGE		COLOR		OPTIONS

SERIES
- **VPS** Viper

LED ENGINE
- **24L-55** 55W, LED array
- **36L-65** 65W, LED array
- **36L-80** 80W, LED array
- **48L-110** 110W, LED array
- **60L-136** 136W, LED array

CCT/CRI
- **3K7** 3000K, 70 CRI
- **4K7** 4000K, 70 CRI
- **5K7** 5000K, 70 CRI

ROTATION
- Leave blank for no rotation
- **L**[5] Optic rotation left
- **R**[5] Optic rotation right

VOLTAGE
- **UNV** 120-277V
- **120** 120V
- **208** 208V
- **240** 240V
- **277** 277V
- **347** 347V
- **480** 480V

COLOR
- **DBT** Dark Bronze Textured
- **BMT** Black Matte Textured
- **PS** Platinum Silver Smooth
- **WHT** White Textured
- **CC** Custom Color (RAL#)

OPTIONS
- **F** Fusing
- **BSP** Bird Spikes
- **BC** Backlight control (limited to Type 4W only)

DISTRIBUTION
- **FR** Type 1/Front Row
- **2** Type 2
- **3** Type 3
- **4** Type 4
- **4W** Type 4 Wide
- **5QM** Type 5QM
- **5R** Type 5R (rectangular)
- **5W** Type 5W (round wide)

MOUNTING
- **A** Rectangular Arm (formerly RA)
- **MAF** Mast Arm Fitter (formerly SF2)
- **K** Knuckle (formerly PK2) limit to 45° tilt
- **WB** Wall Bracket
- **ADSQ** Universal Arm for square pole
- **AD34** Universal Arm for 2.4"-4.1" round pole
- **AD45** Universal Arm for 4.2" to 5.3" round pole
- **AD56** Universal Arm for 5.5" to 6.5" round pole

CONTROL OPTIONS
- **7PR** 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
- **7PR-SC** 7-Pin Receptacle w/Shorting Cap
- **7PR-TL** 7-Pin Receptacle w/Twist Lock photo control
- **SCP/_F**[1,2,6] Programmable Occupancy Sensor w/ daylight control (120-277 volts only)
- **GENI-XX**[3] ENERGENI
- **SWF**[1] SiteSync Field Commission
- **SWFM**[1,2] SiteSync Field Commission w/ Sensor
- **SWP**[1,4] SiteSync Pre-Commission
- **SWPM**[1,2,4] SiteSync Pre-Comm w/ Sensor

HOUSE SIDE SHIELD ACCESSORIES
- **HSS/VP-S/90-FB/XXX** 90° shield front or back
- **HSS/VP-S/90-LR/XXX** 90° shield left or right
- **HSS/VP-S/180-FB/XXX** 180° shield front or back
- **HSS/VP-S/180-LR/XXX** 180° shield left or right
- **HSS/VP-S/270-FB/XXX** 270° shield front or back
- **HSS/VP-S/270-LR/XXX** 270° shield left or right
- **HSS/VP-S/360/XXX** Full shield

(Replace XXX with notation for desired finish color)
(Refer to page 5 for shield images)

[1] Not available with other wireless control or sensor options
[2] Specify mounting height; 8=8' or less, 40=9' to 40'
[3] Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options.
[4] Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface Accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
[5] Only available with 1A, 2, 3, 4, 4W and 5R distributions
[6] Order at least one SCP-REMOTE per project location to program and control

DesignLights Consortium qualified. Consult DLC website for more details: http://www.designlights.org/QPL

Accessories and Services (Ordered Separately)

Catalog Number	Description
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.

Visit www.beaconproducts.com for up-to-date availability information

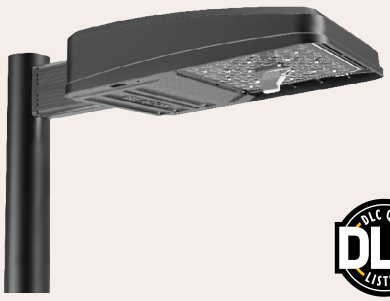
BEACON design . performance . technology

VP-S STRIKE OPTICS

Viper (Small)

TYPE B
12254.003
PLYMOUTH REIT - 56 MILLIKEN ST

SITE/ROADWAY



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DesignLights Consortium qualified. Consult DLC website for more details: http://www.designlights.org/QPL

Visit www.beaconproducts.com for up-to-date availability information

LNC4

Large LED Wallpack – Zero Uplight

Largest in the Litepak product family, the LNC4 is designed for perimeter illumination for safety, security and identity. Replaces up to 400w HID luminaires one-for-one replacement covering existing installation footprint. No uplight and lower glare lenses offer neighbor friendly lighting at typical mounting heights of 15-25'. Units have protective polyester powder coat finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide 70%+ energy savings with little to no maintenance when compared to traditional light sources.

Die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life.

- 120-277, 347 and 480 voltage, 50/60Hz, 0-10V dimming driver
- Electronic driver
- Surge protection – 10KA
- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- 36 and 44 LED configurations available
- Zero uplight distributions using individual acrylic LED optics provide IES type II, III and IV distributions
- Features long-life with L96 of 25,000 hours (Projected per IESNA TM-21-11)
- Optional frosted acrylic diffuser for reduced glare or inverted up mounting
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org

*3000K and warmer CCTs only

STOCK ORDERING INFORMATION

Catalog Number	Description	Distribution	Wattage	Lumens	LPW	Voltage	# of Drivers @ Drive Current	Wgt lbs. (Kg)	PKG. CODE
LNC4-36L-4K	36 LED Configuration, 4000K, Dark Bronze	Type IV	124.6	10,754	86.3	120-277	2 @ 1050mA	27.0 (12.2)	FCC
LNC4-44L-4K	44 LED Configuration, 4000K, Dark Bronze		152.6	13,477	88.3			27.0 (12.2)	FCC
LNC4-44L-5K	44 LED Configuration, 5000K, Dark Bronze		152.1	13,342	87.7			27.0 (12.2)	FCC
LNC4-44L-4K-7PR	44 LED Configuration, 4000K, Dark Bronze, 7 Pin		152.6	13,477	88.3			27.0 (12.2)	FCC
LNC4-44L-4K-SCP	44 LED Config., 4000K, Dark Bronze, Occ. Sensor		152.6	13,477	88.3			27.0 (12.2)	FCC

MADE-TO-ORDER ORDERING INFORMATION - CONFIGURABLE (SEE SPEC SHEET FOR PERFORMANCE INFORMATION AND DETAILS)

LNC4 - 44L - 4K - 1050 - 4 - U - DB - PCU - CS

FAMILY
- LNC4 Large Litepak Wallpack

NUMBER OF LEDS
- 36L 36LED
- 44L 44LED

CCT
- 3K 3000K
- 4K 4000K
- 5K 5000K

DRIVE CURRENT
- 035 350mA
- 065 650mA
- 1050 1050mA

IES DISTRIBUTION
- 2 Type II
- 3 Type III
- 4 Type IV

VOLTAGE
- U 120V-277V
- 1 120V[1]
- 2 208V[1]
- 3 240V[1]
- 4 277V[1]
- 5 480V[1]
- F 347V[1]

FINISH
- DB Bronze
- BL Black
- WH White
- GR Gray
- PS Platinum
- FG Forest Green
- RD Red
- CC Custom Color

CONTROL OPTIONS
- PCU Universal Button PC
- 7PR[5] NEMA 7-Pin twistlock receptacle
- SCP[3,4] Programmable occupancy sensor
- SWP[1,7] SiteSync wireless pre-commisioned
- SWPM[1,4,7,8] SiteSync wireless pre-commisioned w/ occupancy sensor

SPEC SCP/SCO & SWPM MOUNT HEIGHT
- -8F Up to 8ft mount height
- -20F Up to 20ft mount height

OPTIONS
- F[1] Fusing (must specify voltage per footnote)
- CS Frosted acrylic diffuser
- CSU[2] Frosted acrylic diffuser required for inverted fixture installations (Factory install only)
- E[1,6] Integral battery backup rated for 0°C.
- EH[1,6] Integral battery backup with heater rated for -30°C.

[1] Must specify voltage (battery backup 120 or 277V only, SiteSync 120, 277 or 347V only)
[2] Factory install only. Not available with SCP or SWPM sensor/control options
[3] Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only.
[4] PC option not applicable, included in sensor. Must specify sensor height (8F = up to 8ft, 20F = up to 20ft)
[5] Accepts standard 3, 5, and 7-Pin ANSI controls (by others). Not available with PCU, SWP or SWPM control options
[6] 36L-650mA version only. Not available with SWP or SWPM control options.
[7] Must specify group and zone information at time or order. See www.hubbelllighting.com/products/sitesync for further details.
[8] Specify time delay; dimming level and mounting height

CATALOG NUMBER	DESCRIPTION
LNC4-CS	Frosted acrylic diffuser reduces surface brightness and glare with a roughly 20% lumen reduction
SCP-REMOTE2*	Remote control for SCP option. Order at least one per project to program and control
SWUSB**	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB**	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

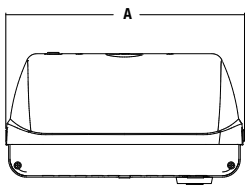
* Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V or 277V only
** When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.

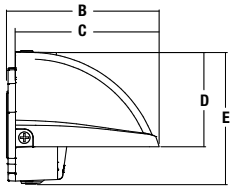
WITHOUT DIFFUSER

WITH DIFFUSER

DIMENSIONS

A	B	C	D	E	Weight
17.2"	10.5"	9.9"	6.5"	8.9"	27 lbs.
436 mm	266 mm	251 mm	165 mm	226 mm	12.3 kg





HUBBELL Outdoor Lighting

CES INC

PLYMOUTH REIT
56 MILLIKEN STREET, PORTLAND, MAINE

TAB 7 - CONSTRUCTION MANAGEMENT PLAN NARRATIVE

Construction Management Principles

This Construction Management Plan depicts the overall planning, coordination and control of construction activities related to the new 72,000 square foot warehouse facility and related site construction located at 56 Milliken Street in Portland, Maine. The goal of this Construction Management Plan is to support a safe construction site and protect public safety. Impacts of the proposed construction activities shall be minimized in their duration and magnitude to the surrounding area.

Development Review of Construction Management Plan

This Construction Management Plan shall be reviewed and approved by the City of Portland Planning Authority and the Portland Department of Public Works.

Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Prior to the start of construction, the contractor and the applicant shall provide the City of Portland performance guarantees as stated in the Planning Authority approval and shall meet the requirements of Section 15-530, Development Review Fees and Post Approval Requirements and Section 14-532, General Requirements and Enforcement of Portland's Land Use Code.

A preconstruction meeting shall be coordinated by the contractor with the City of Portland staff to review this Construction Management Plan, approval requirements and to establish communication contacts for the contractor and the owner.

Contractor shall obtain a Street Opening Permit from the City of Portland prior to the start of any construction in Riverside Industrial Parkway or Milliken Street.

Blasting is not anticipated for this site and building construction. If ledge is encountered during construction and blasting is necessary, then the contractor shall prepare a blasting plan in accordance with the City of Portland Technical Manual and applicable State and Federal regulations.

Contractor shall employ the best practices, as applicable, of Chapter 33 Safeguards during Construction, from the 2009 International Building Code.

Construction Schedule

Contractor shall submit a construction schedule to the City of Portland at the preconstruction meeting. Hours of construction shall occur in Monday through Friday between 7:00 am and 7:00 pm. If a construction activity is required to be conducted outside these hours, then the contractor shall notify the City and provide a written explanation of the activity and state the reasons for work

outside the allowable window. The contractor shall receive written approval from the City prior to construction activities outside the allowable window. Exception shall be made for an emergency activity necessary by an unforeseen event.

Contractor to submit a Fire Safety Program at the preconstruction meeting. The Fire Safety Program shall include:

- Good Housekeeping
- On-site security
- Installation of new fire protection systems as construction progresses
- Preservation of existing systems during demolition
- Organization and training of an on-site fire brigade
- Development of a pre-fire plan with the local fire department
- Rapid communication
- Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations

Contractor shall provide temporary lighting where necessary. Temporary lighting shall be full cut-off fixtures.

Security and Public Safety

Refer to the Construction Management Site Plan for temporary construction fencing to separate pedestrian and vehicle circulation form the construction site.

Construction Permitting and Traffic Control

Construction Activity in Public Streets: Construction activity in the public right-of- way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

Construction traffic shall be restricted to the new access driveway during construction. Contractor to maintain adequate access during construction for emergency vehicles to the site.

Site Management Controls

Contractor to implement Site Management Controls as outlined below:

1. Regular trash and debris removal at the end of each work day. Contractor shall not allow construction debris to migrate from the site into neighboring sites or onto public ways.
2. Contractor shall maintain a construction entrance/exist for all construction vehicles and shall provide street sweeping on adjacent public ways.
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris
4. Noise: The construction shall comply with Portland's requirements under Section 17- 18 of the City Code and Section 25-129 on Noise, dust and debris.
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.

Erosion Control and Preservation of Trees

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.

Contractor shall maintain all tree and landscaping preservation measures as depicted on the site plan within the area of construction.

The storage of materials shall not be located under/near trees.

Construction Staging Area

Construction staging shall be the area in front of the proposed building as shown on the Construction Management Site Plan. All construction deliveries shall be by the new access drive from Riverside Industrial Parkway. Contractor shall Identify any offsite staging, storage or delivery truck holding areas at the preconstruction meeting.

Parking During Construction

Parking of construction vehicles and construction employee shall be located on site as shown on the Construction Management Site Plan.

Special Measures as Necessary

No special measures are foreseen at this time.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

PLYMOUTH 56 MILLIKEN, LLC	) NATURAL RESOURCES PROTECTION ACT
Portland, Cumberland County	) FRESHWATER WETLAND ALTERATION
WAREHOUSE AND DRIVEWAY	) WATER QUALITY CERTIFICATION
L-18722-TB-E-N (approval)	) FINDINGS OF FACT AND ORDER

Project History: On July 8, 1994, the Department accepted an after-the-fact Site Location of Development (Site Law) Application L-18722-26-A-D pursuant to 38 M.R.S.A. § 489-A (delegated authority) by the City of Portland for a 100,000 square-foot addition to an existing warehouse building and associated truck parking area. The original warehouse was constructed in 1966. On May 10, 1995, the Department accepted Site Law Application L-18722-26-B-D under delegated authority by the City of Portland for 19,000 additional square feet of truck parking. On January 1, 1996, the Department accepted Site Law Application L-18722-26-C-D under delegated authority by the City of Portland for an addition to the warehouse. On August 1, 2013, the Department accepted Site Law Application L-18722-26-D-D under delegated authority by the City of Portland for an addition to the truck loading area.

Project Description: The applicant proposes to alter 8,034 square feet of forested freshwater wetlands to construct a 72,000 square-foot warehouse with an associated access drive, truck maneuvering area and stormwater infrastructure. The project is shown on a set of plans, Sheet C102 is titled "Proposed Site Layout & Grading Plan," which was prepared by CES, Inc. and dated October 26, 2018, with a most recent revision date of December 17, 2018. The applicant has avoided and minimized wetland impacts to the greatest extent practicable by proposing the smallest warehouse practicable and by reducing side slopes to 2H:1V for the proposed stream crossing. According to the Department's Geographic Information System (GIS), there are no mapped essential or significant wildlife habitats associated within the project site. The proposed project is located at 56 Milliken Street in the City of Portland.

The Department accepted Site Law Application L-18722-26-F-D under delegated authority by the City of Portland on December 13, 2018 for the proposed project.

The Department accepted a Natural Resources Protection Act (NRPA) Permit by Rule Notification Form (PBR #67074) on December 19, 2018 for activities adjacent to a protected natural resource, namely a stream, that will be constructed in accordance with Chapter 305, Section 2 of PBR Standards; for stormwater outfall pipes that will be constructed in accordance with Chapter 305, Section 7 of PBR Standards; and for a stream crossing that will be constructed in accordance with Chapter 305, Section 10 of PBR Standards.

Permit for:	[X]	Tier 1		
DEP Decision:	[X]	Approved	[ ]	Denied (see attached letter)

CORPS Action:	X	The Corps has been notified of your application. The following are subject to Federal screening: (1) projects with previously authorized or unauthorized work, in combination with a Tier 1 permit for a single and complete project, which total more than 15,000 square feet of altered area; (2) projects with multiple state permits and/or state exemptions which apply to a single and complete project that total more than 15, 000 square feet of altered area; and (3) projects that may impact a vernal pool, as determined by the State of Maine or the Corps. If your activity is listed above, *Corps approval is required for your project.* For information regarding the status of your application contact the Corps' Maine Project Office at (207) 623-8367.

Standard Conditions:

1) If construction or operation of the activity is not begun within four (4) years from the date signed, this permit shall lapse and the applicant shall reapply to the Department for a new permit. This permit is transferable only with prior approval from the Department. If the activity is associated with a larger project, starting any aspect of that project constitutes start of construction.
2) The project shall be completed according to the plans in the application. Any change in the project plans must be reviewed and approved by the Department.
3) Properly installed erosion control measures shall be installed prior to beginning the project, and all disturbed soil should be stabilized immediately upon project completion.
4) A copy of this approval will be sent to the City of Portland. Department approval of your activity does not supersede or substitute the need for any necessary local approvals.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 8TH DAY OF JANUARY, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Melanie Loyzim, Acting Commissioner

Filed
JAN 9 2019
State of Maine
Board of Environmental Protection

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JM/L18722EN/ATS#83737

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

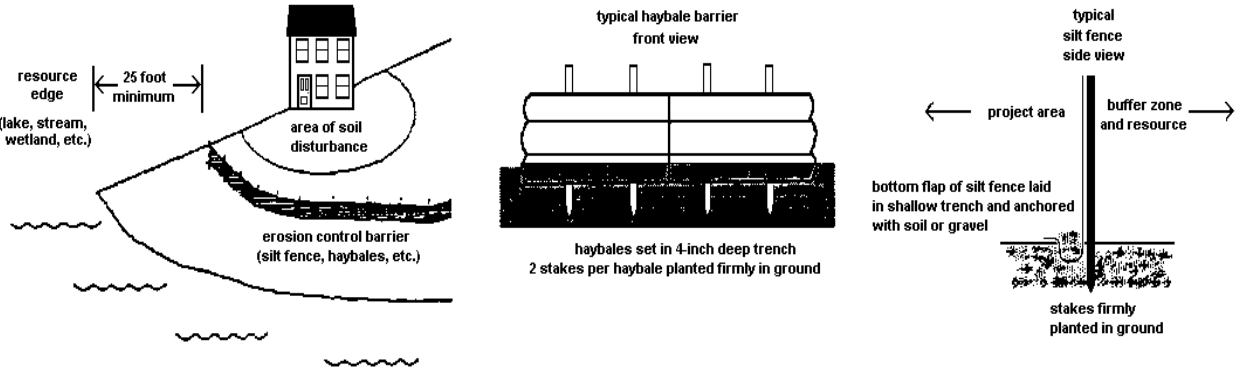
Before Construction

1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.

2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.

4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.



During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.

2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?

To Protect Water Quality

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. It usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money ($$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018 **Contact: (207) 287-2452**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that

hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time the appeal is submitted:

1. *Aggrieved Status*. The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge*. For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer general questions regarding the appeal process.

3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a license holder may proceed with a project pending the outcome of an appeal, but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, and will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452, or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

PLYMOUTH REIT
260 FRANKLIN STREET, 7TH FLOOR
BOSTON, MA 02110

CORPS PERMIT # NAE-2018-02817
CORPS GP ID# 18-692
STATE ID# L-28053-TB-A-N

DESCRIPTION OF WORK:
Place temporary and permanent fill below the ordinary high mark of an unnamed stream and in adjacent freshwater wetlands off Riverside Industrial Parkway at Portland, Maine in order to construct a 72,000 sf warehouse and associated infrastructure. The project will result in approximately 130 sf of permanent and 20 sf of temporary stream bed impact, and 8,034 sf of permanent wetland impact. This work is shown on the attached plans entitled "Site Location Map" in one sheet undated, "PROPOSED SITE PLAN" in one sheet dated "2018-12-17" and "PROPOSED UTILITY PLAN" also dated "2018-12-17". See ADDITIONAL CONDITIONS attached.

LAT/LONG COORDINATES: 43.707972° N -70.304786° W **USGS QUAD:** PORTLAND WEST, ME

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the Federal Permit, the Maine General Permit which can be found at:**
www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/ME/Maine_General_Permit_2015.pdf Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 37 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [X], ISSUED [ ], DENIED [ ] DATE_____

APPLICATION TYPE: PBR: ___, TIER 1: X, TIER 2: ____, TIER 3: ____, LURC: ____ DMR LEASE: ____ NA: ____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 12/13/2018 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10_____, 404 X 10/404_____, 103_____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 978-318-8676 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

COLIN M. GREENAN
PROJECT MANAGER
MAINE PROJECT OFFICE

FOR FRANK J. DEL GIUDICE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

Jay L. Clement 1/4/19
DATE

US Army Corps
of Engineers ®
New England District

PLEASE NOTE THE FOLLOWING ADDITIONAL CONDITIONS FOR DEPARTMENT OF THE ARMY GENERAL PERMIT NO. NAE-2018-02817

1. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

2. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).

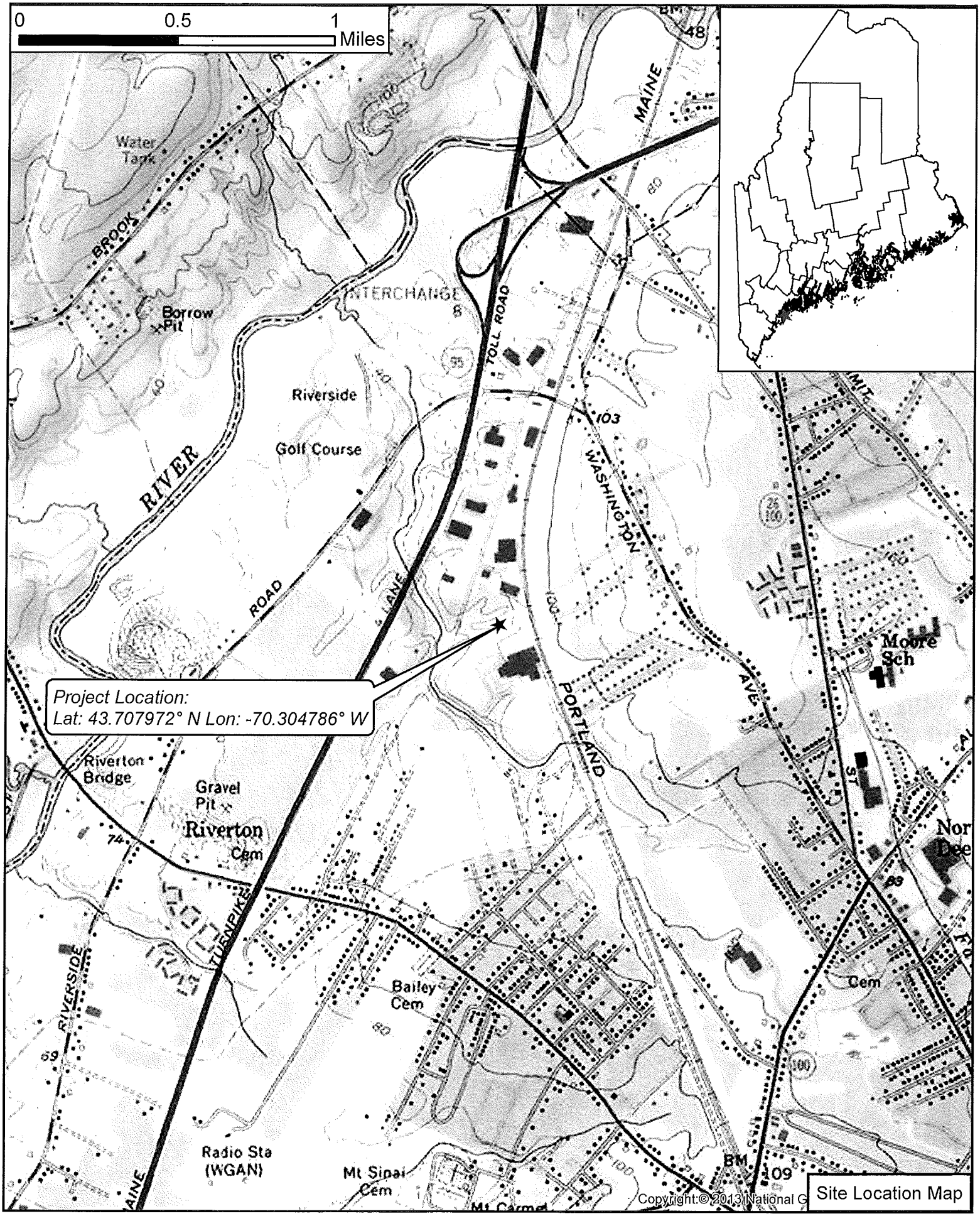
3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices shall be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.

4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.

5. All areas of temporary fill shall be restored to their original contour and character upon completion of the work.

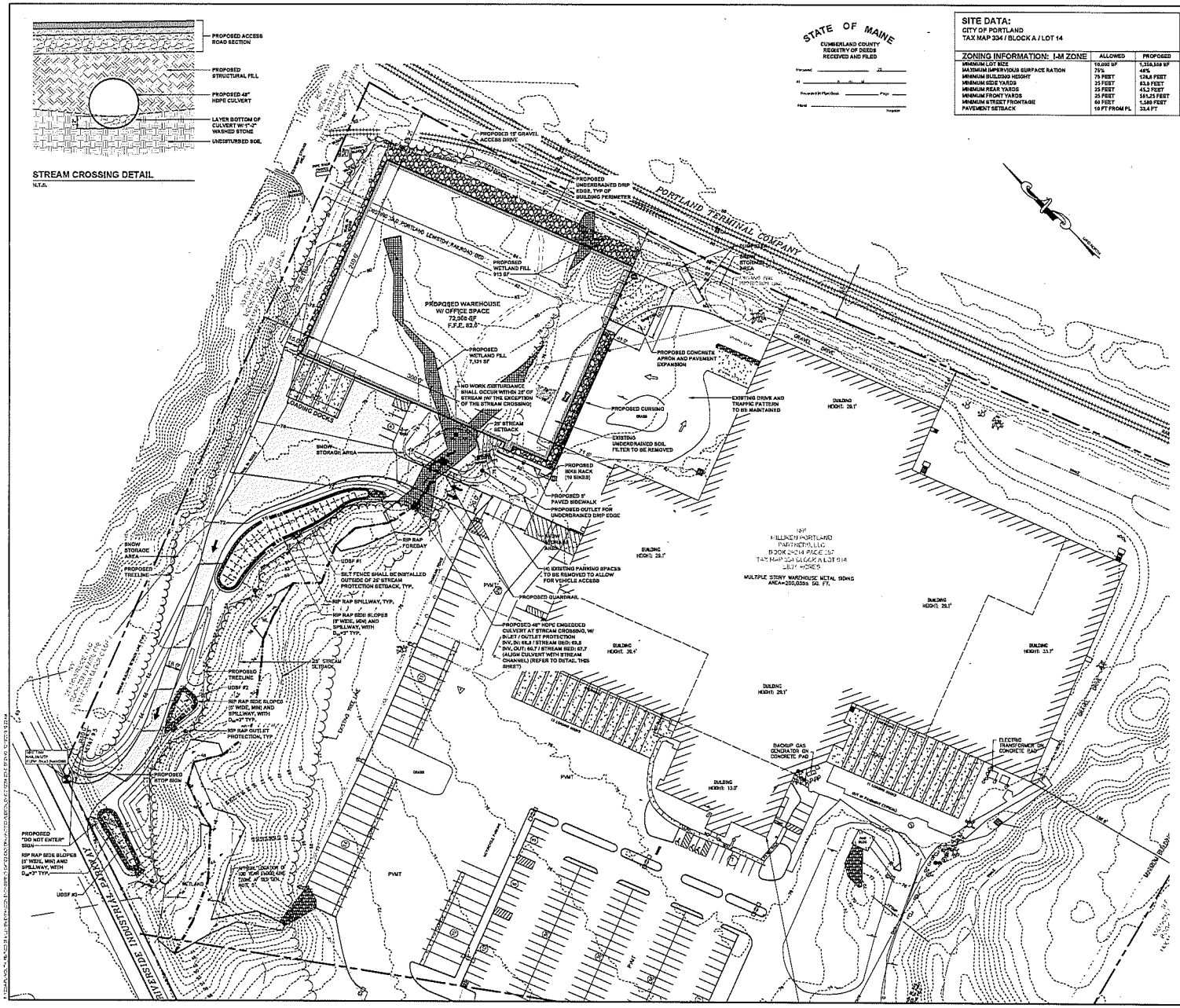
6. In-stream construction work shall be conducted "in the dry" using cofferdams, temporary flume pipes, culverts, etc. and downstream flows shall be maintained during in-stream construction in order to minimize potential impacts to aquatic resources and local water quality.

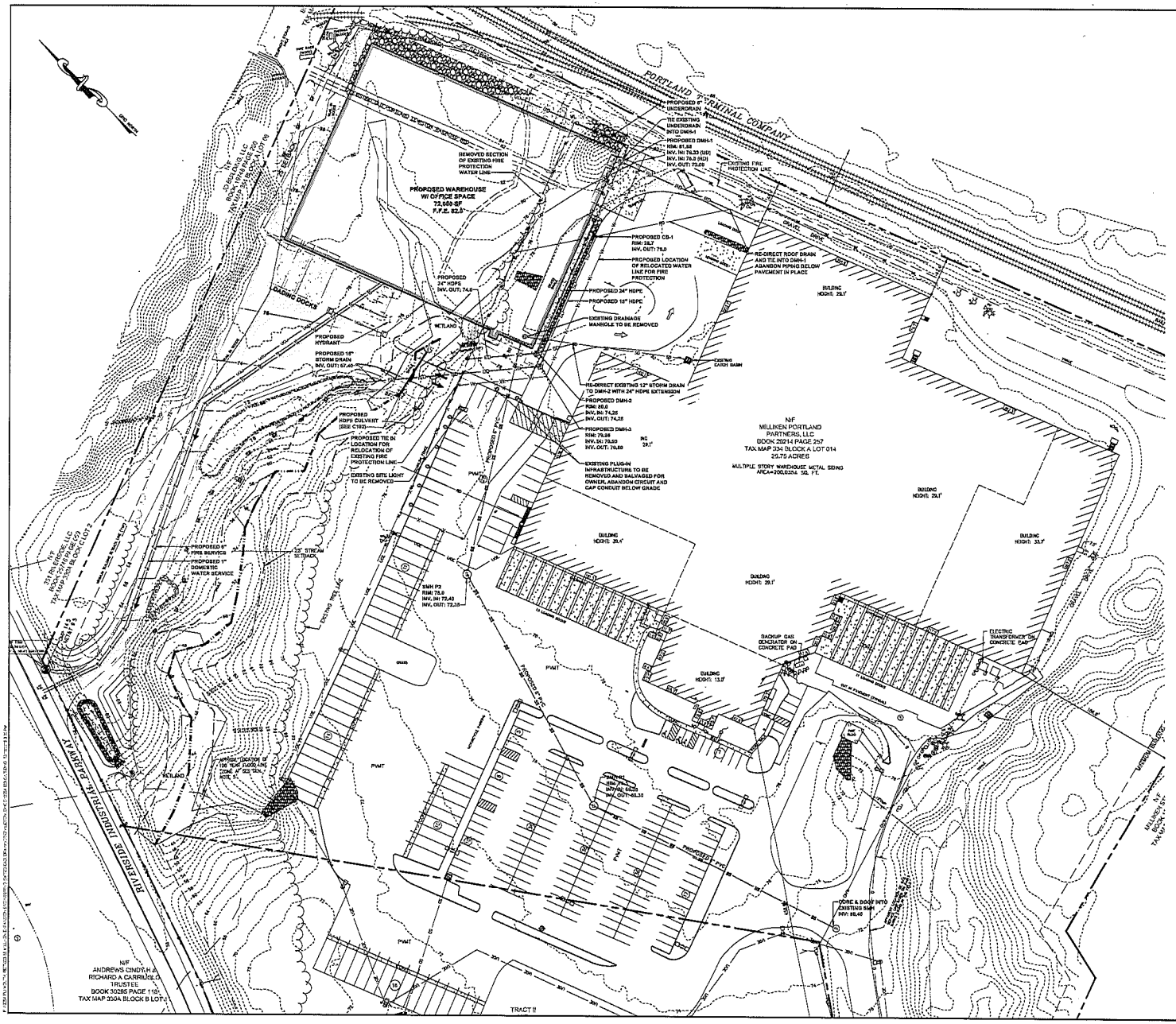
7. No tree cutting shall occur between June 1st and July 31st of any year and to the maximum extent practicable, tree cutting shall occur between October 16th and April 9th of any year in order to minimize potential impacts to federally threatened northern long-eared bats.



Plymouth REIT
56 Milliken Street Portland, Maine
USGS 7.5 QUAD: Portland West, ME

CORPS PERMIT NO. NAE-2018-02817


STATE OF MAINE
CUMBERLAND COUNTY
REGISTRY OF DEEDS
RECEIVED AND FILED
PROPOSED ACCESS ROAD SECTION
PROPOSED STRUCTURAL FILL
PROPOSED 48" HDPE CULVERT
LAYER BOTTOM OF CULVERT W/ 1'-0" WASHED STONE
UNDISTURBED SOIL
STREAM CROSSING DETAIL
N.T.S.
SITE DATA:
CITY OF PORTLAND
TAX MAP 334 / BLOCK A / LOT 14
ZONING INFORMATION: I-M ZONE
ALLOWED
PROPOSED
MINIMUM LOT SIZE 10,000 SF 1,156,168 SF
MAXIMUM IMPERVIOUS SURFACE RATION 75% 48%
MINIMUM BUILDING HEIGHT 75 FEET 126.8 FEET
MINIMUM SIDE YARDS 25 FEET 63.6 FEET
MINIMUM REAR YARDS 25 FEET 43.2 FEET
MINIMUM FRONT YARDS 25 FEET 181.25 FEET
MINIMUM STREET FRONTAGE 50 FEET 1,340 FEET
PAVEMENT SETBACK 10 FT FROM PL 33.4 FT
PORTLAND TERMINAL COMPANY
PROPOSED WAREHOUSE W/ OFFICE SPACE 72,000 SF F.F.E. 82.0'
PROPOSED 15' GRAVEL ACCESS DRIVE
PROPOSED UNDERDRAINED DRIP EDGE, TYP OF BUILDING PERIMETER
PROPOSED WETLAND FILL 913 SF
PROPOSED WETLAND FILL 1,321 SF
PROPOSED CONCRETE APRON AND PAVEMENT EXPANSION
EXISTING DRIVE AND TRAFFIC PATTERN TO BE MAINTAINED
NO WORK, DISTURBANCE SHALL OCCUR WITHIN 25' OF STREAM (W/ THE EXCEPTION OF THE STREAM CROSSING)
25' STREAM SETBACK
PROPOSED CURBING
EXISTING UNDERDRAINED SOIL FILTER TO BE REMOVED
PROPOSED BIKE RACK (10 SPACES)
PROPOSED 5' PAVED SIDEWALK
PROPOSED OUTLET FOR UNDERDRAINED DRIP EDGE
SNOW STORAGE AREA
LOADING DOCKS
BUILDING HEIGHT: 26.1'
BUILDING HEIGHT: 28.0'
BUILDING HEIGHT: 28.2'
BUILDING HEIGHT: 26.4'
BUILDING HEIGHT: 33.7'
BUILDING HEIGHT: 28.1'
BUILDING HEIGHT: 13.0'
MILLIKEN PORTLAND PARTNERS, LLC
BOOK 30214 PAGE 267
TAX MAP 334 BLOCK A LOT 014
MULTIPLE STORY WAREHOUSE METAL SIDING
AREA=200,033± SQ. FT.
(4) EXISTING PARKING SPACES TO BE REMOVED TO ALLOW FOR VEHICLE ACCESS
PROPOSED GUARDRAIL
PROPOSED 48" HDPE ENGEDDED CULVERT AT STREAM CROSSING, W/ INLET / OUTLET PROTECTION INV. IN: 69.3 / STREAM BED: 69.8 INV. OUT: 69.7 / STREAM BED: 67.7 (ALIGN CULVERT WITH STREAM CHANNEL) (REFER TO DETAIL THIS SHEET)
SILT FENCE SHALL BE INSTALLED OUTSIDE OF 25' STREAM PROTECTION SETBACK, TYP.
RIP RAP SPILLWAY, TYP.
RIP RAP SIDE SLOPES (5' WIDE, MIN) AND SPILLWAY, WITH D50=2" TYP.
RIP RAP FOREBAY
USDF #1
USDF #2
USDF #3
PROPOSED TREELINE
PROPOSED STOP SIGN
PROPOSED "DO NOT ENTER" SIGN
RIP RAP OUTLET PROTECTION, TYP
APPROX. LOCATION OF 100 YEAR FLOOD AND 75' @ 83' SETBACK
WETLAND
EXISTING WETLAND
EXISTING TREELINE
EXISTING DRAIN
EXISTING WATER LINE
EXISTING SEWER LINE
EXISTING GAS LINE
EXISTING OVERHEAD UTILITY
EXISTING UNDERGROUND UTILITY
EXISTING GRAVEL DRIVE
EXISTING PAVEMENT
EXISTING CONCRETE
EXISTING BUILDING
EXISTING GUARDRAIL
EXISTING CURB
EXISTING CONCRETE PAD
EXISTING TRANSFORMER ON CONCRETE PAD
BACKUP GAS GENERATOR ON CONCRETE PAD
EXISTING UTILITY POLE
EXISTING POWER BANK
EXISTING SITE LIGHT
EXISTING DRAINAGE MANHOLE
EXISTING CATCH BASIN
EXISTING HYDRANT
EXISTING PROPERTY LINE
EXISTING EDGE OF PAVEMENT
EXISTING EDGE OF GRAVEL
EXISTING MAJOR FOOT CONTOUR
EXISTING MINOR FOOT CONTOUR
EXISTING WATER LINE
EXISTING SANITARY SEWER LINE
EXISTING OVERHEAD UTILITY
EXISTING UNDERGROUND UTILITY
EXISTING STORMDRAIN
EXISTING UNDERDRAIN
EXISTING ROOF DRAIN
EXISTING SILT FENCE
EXISTING GRAVEL SURFACE
EXISTING PAVED SURFACE
AWARD PAPER INDUSTRIAL PARK
RIVERSIDE INDUSTRIAL PARK
PWIT
SITE
LOCATION MAP:
SCALE: 1"=2000'
USGS QUADRANGLE: PORTLAND WEST
MAPTECH® USGS TOPOGRAPHIC SERIES™.
©MAPTECH®, INC. 978-453-3000
WWW.MAPTECH.COM/TOPO
LEGEND:
DESCRIPTION
EXISTING
PROPOSED
GENERAL NOTES
1. TOPOGRAPHY SHOWN REPRESENTS RESULTS FROM TOPOGRAPHIC SURVEY PERFORMED BY CES, INC. ON AUGUST 23, 2016 AND MERGED WITH 2' LIDAR CONTOURS PROVIDED BY THE MAINE OFFICE OF GIS.
2. EXISTING CONDITIONS FROM DIGITAL RECORD DRAWING PROVIDED BY THE OWNER, FILE NAME Milliken2_Base.dwg.
3. THE DIRECTION OF LINES AND UNDERLYING HORIZONTAL COORDINATE SYSTEM IS MAINE STATE PLANE WEST ZONE, US SURVEY FOOT, NAD 83, WITH NAVD 88 VERTICAL DATUM. A VERTICAL ADJUSTMENT OF 5.863 FEET IS TO BE APPLIED FOR CONVERSION TO THE CITY OF PORTLAND'S VERTICAL DATUM OF NGVD29.
4. WETLAND BOUNDARY SHOWN IS THE RESULT OF A WETLAND DELINEATION PERFORMED BY CES, INC.
PLAN REFERENCE
1. PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATION ON #56 MILLIKEN STREET, PORTLAND, ME PREPARED FOR PLYMOUTH INDUSTRIAL REIT, INC., 260 FRANKLIN STREET, 16TH FLOOR, BOSTON, MA 02110", PREPARED BY SGC ENGINEERING, LLC, PLAN REVISION DATE 11-20-2014.
THIS IS TO CERTIFY THAT AFTER REVIEWING THE SITE PLAN SUBMISSION INFORMATION FOR THE PROJECT SHOWN ON THIS PLAN AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE CITY OF PORTLAND'S CODE OF ORDINANCES AND IN ACCORDANCE WITH THE APPLICATION REQUIREMENTS, THE UNDERSIGNED HAVE MADE FINDINGS OF FACT ESTABLISHING THAT THIS PLAN ALONG WITH ITS ADDITIONAL SUBMISSION INFORMATION (IF APPLICABLE) HAS MET ALL THE CRITERIA SET FORTH AND THEREFORE THE SITE PLAN IS APPROVED.
APPROVED BY THE CITY OF PORTLAND PLANNING BOARD ON:
CONDITIONS:
PLANNING BOARD SIGNED ON:
PROPOSED SITE PLAN
RECORD OWNER
MILLIKEN PORTLAND PARTNERS, LLC
ADDRESS OF RECORD OWNER: 11940 VALLEY VIEW ROAD, EDEN PRAIRIE, MN 53445
FOR
PLYMOUTH INDUSTRIAL REIT, INC.
SITE EXPANSION PROJECT
ADDRESS: 56 MILLIKEN STREET, PORTLAND, MAINE
GRAPHIC SCALE
60 0 30 60 100 200
(IN FEET)
1 inch = 50 ft.
CES INC
Engineers • Environmental Scientists • Surveyors
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET
PROPOSED SITE LAYOUT & GRADING PLAN
NOT FOR CONSTRUCTION
JOHN D. KUCHENBERG No. 9780 REGISTERED PROFESSIONAL ENGINEER
ISSUED FOR PERMITTING
SCALE 1"=50'
DATE 2016-10-26
DRAWN BY SLC CHECKED BY JDK
SUBMITTED BY SLC APPROVED BY DMT
JOB NUMBER 12254.003
DRAWING NUMBER C102



LEGEND:

DESCRIPTION	EXISTING	PROPOSED
UTILITY POLE		
POWER BANK		NA
SITE LIGHT		NA
DRAINAGE MANHOLE		
CATCH BASIN		
ELECTRICAL MANHOLE	NA	
HYDRANT	NA	
PROPERTY LINE		NA
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
MAJOR FOOT CONTOUR	100	100
MINOR FOOT CONTOUR	98	98
WATER LINE	W	W
SANITARY SEWER LINE	SS	SS
OVERHEAD UTILITY	OHU	NA
UNDERGROUND UTILITY	NA	UGU
STORMDRAIN	SD	SD
UNDERDRAIN	UD	UD
ROOF DRAIN	RD	RD
SILT FENCE	NA	SF
GRAVEL SURFACE	NA	
PAVED SURFACE	NA	

GENERAL NOTES

1. TOPOGRAPHY SHOWN REPRESENTS RESULTS FROM TOPOGRAPHIC SURVEY PERFORMED BY CES, INC. ON AUGUST 23, 2018 AND MERGED WITH 2' LIDAR CONTOURS PROVIDED BY THE MAINE OFFICE OF GIS.
2. EXISTING CONDITIONS FROM DIGITAL RECORD DRAWING PROVIDED BY THE OWNER, FILE NAME MEExistR_Base.dwg.
3. THE DIRECTION OF LINES AND UNDERLYING HORIZONTAL COORDINATE SYSTEM IS MAINE STATE PLANE WEST ZONE, US SURVEY FOOT, NAD 83, WITH NAVD 88 VERTICAL DATUM. A VERTICAL ADJUSTMENT OF 0.448 FEET IS TO BE APPLIED FOR CONVERSION TO THE CITY OF PORTLAND'S VERTICAL DATUM OF NGVD29.
4. WETLAND BOUNDARY SHOWN IS THE RESULT OF A WETLAND DELINEATION PERFORMED BY CES, INC.

PLAN REFERENCE

1. PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATED ON #14 MILLIKEN STREET, PORTLAND, ME PREPARED FOR PLYMOUTH INDUSTRIAL REIT, INC., 260 FRANKLIN STREET, 16TH FLOOR, BOSTON, MA 02110", PREPARED BY BDC ENGINEERING, LLC., PLAN REVISION DATE 11-30-2018.

PROPOSED UTILITY PLAN

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

CES INC
Engineers • Environmental Scientists • Surveyors

Waterville
45 Main Street
Waterville, ME
Phone No.
207-873-2227

Portland
560 Main Street
Suite 304
Westbrook, ME
Phone No.
207-854-1806

Lewiston
179 Lisbon Street
Lewiston, ME
Phone No.
207-784-0576

Bangor
489 Essex Street
Suite 401
Bangor, ME
Phone No.
207-989-4824

Machias
4 Main Street
PO Box 147
Machias, ME
Phone No.
207-255-3329

Ellsworth
540 West Main Street
Suite 1
Ellsworth, ME
Phone No.
207-667-7329

Scarborough
10 Saco Park Drive
Suite 110
Scarborough, ME
Phone No.
207-396-6566

PROJECT
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
85 MILLIKEN STREET

TITLE
PROPOSED UTILITY PLAN

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6	PER USER'S ADDENDUMS	BLO	10-26

NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. HUCHINSON
No. 9796
REGISTERED PROFESSIONAL ENGINEER
ISSUED FOR PERMITTING

SCALE	1"=50'
DATE	2018-10-26
DRAWN BY	BLO
CHECKED BY	JDK
SUBMITTED BY	BLO
APPROVED BY	SMT
CAD NUMBER	12284.003
DRAWING NUMBER	C103

US Army Corps
of Engineers ®
New England District

GENERAL PERMIT
WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

MAIL TO: Colin M. Greenan
U.S. Army Corps of Engineers, New England District
Maine Project Office
442 Civic Center Drive, Suite 350
Augusta, Maine 04330

A Corps of Engineers Permit (No. NAE-2018-02817) was issued to Plymouth REIT. The permit authorized the permittees to place temporary and permanent fill below the ordinary high water mark of an unnamed stream and in adjacent freshwater wetlands off Riverside Industrial Parkway at Portland, Maine in order to construct a 72,000 sf warehouse and associated infrastructure.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

_____

_____

Business Address: _____

_____

_____

Telephone: (____) _____ (____) _____

Proposed Work Dates: Start: _____

Finish: _____

PERMITTEE'S SIGNATURE: _____ DATE: _____

PRINTED NAME: _____ TITLE: _____

FOR USE BY THE CORPS OF ENGINEERS

Project Manager: GREENAN Submittals Required: No

Inspection Recommendation: random Maine General Permit compliance

US Army Corps of Engineers®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Corps of Engineers Permit No: NAE-2018-02817

Name of Permittees: Plymouth REIT

Permit Issuance Date: 1/4/2019

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

****
* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Policy & Technical Support Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
****

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee Date

_____ _____
Printed Name Date of Work Completion

(____) _____ (____) _____
Telephone Number Telephone Number

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

➔PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

1. Name of Applicant:	Plymouth REIT	5 Name of Agent: (if applicable)	CES, Inc. (John Kuchinski)
2. Applicant's Mailing Address:	260 Franklin Street, 7th Floor Boston, MA 02110	6 Agent's Mailing Address:	146 Main Street Saco, ME 04072
3. Applicant's Daytime Phone #:	617-340-3826	7 Agent's Daytime Phone #:	207-283-9151
4 Applicant's Email Address Required from *either* applicant or agent:	Jeff.Witherell@PlymouthREI.com	8. Agent's Email Address:	jkunchinski@cesincusa.com

9. Location of Activity: (Nearest Road, Street, Rt.#)	56 Milliken Street	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:	NONE
		14. Amount of Impact: (Sq.Ft.)	Fill: 7,391 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		
		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 72,000 square foot warehouse building, access drive, and loading docks.

17. Size of Lot or Parcel:	❑ _____ square feet, or ■ 31.21 acres	UTM Northing: 394981.8	UTM Easting: 4840144.0
18. Title, Right or Interest:	■ own ❑ lease ❑ purchase option ❑ written agreement		

19. Deed Reference Numbers:	Book#: 31943 Page: 229	20. Map and Lot Numbers:	Map #: 254A	Lot #: A001	
21. DEP Staff Previously Contacted:	N/A	22. Part of a larger project:	❑ Yes ■ No	After-the-Fact:	❑ Yes ■ No
23. Resubmission of Application?	❑ Yes➔ ■ No	If yes, previous application #	N/A	Previous project manager:	N/A
24. Written Notice of Violation?	❑ Yes ➔ ■ No	If yes, name of DEP enforcement staff involved:	N/A	25. Previous Wetland Alteration:	❑ Yes ■ No

26. Detailed Directions to the Project Site:	Forrest Avenue west to Riverside Industrial Parkway. Approximately 0.6 mile to Milliken Street. Turn onto Milliken Street, site is on the left.

27. TIER 1	TIER 2/3 AND INDIVIDUAL PERMITS	
■ Title, right or interest documentation	❑ Title, right or interest documentation	❑ Erosion Control/Construction Plan
■ Topographic Map	❑ Topographic Map	❑ Functional Assessment (Attachment 3), if required
■ Narrative Project Description	❑ Copy of Public Notice/Public Information Meeting Documentation	
■ Plan or Drawing (8 1/2" x 11")	❑ Wetlands Delineation Report (Attachment 1) that contains the Information listed under Site Conditions	❑ Compensation Plan (Attachment 4), if required
■ Photos of Area	❑ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized	❑ Appendix A and others, if required
■ Statement of Avoidance & Minimization		❑ Statement/Copy of cover letter to MHPC
■ Statement/Copy of cover letter to MHPC		❑ Description of Previously Mined Peatland, if required

28. FEES, Amount Enclosed:	$75.00

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 fines 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)."

JEFF WILHELM CEO Date: 10-29-18

SIGNATURE OF AGENT/APPLICANT

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.

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resources Protection Act- Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Plymouth REIT	**Name:**	CES, Inc. (John Kuchinski)
Mailing Address:	260 Franklin Street, 7th Floor	**Mailing Address:**	146 Main Street
Town:	Boston	**Town:**	Saco
State and Zip Code:	MA 02110	**State and Zip Code:**	ME 04072
Daytime Phone #:	617-340-3826	**Daytime Phone #:**	207-283-9151
Email Address:	Jeff.Witherell@PlymouthREI.com	**Email Address:**	jkuchinski@cesincusa.com

PROJECT INFORMATION

Part of a larger project? (check one):	■ Yes ☐ No	**After the Fact? (check one):**	☐ Yes ■ No	**Project involves work below mean low water? (check one):**	☐ Yes ■ No	**Name of waterbody:**	N/A
Project Town:	Portland	**Project Location (Address):**	56 Milliken Street			**Map & Lot Number:**	354A & A001
Brief Project Description:	Construction of 72,000 square foot warehouse building, access drive, and loading docks.						
Brief Directions to Site:	Forrest Avenue west to Riverside Industrial Parkway. Approximately 0.6 mile to Milliken Street. Turn onto Milliken Street, site is on the left.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. **I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.**

- ☐ Sec. (2) Act. Adj. to Protected Natural Res.
- ☐ Sec. (3) Intake Pipes
- ☐ Sec. (4) Replacement of Structures
- ☐ Sec. (5) REPEALED
- ☐ Sec. (6) Movement of Rocks or Vegetation
- ☐ Sec. (7) Outfall Pipes
- ☐ Sec. (8) Shoreline stabilization
- ☐ Sec. (9) Utility Crossing
- ■ Sec.(10) Stream Crossing
- ☐ Sec. (11) State Transportation Facil.
- ☐ Sec. (12) Restoration of Natural Areas
- ☐ Sec. (13) F&W Creation/Enhance/Water Quality Improvement
- ☐ Sec. (14) REPEALED
- ☐ Sec. (15) Public Boat Ramps
- ☐ Sec. (16) Coastal Sand Dune Projects
- ☐ Sec. (17) Transfers/Permit Extension
- ☐ Sec. (18) Maintenance Dredging
- ☐ Sec. (19) Activities in/on/over significant vernal pool habitat
- ☐ Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas

NOTE: Municipal permits *may* also be required. Contact your local code enforcement office for more information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for more information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS

- ■ ***Attach*** **all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.**
- ■ ***Attach*** **a check for the correct fee made payable to: "Treasurer, State of Maine". The current fee for NRPA PBR Notifications can be found at the Department's website: http://www.maine.gov/dep/feesched.pdf**
- ■ ***Attach*** **location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ■ ***Attach Proof of Legal Name*** **if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x) Individuals and municipalities are not required to provide any proof of identity.**

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:	JEFF WITHERELL CEO	**Date:**	10-29-18

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

OFFICE USE ONLY	Ck.#		Staff	Staff	
PBR #	FP	Date	Acc. Date	Def. Date	After Photos

QUITCLAIM DEED WITH COVENANT

KNOW ALL BY THESE PRESENTS, that **Milliken Portland Partners, LLC**, a Massachusetts limited liability company with a mailing address of 40 South Street, Suite 305, Marblehead, MA 01945 (the "Grantor"), for consideration paid, grants to **Plymouth 56 Milliken LLC**, a Delaware limited liability company (the "Grantee"), with a mailing address of 260 Franklin Street, 19th Floor, Boston, MA 02110, with Quitclaim Covenant, the premises in the City of Portland, Cumberland County, State of Maine, described in **Exhibit A** attached hereto and made a part of hereof.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the said Milliken Portland Partners, LLC has caused this instrument to be executed by J. Hilary Rockett, Jr., Manager of JHR Development, LLC, its Manager, hereunto duly authorized this 18TH of November, 2014.

Milliken Portland Partners, LLC, a
Massachusetts limited liability company

By: JHR Development, LLC, its Manager

By:_____
J. Hilary Rockett, Jr., Manager

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

On this 18th day of November, 2014, before me, the undersigned notary public, personally appeared **J. Hilary Rockett, Jr.**, proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☑ personal knowledge of the undersigned, ☐ oath or affirmation of a credible witness, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily and for its stated purpose as Manager of JHR Development, LLC, Manager of Milliken Portland Partners, LLC.

Notary Public:
My commission expires:

JULIA M. WHALL
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
July 24, 2020

EXHIBIT A

(56 Milliken Street, Portland, Cumberland County, Maine)

TRACT I:

A certain lot or parcel of land with any buildings thereon situated easterly of Riverside Industrial Parkway and Northerly of Milliken Street in the City of Portland, County of Cumberland and State of Maine, to wit:

BEGINNING on the westerly side of land now or formerly of the Portland Terminal Company at a drill hole in a found stone at the northerly corner at land now or formerly owned by Portland Water District;

Thence, South 55°14'20" West, 71.28 feet along said Water District land to a point;

Thence, North 21°15'40" West, 17.82 feet along said Water District land to a point;

Thence, South 74°52'45" West, 31.62 feet along said Water District land to a point near an iron pipe;

Thence, South 55°51'08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence, North 21°16'37" West, 555.77 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence, South 68°44'47" West, 114.56 feet to a point near a 5/8" rebar;

Thence, North 14°55'55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2 feet from the terminus of said course, to a point;

Thence, South 75°08'46" West, 328.45 feet along said Milliken Street LLC land to a point;

Thence, South 13°13'08" West, 61.39 feet along said Milliken Street LLC land to a point;

Thence, South 68°44'47" West, 143.78 feet to a point in the easterly line of Milliken Street;

Thence, along easterly line North 56°10'30" West, 92.98 feet to a point;

Thence, North 56°04'53" West, 117.32 feet to a point;

Thence, leaving said easterly line North 34°51'20" East, 213.80 feet to a point;

Thence, North 35°56'16" West, 781.79 feet to a point in the easterly right-of-way of Riverside Industrial Parkway;

Thence, along said easterly right-of-way line North 18°39'48" East, 204.96 feet to a point;

Thence, leaving said easterly right-of-way North 68°40'30" East, 849.45 feet to a point in the westerly sideline of said Portland Terminal Company land;

Thence, along said westerly line along a curve deflecting to the left having a radius of 2,902.78 feet, an arc of 178.13 feet, a chord bearing of South 15°42'18" East, a chord of 178.10 feet to a point;

Thence, along a curve deflecting to the left having a radius of 6,422.46 feet, an arc of 427.82 feet, a chord bearing of South 19°21'10" East, a chord of 427.74 feet to a point;

Thence, South 21°15'40" East, 521.66 feet to a point;

Thence, South 57°03'20" West, 16.85 feet to a point;

Thence, South 21°15'40" East, 619.95 feet to the POINT OF BEGINNING, containing 25.75 acres.

Being the Tract I of the premises conveyed to Grantor by deed of C&S Logistics of Portland LLC, dated as of August 10, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21653, Page 272.

TRACT II:

A certain lot or parcel of land situated Easterly of Riverside Industrial Parkway & Northerly of Milliken Street in the City of Portland, County of Cumberland, Maine to wit:

COMMENCING at a point on the westerly side of land now or formerly of the Portland Terminal Company t the northerly corner of the land now or formerly owned by the Portland Water District;

Thence South 55°14'20" West, 71.28 feet along said Water District Land to a point;

Thence North 21°15'40" West, 17.82 feet along said Water District Land to a point;

Thence South 74°52'45" West, 31.62 feet along said Water District Land to a point near an iron pipe;

Thence South 55°51'08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;

Thence North 21°16'37" West, 555.77 feet along said Milliken Street LLC land to a 5/8" rebar;

Thence South 68°44'47" West, 114.56 feet along said Milliken Street LLC land to a point near a 5/8" rebar;

Thence North 14°55'55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2 feet from the terminus of said course, to a point;

Thence South 75°08'46" West, 328.45 feet along said Milliken Street LLC land to a point;

Thence South 13°13'08" West, 61.39 feet along said Milliken Street LLC land to a point;

Thence South 68°44'47" West, 143.78 feet to a point in the easterly line of Milliken Street;

Thence along said easterly line North 56°10'30" West, 92.98 feet to a point;

Thence North 56°04'53" West, 117.32 feet to the true point of beginning;

Thence continuing along the easterly line of Milliken Street North 56°04'53" West, 280.50 feet to a point;

Thence North 63°50'00" West, 258.77 feet to a point at the Intersection of said easterly line and the southern line of land conveyed to ADC Building Fund Inc. by Davis-Greene Co. dated December 18, 1962, recorded in Book 2723, Page 182;

Thence leaving said easterly line along said southern line North 55°47'03" West, 91.92 feet to a point at the intersection of said easterly line and said southern line;

Thence leaving said southern line along said easterly line of Milliken Street along a curve deflecting to the right having a radius of 50.00' and arc of 49.66', a chord bearing of North 06°39'55" East, a chord of 47.64', to a point at the intersection of said easterly line of Milliken Street and the easterly line of Riverside Industrial Parkway;

Thence leaving said easterly line of Milliken Street along said easterly line of Riverside Industrial Parkway along a curve deflecting to the left having a radius of 1171.67', an arc of 336.46, a chord bearing of North 26° 53' 24" East, a chord of 335.31' to a point;

Thence North 18°39'48" East, 147.48 feet to a point;

Thence leaving said easterly line along a line between Tract I and II South 35°56'16" East, 781.79 feet to a point;

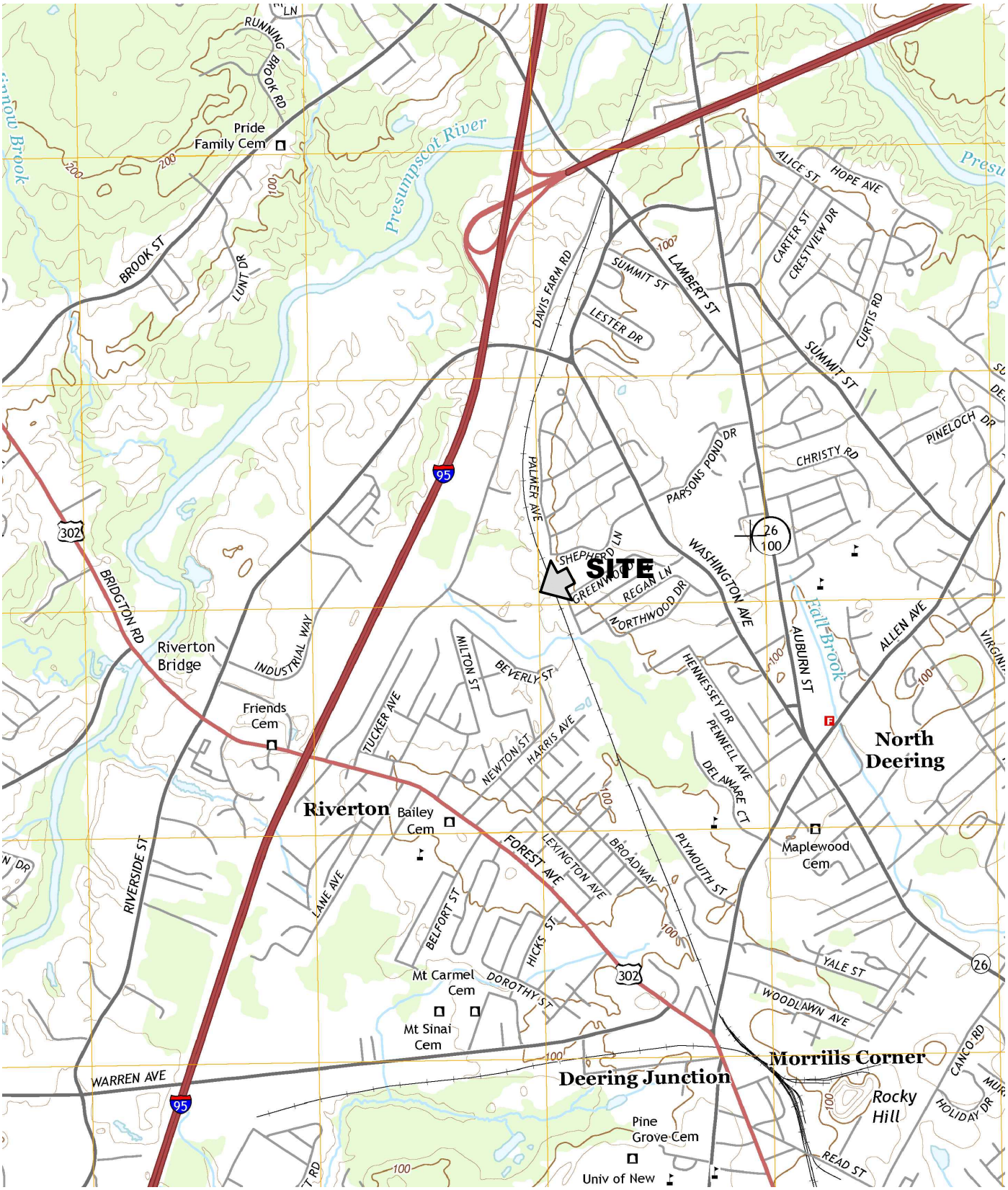
Thence South 34°51'20" West, 213.80 feet to the true POINT OF BEGINNING, containing 5.46 acres.

Being Tract II of the premises conveyed to Grantor by deed of C&S Logistics of Portland LLC, dated as of August 10, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21653, Page 272.

Tracts I and II are conveyed SUBJECT TO:

a. Rights and easements granted to Central Maine Power Company and Verizon New England, Inc. in a certain utility easement dated January 21, 2005, recorded in the Cumberland County Registry of Deeds in Book 22575, Page 21.

b. Current zoning restrictions.



SOURCE:
U.S.G.S. TOPOGRAPHIC QUADRANGLE
PORTLAND WEST
@ 1:24,000

CES INC

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND, MAINE
LOCATION MAP

2018-07-06
12254.003

PLYMOUTH INDUSTRIAL REIT, INC.
56 MILLIKEN STREET, PORTLAND
NRPA TIER 1 NARRATIVE

Project Description

Plymouth REIT is proposing a 72,000 square foot warehouse building on an existing developed site located at 56 Milliken Street in Portland. The site is currently occupied by an existing 200,000 square foot building where Paradigm Windows and Advance Pierre both have manufacturing and warehousing facilities. The new building will allow the owner to lease additional warehouse space within the City of Portland.

Development of the site includes a new access drive from the new building onto Riverside Industrial Parkway. This driveway will be a one-way exit. Additional impervious area along the front of the building allows for truck maneuvering for the proposed loading bays.

Avoidance

The new building has been located to the westerly side of the lot to avoid to the extent practicable wetland disturbance and still have a viable project. In addition, the building placement does not directly impact a portion of the wetland identified as an intermittent stream.

Minimization

Wetland disturbance is limited to the extent necessary for the development of the warehouse. A retaining wall is included in the design along the front walkway to limit and minimize the extent of wetland fill. Wetland fill will be limited to the minimum amount necessary to construct the project. Building placement allows for minimum access to the rear for fire fighting equipment.

PLYMOUTH REIT
PROPOSED WAREHOUSE CONSTRUCTION

Photo No. 1

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking west at wetland and stream at approximate crossing location.

Photo By: JES

Photo No. 2

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
View of stream at approximate crossing location.

Photo By: JES

Photo No. 3

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking east at scrub-shrub wetland within proposed warehouse alteration area.

Photo By: JES

Photo No. 4

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking west at wetland, outside of alteration areas, in western portion of the site.

Photo By: JES

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

August 21, 2018

Mr. Kirk Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street
Augusta, ME 04333-0065

Re: Plymouth Industrial REIT | 56 Milliken Road | Portland, Maine

Dear Mr. Mohney,

Plymouth Industrial REIT is currently in the process of preparing a Site Location of Development Permit Amendment Application for the construction of a 72,000 square foot building at 56 Milliken Drive in Portland, Maine. The facility is an addition to and existing industrial manufacturing facility at 56 Milliken Road, Portland.

As required for permitting requirements, we are submitting this request to your office to determine if there are any potential impacts to fisheries or wildlife habitats located at the site or in the immediate surroundings. Any response can be forwarded to our office located at 146 Main Street, Saco, ME 04072 or by email at jkuchinski@ces-maine.com.

Thank you for your assistance in this matter.

Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/cmc
Encl.

Seven Locations in Maine | www.ces-maine.com

146 Main Street
Suite 300
Saco, Maine 04072
T 207.283.9151
F 207.283.9136

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

RECEIVED
SEP 05 2018
AND SCANNED

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

August 29, 2018

Mr. John D. Kuchinski
CES Inc
146 Main St, Suite 300
Saco, ME 04072

Project: MHPC #1141-18 Plymouth Industrial Reit; 56 Milliken Rd
Construction of a 72,000 Sq Ft Building

Town: Portland, ME

Dear Mr. Kuchinski:

In response to your recent request, I have reviewed the information received August 23, 2018 to initiate consultation on the above referenced project in accordance with the requirements of the Maine Department of Environmental Protection.

Based on the information submitted, I have concluded that there will be no historic properties (archaeological or architectural) affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

PHONE: (207) 287-2132 FAX: (207) 287-2335

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

➔PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

1. Name of Applicant:	Plymouth REIT	5 Name of Agent: (if applicable)	CES, Inc. (John Kuchinski)
2. Applicant's Mailing Address:	260 Franklin Street, 7th Floor Boston, MA 02110	6 Agent's Mailing Address:	146 Main Street Saco, ME 04072
3. Applicant's Daytime Phone #:	617-340-3826	7 Agent's Daytime Phone #:	207-283-9151
4 Applicant's Email Address Required from *either* applicant or agent:	Jeff.Witherell@PlymouthREI.com	8. Agent's Email Address:	jkunchinski@cesincusa.com

9. Location of Activity: (Nearest Road, Street, Rt.#)	56 Milliken Street	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:	NONE
		14. Amount of Impact: (Sq.Ft.)	Fill: 7,391 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		
		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 72,000 square foot warehouse building, access drive, and loading docks.

17. Size of Lot or Parcel:	❑ _____ square feet, or ■ 31.21 acres	UTM Northing: 394981.8	UTM Easting: 4840144.0
18. Title, Right or Interest:	■ own ❑ lease ❑ purchase option ❑ written agreement		

19. Deed Reference Numbers:	Book#: 31943 Page: 229	20. Map and Lot Numbers:	Map #: 254A	Lot #: A001	
21. DEP Staff Previously Contacted:	N/A	22. Part of a larger project:	❑ Yes ■ No	After-the-Fact:	❑ Yes ■ No
23. Resubmission of Application?	❑ Yes➔ ■ No	If yes, previous application #	N/A	Previous project manager:	N/A
24. Written Notice of Violation?	❑ Yes ➔ ■ No	If yes, name of DEP enforcement staff involved:	N/A	25. Previous Wetland Alteration:	❑ Yes ■ No

26. Detailed Directions to the Project Site:	Forrest Avenue west to Riverside Industrial Parkway. Approximately 0.6 mile to Milliken Street. Turn onto Milliken Street, site is on the left.

27. TIER 1	TIER 2/3 AND INDIVIDUAL PERMITS	
■ Title, right or interest documentation	❑ Title, right or interest documentation	❑ Erosion Control/Construction Plan
■ Topographic Map	❑ Topographic Map	❑ Functional Assessment (Attachment 3), if required
■ Narrative Project Description	❑ Copy of Public Notice/Public Information Meeting Documentation	
■ Plan or Drawing (8 1/2" x 11")	❑ Wetlands Delineation Report (Attachment 1) that contains the Information listed under Site Conditions	❑ Compensation Plan (Attachment 4), if required
■ Photos of Area	❑ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized	❑ Appendix A and others, if required
■ Statement of Avoidance & Minimization		❑ Statement/Copy of cover letter to MHPC
■ Statement/Copy of cover letter to MHPC		❑ Description of Previously Mined Peatland, if required

28. FEES, Amount Enclosed:	$75.00

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 fines 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)."

JEFF WILHELM CEO Date: 10-29-18

SIGNATURE OF AGENT/APPLICANT

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.

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resources Protection Act- Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Plymouth REIT	**Name:**	CES, Inc. (John Kuchinski)
Mailing Address:	260 Franklin Street, 7th Floor	**Mailing Address:**	146 Main Street
Town:	Boston	**Town:**	Saco
State and Zip Code:	MA 02110	**State and Zip Code:**	ME 04072
Daytime Phone #:	617-340-3826	**Daytime Phone #:**	207-283-9151
Email Address:	Jeff.Witherell@PlymouthREI.com	**Email Address:**	jkuchinski@cesincusa.com

PROJECT INFORMATION

Part of a larger project? (check one):	■ Yes ☐ No	**After the Fact? (check one):**	☐ Yes ■ No	**Project involves work below mean low water? (check one):**	☐ Yes ■ No	**Name of waterbody:**	N/A
Project Town:	Portland	**Project Location (Address):**	56 Milliken Street			**Map & Lot Number:**	354A & A001
Brief Project Description:	Construction of 72,000 square foot warehouse building, access drive, and loading docks.						
Brief Directions to Site:	Forrest Avenue west to Riverside Industrial Parkway. Approximately 0.6 mile to Milliken Street. Turn onto Milliken Street, site is on the left.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. **I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.**

- ☐ Sec. (2) Act. Adj. to Protected Natural Res.
- ☐ Sec. (3) Intake Pipes
- ☐ Sec. (4) Replacement of Structures
- ☐ Sec. (5) REPEALED
- ☐ Sec. (6) Movement of Rocks or Vegetation
- ☐ Sec. (7) Outfall Pipes
- ☐ Sec. (8) Shoreline stabilization
- ☐ Sec. (9) Utility Crossing
- ■ Sec.(10) Stream Crossing
- ☐ Sec. (11) State Transportation Facil.
- ☐ Sec. (12) Restoration of Natural Areas
- ☐ Sec. (13) F&W Creation/Enhance/Water Quality Improvement
- ☐ Sec. (14) REPEALED
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- ■ ***Attach*** **location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ■ ***Attach Proof of Legal Name*** **if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x) Individuals and municipalities are not required to provide any proof of identity.**

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:	JEFF WITHERELL CEO	**Date:**	10-29-18

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

OFFICE USE ONLY	Ck.#		Staff	Staff	
PBR #	FP	Date	Acc. Date	Def. Date	After Photos

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Oct 17 2018 10:04:42. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
PLYMOUTH 56 MILLIKEN LLC	20150380FC	LIMITED LIABILITY COMPANY (FOREIGN)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
11/13/2014	N/A	DELAWARE

Other Names	(A=Assumed ; F=Former)
NONE	

Clerk/Registered Agent

C T CORPORATION SYSTEM
128 STATE ST #3
AUGUSTA, ME 04330

Back to previous screen | New Search

Click on a link to obtain additional information.

List of Filings	View list of filings
Obtain additional information:	
Certificate of Existence (more info)	Short Form without amendments ($30.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

PLYMOUTH REIT
PROPOSED WAREHOUSE CONSTRUCTION

Photo No. 1

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking west at wetland and stream at approximate crossing location.

Photo By: JES

Photo No. 2

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
View of stream at approximate crossing location.

Photo By: JES

Photo No. 3

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking east at scrub-shrub wetland within proposed warehouse alteration area.

Photo By: JES

Photo No. 4

Photo Date:
July 2, 2018

Site Location:
Milliken Street
Portland, Maine

Description:
Looking west at wetland, outside of alteration areas, in western portion of the site.

Photo By: JES

Att. O

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

RE: 56 Milliken street, Portland

1 message

John Kuchinski <jkuchinski@cesincusa.com> Mon, Dec 17, 2018 at 12:03 PM
To: Jean Fraser <jf@portlandmaine.gov>

Jean

See my responses below:

John Kuchinski, P.E. ◆ Senior Project Engineer

P 207.283.9151 | **F** 207.283.9151 | **C** 207.899.5307 | www.ces-maine.com

From: Jean Fraser <jf@portlandmaine.gov>
Sent: Thursday, December 13, 2018 4:52 PM
To: John Kuchinski <jkuchinski@cesincusa.com>
Subject: Re: 56 Milliken street, Portland

Hello John

I am waiting for the reviewers to send me detailed comments but some of them have requested additional information or raised issues as outlined below in order to complete their reviews:

- What is the relationship of the new building to the ones on the site ie will the existing businesses be using the new building or is it for some other user?
  Response: The owner has not determined the future occupant of the proposed building. They are seeking to provide additional warehouse space with the City. This space may serve the current occupants of the site or be rented to another entity for warehousing space.
- Traffic generation - as part of the SLOD we need to determine if a TMP is required. Please send the history of the trip generation data for the last 10 years for the entire site (the transportation info submitted only relates to the new warehouse).
  Response: The traffic generation for the proposed building represents the total trip generation within the past ten years. The previous modification to the site

consisted of a loading dock modification approved by the City on August 27, 2013. This change did not have any impacts on traffic demand. Development prior to that occurred in 2005 according to City Building Permit records.

- Why do you need two curb-cuts; the city aims to reduce rather than increase the number of curbcuts?
  Response: The second driveway is allowed in the zone. This was discussed in out pre-application meeting in July of This year. The second drive is an exit only for trucks. The reason for the driveway is to eliminate additional wetland impacts and stream crossing to allow large trucks to reenter the southerly portion of the site and exit onto Milliken Street.

- The Fire Department requires access to the full length of two sides of the building.
  Response: Access is provided on almost all 4 sides. The southerly and westerly sides provide access for emergency vehicles. Gravel access lanes are provide on 90 percent of the easterly and northerly sides of the proposed building.

- Please show the entire site on all of the civil plans.
  Response: Our intent with the proposed site plans at a scale of 1" = 50' was to make the prosed plan more readable for the reviewers while maintaining a 24"x36" sheet size. Is it acceptable to have all of the site plans at 1" = 60'? this can be done fairly easily if required.

- The sidewalk waiver request needs to address the sidewalk and curbing waiver criteria, which are listed below. Please note that current developments on Riverside Industrial Parkway include sidewalks in their proposals.
  Response: We would like to add to our waiver request the waiver of curbing criteria. Placing a sidewalk along the street frontage on Riverside Industrial Parkway has several technical and environmental challenges. First as stated in our original waiver request, there are no sidewalks or curbs along either side of Riverside Industrial Parkway. The nature of Riverside Industrial Parkway is industrial which does not lend itself to pedestrian traffic. On a technical nature is the large grade difference between the road surface and the stream crossing under Riverside Industrial Parkway. To place a sidewalk will require additional impact to the stream and extending the City of Portland Culvert under the road to accommodate a sidewalk.

While writing I attach the wastewater capacity letter from DPW.

thank you

Jean

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

January 9, 2019

Jean Fraser, Planner
Portland Planning and Urban Development Department
389 Congress Street
Portland, Maine, 04101
jf@portlandmaine.gov

Re: Neighborhood Meeting Certification | Plymouth REIT 56 Milliken Street

Dear Jean

I, John D. Kuchinski, PE of CES, Inc. hereby certify that a neighborhood meeting was held on Thursday, January 3, 2019 at Riverton Elementary School Community Room at 6:00 PM for the proposed project located at 56 Milliken Street.

I also certify that on December 18, 2018 invitations to the meeting were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1,000 feet of a subdivision within an industrial zone or industrial zone change.

2. Residents on the "interested parties" list.

Sincerely,
CES, Inc.

John D. Kuchinski, PE
Senior Project Engineer

JDK/gdr
Enc: 1. Copy of the Invitation Sent
2. Sign-in Sheet
3. Meeting Minutes
cc: Jeff Witherell, Plymouth REIT

Sensible Solutions | www.cesincusa.com

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Suite 300
Saco, Maine 04072
T 207.283.9151
F 207.283.9136

NEIGHBORHOOD MEETING INVITATION

December 18, 2018

Dear Neighbor:

Please join us for a neighborhood meeting to discuss plans for a 72,000 square foot warehouse and associated site construction located at 56 Milliken Street in Portland, Maine.

Meeting Location: Riverton Elementary School Community Room
Meeting Date: Thursday, January 3, 2019
Meeting Time: 6:00 PM

(The City code requires that property owners within 500 feet (1,000 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 contact John Kuchinski at 207-283-9151 or at jkuchinski@cesincusa.com.

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 plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department Planning Division, 4th Floor, 389 Congress Street, Portland, ME 04101 or by email to: bab@portlandmaine.gov

CES INC

NEIGHBORHOOD MEETING SIGN-IN

Date: January 3, 2019 Time: 6:00 PM Location: Community Room, Riverton Elementary School, Portland

Project: Plymouth REIT 56 Milliken St, Portland

Consultant:
John Kuchinski, CES, Inc. 146 Main St., Suite 300 Saco ME 04072 (207) 283-9151 jkuchinski@cesincusa.com

NAME	ADDRESS	TELEPHONE	EMAIL
Margaret Rodriguez	107 Primrose Ln.	209-559-2411	margretr@yahoo.com
Karen Szalajda	99 Primrose Lane	(207)450-2133	Kahn135e@aol.com
Steve Keyser	156 Greenwood LN	603-289-4051	elmyard@gmail.com

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

MEMO

To: Jean Fraser, Planner
City of Portland Planning & Urban Development Department

From: John D. Kuchinski, PE

Re: Meeting Minutes of Neighborhood Meeting
56 Milliken Street for Plymouth REIT

Date: January 9, 2019

The January 3, 2019 meeting was opened at 6:00 PM at the Riverton Elementary School Community Room. Three abutters were in attendance in addition to Mr. Kuchinski who is representing Plymouth REIT.

John Kuchinski provided a brief presentation of the proposed project that consists of a 72,000 square foot warehouse, two sets of loading bays, and an access exit driveway onto Riverside Industrial Parkway.

Abutters stated that they had received a postcard from the City of Portland Planning Department stating that this project was a marijuana growing and processing facility. An abutter stated that the address on the postcard, 66 Milliken Street, was crossed off and 56 Milliken was written in. Mr. Kuchinski stated that the proposed project is not a marijuana facility but a simple warehouse. Mr. Kuchinski passed around a printed copy of the application materials submitted to the City of Portland and stated that marijuana is not mentioned anywhere in the application. A discussion of this continued for a period of time. The abutters present stated that they oppose a marijuana facility ant that was the reason for their attendance.

Mr. Kuchinski stated that he would contact the City and inquire about the confusing post card notice.

The meeting was adjourned at 6:30 PM.

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F 207.283.9136

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

MEMO

To: John Kuchinski, P.E., Project Manager
CES, Inc.

From: Johanna Szillery, Senior Project Scientist
CES, Inc.

RE: Natural Resource Survey
Plymouth REIT Expansion | 56 Milliken Street | Portland, Maine

Date: February 11, 2019

This memo is intended to summarize natural resource work performed by CES, Inc. (CES) at 56 Milliken Street (the Site) in Portland, Maine in support of the proposed facility expansion. CES completed the following scope of work for the Site:

- Reviewed publicly available data on known fish and wildlife habitats from the Maine Department of Inland Fisheries and Wildlife (MDIFW) and US Fish and Wildlife Service (USFWS);
- A Site reconnaissance survey on December 11, 2017;
- An on-Site meeting with Maine Department of Environmental Protection (MDEP) in April 2018;
- A natural resource surveys on July 2, 2018; and
- Permit application preparation in November 2018.

DATABASE REVIEW

CES reviewed available state and federal databases for known regulated natural resources near the Site. At the federal level, the Site is within the range of the threatened northern long-eared bat (*Myotis septentrionalis*). There is no critical habitat mapped for this species.

At the State level, two significant vernal pools have been previously mapped west of Riverside Industrial Parkway. The State-regulated 250-foot buffer on these pools extends a few feet onto the Site.

SITE DESCRIPTION AND NATURAL RESOURCE SURVEY

The Site is located in the northern portion of Portland, in an area of mixed land use, with commercial, residential and industrial developments in the Sire area. The southern portion of the Site is currently developed with a commercial building and parking areas. The northern portion of the Site is undeveloped woodland, primarily forested with a mix of softwoods and hardwoods. The terrain is relatively flat, but a stream and associated floodplain wetlands, bisect the area. The

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stream is located within a steep-sided gully that takes up a significant portion of the undeveloped portion of the Site.

Jurisdictional wetlands were delineated based on the 1987 US Army Corps Wetland Delineation Manual and the routine determination method as outlined in the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. Jurisdictional "rivers, streams, or brooks" were identified using the definition provided in MRSA Title 38 §480-B (9) and Section 404 of the Clean Water Act. A potential vernal pool survey was completed in accordance with State and Federal Guidelines and the Maine Association of Wetland Scientists Vernal Pool Survey Protocol (2014).

CES scientists identified and located two wetlands and one stream on the Site. The stream is intermittent, with a silt- and organic substrate. The stream flows to the west, toward Riverside Industrial Parkway. Scrub-shrub (PSS) and emergent (PEM) freshwater floodplain wetlands were delineated along this stream. A second PSS wetland area was identified and delineated in the northeast portion of the Site. These wetlands are dominated by speckled alder, arrowwood, sensitive fern, impatiens, and meadow sweet. Indicators of hydrology observed included: soil saturation within 5 inches of the ground surface; and drainage patterns. The soils in the wetlands are silt loam soils that meet the hydric criteria described as *Depleted Matrix.* Potential vernal pools were not observed on the Site.

The wetlands and stream observed on the Site are shown on the plan entitled, Proposed Site Plan, Milliken Portland Partners, LLC, Supervalu Operations, Inc., Site Expansion Project (Sheet C101) and dated October 26, 2018.

MDEP STREAM DETERMINATION

At the request of CES, the MDEP completed a determination of the jurisdictional status of the drainage features on the Site. CES met with MDEP in April 2018 on the Site. Based on this visit, MDEP determined that the feature meets the MDEP definition of a "river, stream, or brook" under the Natural Resources Protection Act.

PERMIT APPLICATION PREPARATION

CES completed and submitted a MDEP Tier 1 permit application for 7,391 square feet of wetland alteration and Permit by Rule Applications for related activities, namely, activities adjacent to a protected natural resource; stormwater outfall pipes; and a stream crossing. The MDEP approved the permit application on January 9, 2019. A Site Conditions/Wetland Delineation report was not completed as the application requirements for an MDEP Tier 1 permit do not require this report.

Please do not hesitate to contact me at 207-989-4824 if you have questions regarding this summary of work.

Johanna Szillery, C.S.S.
Senior Project Scientist

CES INC Engineers ◆ Environmental Scientists ◆ Surveyors

February 12, 2019

Jean Fraser, Planner
City of Portland
200 Congress Street
Portland, ME 04101

Re: 56 Milliken Street | Response to Comments

Dear Ms. Fraser:

The following are our responses to the comments received on January 18, 2019 and from the Planning Board workshop meeting on January 22, 2019. Each comment is followed by the response in italics.

Traffic – Thomas Errico:

- The Applicant has conducted a trip generation analysis and the project is not expected to have a significant impact on traffic and safety conditions in the study area. A Traffic Movement Permit is not required.
  - *Response: None.*

- A sidewalk shall be constructed on Milliken Street from the project driveway to Riverside Industrial Parkway. A fully compliant ADA crosswalk shall be installed to the proposed sidewalk located on the north side of Riverside Industrial Parkway (to be constructed by others).
  - *Response: We have added the sidewalk to the site plan as requested.*

- I support a waiver for the construction of a sidewalk along the site frontage on Riverside Industrial Parkway given a sidewalk is provided on the other side of the street and pedestrian demand is expected to be primarily destined to the proposed sidewalk on Milliken Street.
  - *Response: We have added a paved shoulder along the northern side of Milliken Street to serve as a sidewalk. The paved area will allow for stormwater runoff to enter the drainage ditch along the road. We do request the waiver for curbing to minimize the impact to Milliken Street drainage.*

- It is my understanding that the egress driveway will be widened to 20 feet for emergency vehicle access purposes. It is recommended that the applicant paint a 4-foot area for pedestrians delineated by a 6" white line with painted pedestrian symbols every 75 feet.
  - *Response: The egress drive has been widened to 20 feet. A six-inch white painted line with pedestrian symbols has been added to delineate the pedestrian pathway.*

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- A sidewalk connection shall be provided between Milliken Street and the entrance to the existing building.
  - *Response: A sidewalk from Milliken Street to the existing building has been added.*

- Given low traffic volumes, I find the one-way entry and exit circulation pattern to be acceptable.
  - *Response: None.*

- The applicant has conducted a parking analysis documenting existing and future parking conditions. The analysis documented existing parking demand at the site. According to a survey conducted in October 2018, there were 41 available parking spaces. Based upon a parking demand estimate of 37 parking spaces for the proposed site (estimated from the ITE Parking Generation Manual) the site will have sufficient parking conditions. I concur with this analysis that adequate parking will be provided.
  - *Response: The site has enough parking.*

- The applicant shall provide a parking management plan that documents the allocation of parking spaces, with a desire to locate parking in proximity to building entrances.
  - *Response: The parking spaces nearest the new building will be dedicated to the warehouse. Twenty-one passenger car spaces are located in the lot to the north of the existing building. An additional four spaces are located near the loading dock of the new building. The remaining parking spaces will be in the existing parking lot.*

- The applicant shall provide greater detail on the site plan in the area to the north of the existing building (where vehicles will travel to access to new site). This shall include dimensioning parking spaces and aisle widths. Additionally, an auto-turn graphic shall be provided that illustrates adequate circulation for trucks entering the new site.
  - *Response: Additional Detail is being provided in the parking area north of the existing building.*

Civil Engineering – Lauren Swett:

An area of undisturbed wetlands has been left to the west of the building. It is immediately adjacent to a retaining wall and areas to be graded. If the area is to remain as undisturbed, additional erosion and sedimentation control should be provided to protect the area. In accordance with the Maine DEP Chapter 500 Regulations and Section 5 of the City's Technical Manual, the Applicant is required to meet the Basic, General, and Flooding Standards for Stormwater Management. The Applicant has proposed erosion and sedimentation control features to meet the Basic Standard and grassed underdrained soil filters to help meet the General and Flooding Standards.

The following comments should be addressed on the proposed stormwater management plan:

- Please review the time of concentration (TC) numbers that are utilized in the HydroCAD model. It is noted that Post-Development Subcatchment 4 has a larger TC than was utilized for the larger Pre-Development Subcatchment 1 that it is a part of. Also, the general practice is that a minimum TC of 5 or 6 minutes is typically utilized on small subcatchments due to the

limitations of the HydroCAD software calculations. This would increase TC values utilized in both the pre-development and post-development models, so it is acknowledged that this likely would have minimal impact on the final model results.

- *Response*: *All time of concentrations have been updated to a minimum of six minutes. The time of concentration for Post-Development Subcatchment 4 has been corrected. The surface description for the sheet flow has changed from dense grass to short grass.*

- Please review the HydroCAD input for the proposed underdrained soil filter ponds. It appears based on the review of the output that the model is taking into consideration infiltration at each filter location, but that is not clear from the information shown in the output. Please evaluate why there is zero outflow from each filter.
  - *Response: There was a data entry error in the pond volumes. That has been corrected. Revised plans and calculations are being provided. The infiltration component is the flow of water through the soil media. The time for the wetted front to reach the underdrains exceeds the time of the peak rate of discharge therefore the small infiltration flow is discarded in the HydroCAD peak rate model.*

- Per the DEP standards, a grassed underdrained soil filter should not have a filter area greater than 3,000 SF. The largest proposed filter has a filter area of 3,900 SF. The DEP standard notes that the size restriction is provided due to the difficulty of maintaining large filters. Please adjust the size or provide justification of a waiver of the size based on the ability to complete adequate maintenance.
  - *Response: Although the Underdrained soil filter (Pond 1) exceeds the 3,000 square feet recommendation for bed sizes. Pond 1 is long and narrow and can be easily constructed and maintained from the proposed paved area.*

- Please provide sediment pre-treatment (forebays) for all grassed underdrained soil filters in accordance with the standards outlined in the Maine DEP's stormwater BMP. A forebay has been provided for the largest filter, but it does not appear to be positioned to receive the runoff from most of the paved area draining to the filter. The Applicant is providing riprap slopes around the perimeter of the filters, which will provide for sediment removal; if this feature is to be used for sediment pre-treatment, specific considerations on how the rip rap slopes can be cleared of sediment should be provided.
  - *Response: Per MDEP standards a stone sediment edge is proposed in lieu of a forebay. The stone edge provides pretreatment to meet the BMP requirements. Maintenance shall include power broom removal of accumulated sediment and periodic replacement of the stone.*
- The soil filters are proposed with rip rap side slopes. Please change the detail for the gravel underdrained soil filters to reflect this design.
  - *Response:* The detail has been revised.

- A stormwater maintenance agreement will be required for the project.
  - *Response: The Owner will enter into a stormwater maintenance agreement with the City of Portland.*

City Arborist – Jeff Tarling

Tree & landscape review for the proposed Milliken project off Riverside Industrial Parkway. The proposed development is a large warehouse addition to a long existing complex off Riverside Industrial Parkway. As part of this project a significant section of woodland will be removed, and a drainage-way filled to complete the necessary site work. While this impact does not trigger local Site Plan regulations or limitations we wanted to at least acknowledge this value.

Our tree & landscape recommendations for this site would be to improve the tree and plant selections to native plant types given the surrounding 'rural' feel to this commercial site.

a) Tree & Landscape Recommendations :

- Pin Oak - change to Swamp White Oak
- Japanese Juniper - change to 'Blueberry Delight' Common Juniper
- Dwarf Boxwood - change to Viburnum or Gro-Low Sumac
- White Spruce is native and a good selection for this site.
- *Response: The planting schedule and plan has been revised per the City Arborist comments.*

b) Tree Save delineation & Tree Protection Measures:

Tree save and tree protection measures shall be in place prior to the start of Site Work and noted at the pre-construction conference.

- *Response: Tree saves are identified on the site plan.*

c) Additional tree parking lot tree planting:

Recommend the planting of 5 additional trees near the parking lot edge, acknowledge space for snow storage. These trees can be White Pine or White Spruce conifers 5-6' height or Red Maple shade trees and 1 parking lot shade tree on the parking lot island of choice. Along the project frontage on Riverside Industrial parkway replacing 3 Taxus shrubs, updating them with native trees of the types mentioned above. We feel that the suggested landscape improvements are cost effective and help the project, new and old better blend into the surrounding environment.

- *Response: Additional plantings are shown on the site plan per the recommendation.*

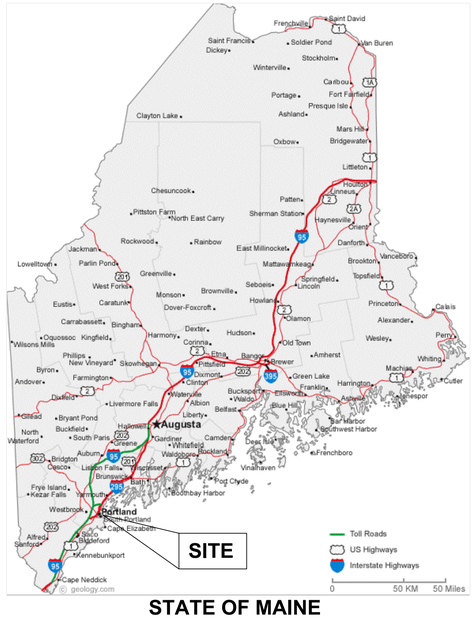
As always, please let us know if you have any questions or need additional information.

Sincerely,
CES, Inc.

John D. Kuchinski, P.E.
Senior Project Engineer

JDK/gdr
Encls.

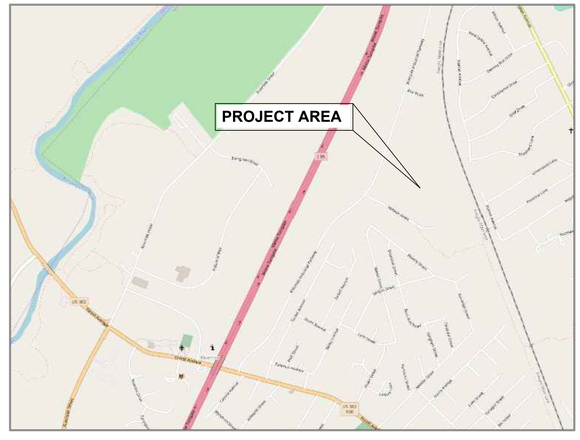
PLYMOUTH INDUSTRIAL REIT, INC.
SITE EXPANSION PROJECT
56 MILLIKEN STREET
PORTLAND, MAINE



STATE OF MAINE

INDEX OF DRAWINGS

C101	EXISTING SITE PLAN
C102	PROPOSED SITE LAYOUT & GRADING PLAN
C103	PROPOSED UTILITY PLAN
C104	SITE ELECTRICAL
C501	DETAILS
C502	DETAILS
C503	DETAILS
C701	PRE DEVELOPMENT HYDROLOGY PLAN
C702	POST DEVELOPMENT HYDROLOGY PLAN
C801	CONSTRUCTION MANAGEMENT SITE PLAN
C802	PHOTOMETRIC PLAN



PROJECT LOCATION

ISSUED FOR REVIEW

2018-10-26

REVISED

2019-02-12

CES INC

ENGINEERS • ENVIRONMENTAL SCIENTISTS • SURVEYORS

465 So. Main Street
P.O. Box 639
Brewer, ME 04412
T: 207-989-4824
F: 207-989-4881

1366 State Highway 102
Bar Harbor, ME 04609
T: 207-288-0587
F: 207-288-0588

640 Main Street
Lewiston, ME 04240
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F: 207-795-6128

61 Dublin Street
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Machias, ME 04654
T: 207-255-3270
F: 207-255-8367

549 Main Street
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Presque Isle, ME 04769
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44 Main Street
Suite 204
Waterville, ME 04903
Tel: 207-680-2202
Fax: 207-680-2204

BWLK, a division of CES, Inc.
13041 McGregor Boulevard
Fort Myers, FL 33919
T: 239-481-1331
F: 239-481-1073

APPROVED:

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED PROFESSIONAL ENGINEER

JOHN KUCHINSKI, P.E.

CES PROJECT NO: 12552.001

LEGEND:

DESCRIPTION	EXISTING
UTILITY POLE	
BUILDING MOUNTED LUMINAIRE	NA
SITE LIGHT	NA
PROPERTY LINE	
EDGE OF PAVEMENT	
EDGE OF GRAVEL	
MAJOR FOOT CONTOUR	100
MINOR FOOT CONTOUR	98
WATER LINE	WL
SANITARY SEWER LINE	SS
OVERHEAD UTILITY	OHD
UNDERGROUND UTILITY	NA
SILT FENCE	NA
GRAVEL SURFACE	NA
PAVED SURFACE	
STORMWATER FLOW DIRECTION	NA

GENERAL NOTES

1. TOPOGRAPHY SHOWN REPRESENTS RESULTS FROM TOPOGRAPHIC SURVEY PERFORMED BY CES, INC. ON AUGUST 23, 2018 AND MERGED WITH 2' LIDAR CONTOURS PROVIDED BY THE MAINE OFFICE OF GIS.
2. EXISTING CONDITIONS FROM DIGITAL RECORD DRAWING PROVIDED BY THE OWNER, FILE NAME MillikenSt_Base.dwg.
3. THE DIRECTION OF LINES AND UNDERLYING HORIZONTAL COORDINATE SYSTEM IS MAINE STATE PLANE WEST ZONE, US SURVEY FOOT, NAD 83, WITH NAVD 88 VERTICAL DATUM. A VERTICAL ADJUSTMENT OF 0.686 FEET IS TO BE APPLIED FOR CONVERSION TO THE CITY OF PORTLAND'S VERTICAL DATUM OF NGVD29.
4. WETLAND BOUNDARY SHOWN IS THE RESULT OF A WETLAND DELINEATION PERFORMED BY CES, INC.

PLAN REFERENCE

1. PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATION ON #56 MILLIKEN STREET, PORTLAND, ME PREPARED FOR PLYMOUTH INDUSTRIAL REIT, INC., 260 FRANKLIN STREET, 19TH FLOOR, BOSTON, MA 02110", PREPARED BY SGC ENGINEERING, LLC, PLAN REVISION DATE 11-20-2014.

EXISTING SITE PLAN

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

Waterville
44 Main Street
Suite 204
Waterville, ME
T 207-680-2252
F 207-680-2204

Lewiston
44 Main Street
Lewiston, ME
T 207-795-6069
F 207-795-6168

Presque Isle
549 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Bar Harbor
McKay Way 102
Bar Harbor, ME
T 207-288-0587
F 207-288-0588

Rumford
466 South Main Street
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Rumford, ME
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F 207-989-4881

Machias
35 Center Street
PO Box 687
Machias, ME
T 207-255-2370
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
EXISTING SITE PLAN

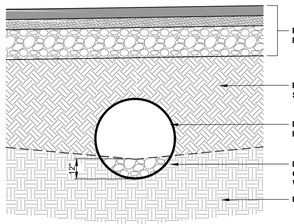
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PER CITY REVIEW COMMENTS	2019-03-12	BLQ	JDK

ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
REGISTERED PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	SMT
DESIGNED BY	BLQ
APPROVED BY	SMT
JOB NUMBER	12254.003
DRAWING NUMBER	C101

P:\12254.PLYMOUTH_RETTOS\56 MILLIKEN EXPANSION ENGINEERING\SITE\D-CAD_DRAWINGS\CIVIL DESIGN_DWGS\12254.003-3-XP DWG 2/12/2019 2:21 PM



STREAM CROSSING DETAIL

N.T.S.

WETLAND IMPACT TABULATION

5,344 SF	WETLAND FILL
1,102 SF	INDIRECT WETLAND IMPACT (NO FILL)
1,588 SF	STREAM CROSSING WETLAND FILL

STATE OF MAINE
CUMBERLAND COUNTY
REGISTRY OF DEEDS
RECEIVED AND FILED

Received _____ 20____
At _____ h. m. M.
Recorded In Plan Book _____ Page _____
Attest _____
Register

SITE DATA:

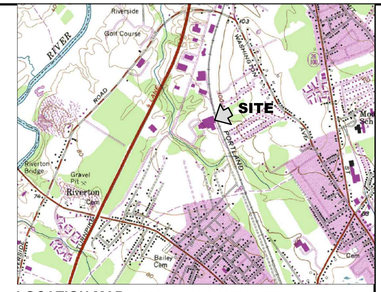
CITY OF PORTLAND
TAX MAP 334 / BLOCK A / LOT 14

ZONING INFORMATION: I-M ZONE	ALLOWED	PROPOSED
MINIMUM LOT SIZE	10,000 SF	1,359,508 SF
MAXIMUM IMPERVIOUS SURFACE RATION	75%	46%
MINIMUM BUILDING HEIGHT	75 FEET	128.6 FEET
MINIMUM SIDE YARDS	25 FEET	53.5 FEET
MINIMUM REAR YARDS	25 FEET	45.2 FEET
MINIMUM FRONT YARDS	25 FEET	551.25 FEET
MINIMUM STREET FRONTAGE	60 FEET	1,580 FEET
PAVEMENT SETBACK	10 FT FROM PL	33.4 FT

PLANTING SCHEDULE				
I.D.	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
Qp	2	QUERCUS PALUSTRIS	PIN OAK	1.5" CAL B&B
Jp	60	JUNIPERUS PROCUMBENS	DWARF JAPGARDEN JUNIPER	1 GAL / 8" O.C.
Bs	16	BOXUS SEMPERVIRENS	DWARF BOXWOOD	1 GAL / 5' O.C.
Pg	6	PICEA GLAUCA	WHITE SPRUCE	4'-6' B&B

PLANTING KEY:

Jp
Bs
Qp
Pg



LOCATION MAP:

SCALE: 1"=2000'

USGS QUADRANGLE: PORTLAND WEST
MAPTECH® USGS TOPOGRAPHIC SERIES™,
©MAPTECH®, INC. 978-933-3000
WWW.MAPTECH.COM/TOPO

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
UTILITY POLE		
POWER BANK		NA
SITE LIGHT		NA
DRAINAGE MANHOLE		
CATCH BASIN		
HYDRANT	NA	
PROPERTY LINE		NA
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
MAJOR FOOT CONTOUR	100	100
MINOR FOOT CONTOUR	98	98
WATER LINE	W	W
SANITARY SEWER LINE	SS	SS
OVERHEAD UTILITY	OHD	NA
UNDERGROUND UTILITY	NA	UGU
STORMDRAIN	SD	SD
UNDERDRAIN	UD	UD
ROOF DRAIN	RD	RD
SILT FENCE	NA	SF
GRAVEL SURFACE	NA	
PAVED SURFACE	NA	

GENERAL NOTES

1. TOPOGRAPHY SHOWN REPRESENTS RESULTS FROM TOPOGRAPHIC SURVEY PERFORMED BY CES, INC. ON AUGUST 23, 2018 AND MERGED WITH 2' LIDAR CONTOURS PROVIDED BY THE MAINE OFFICE OF GIS.
2. EXISTING CONDITIONS FROM DIGITAL RECORD DRAWING PROVIDED BY THE OWNER, FILE NAME MillikenSt_Base.dwg.
3. THE DIRECTION OF LINES AND UNDERLYING HORIZONTAL COORDINATE SYSTEM IS MAINE STATE PLANE WEST ZONE, US SURVEY FOOT, NAD 83, WITH NAVD 88 VERTICAL DATUM. A VERTICAL ADJUSTMENT OF 0.686 FEET IS TO BE APPLIED FOR CONVERSION TO THE CITY OF PORTLAND'S VERTICAL DATUM OF NGVD29.
4. WETLAND BOUNDARY SHOWN IS THE RESULT OF A WETLAND DELINEATION PERFORMED BY CES, INC.

PLAN REFERENCE

1. PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATION ON #56 MILLIKEN STREET, PORTLAND, ME PREPARED FOR PLYMOUTH INDUSTRIAL REIT, INC., 260 FRANKLIN STREET, 19TH FLOOR, BOSTON, MA 02110", PREPARED BY SGC ENGINEERING, LLC, PLAN REVISION DATE 11-20-2014.

THIS IS TO CERTIFY THAT AFTER REVIEWING THE SITE PLAN SUBMISSION INFORMATION FOR THE PROJECT SHOWN ON THIS PLAN AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE CITY OF PORTLAND'S CODE OF ORDINANCES AND IN ACCORDANCE WITH THE APPLICATION REQUIREMENTS, THE UNDERSIGNED HAVE MADE FINDINGS OF FACT ESTABLISHING THAT THIS PLAN ALONG WITH ITS ADDITIONAL SUBMISSION INFORMATION (IF APPLICABLE) HAS MET ALL THE CRITERIA SET FORTH AND THEREFORE THE SITE PLAN IS APPROVED.

APPROVED BY THE CITY OF PORTLAND PLANNING BOARD ON:_____

CONDITIONS: _____

PLANNING BOARD SIGNED ON: _____

PROPOSED SITE PLAN

RECORD OWNER

MILLIKEN PORTLAND PARTNERS, LLC

ADDRESS OF RECORD OWNER: 11840 VALLEY VIEW ROAD, EDEN PRAIRIE, MN 53443

FOR

PLYMOUTH INDUSTRIAL REIT, INC.
SITE EXPANSION PROJECT

ADDRESS: 56 MILLIKEN STREET, PORTLAND, MAINE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

Waterville
44 Main Street
Suite 204
Waterville, ME
T 207-680-2252
F 207-680-2204

Lewiston
44 Main Street
Lewiston, ME
T 207-795-6099
F 207-795-6198

Pittsfield
54 South Main Street
PO Box 627
Pittsfield, ME
T 207-487-3157
F 207-487-3158

Bar Harbor
1455 Bar Harbor Hwy 102
Bar Harbor, ME
T 207-288-0587
F 207-288-0588

Rumford
145 Hartford Ave
PO Box 1237
Rumford, ME
T 207-369-4824
F 207-369-4881

Machias
25 Main Street
PO Box 687
Machias, ME
T 207-255-0270
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
PROPOSED SITE LAYOUT & GRADING PLAN

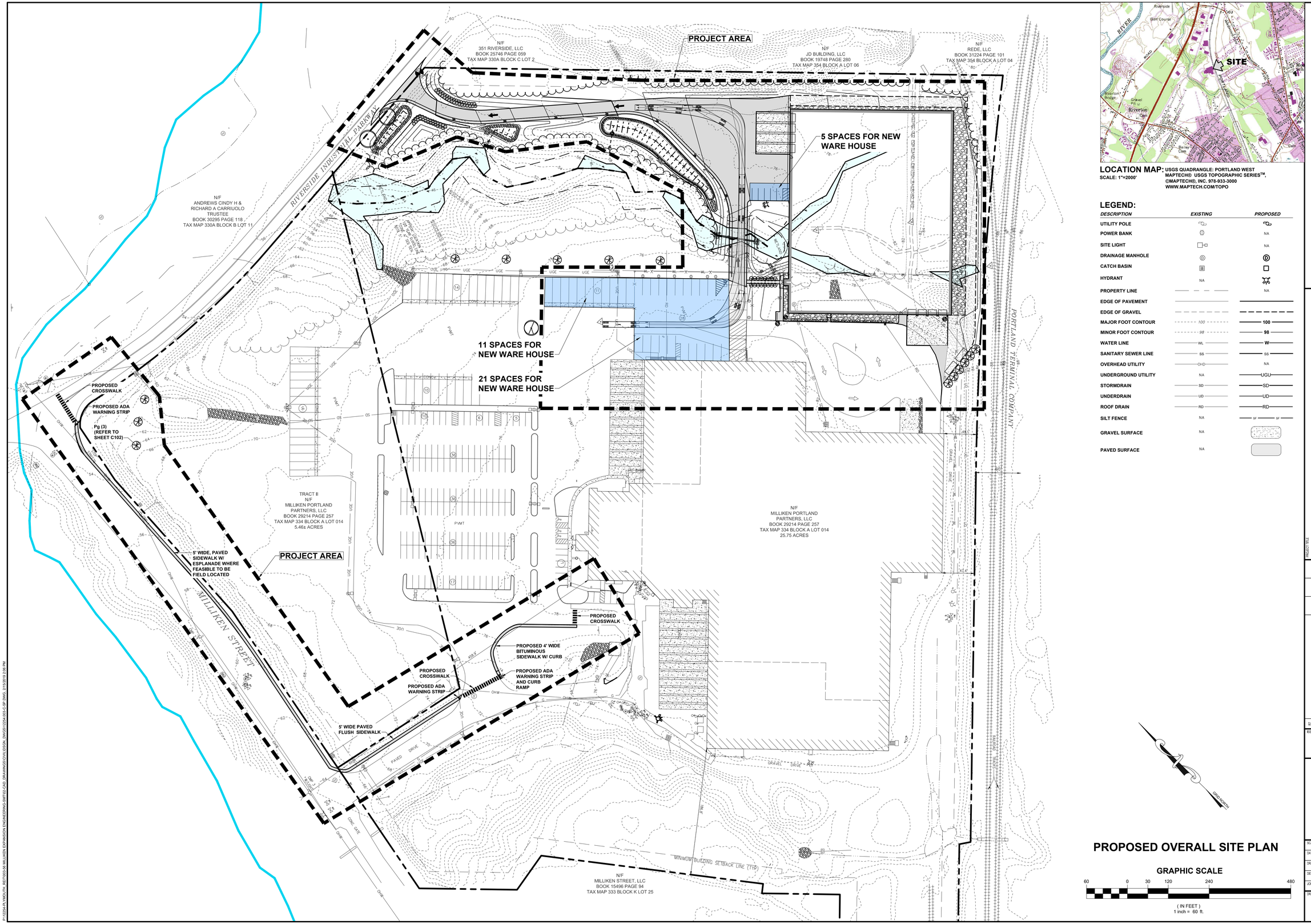
REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PLANTINGS & WALKWAY	2019-01-08	BLQ	JDK
R2	PER MDEP & ACOE COMMENTS	2018-12-17	BLQ	JDK
R3				
R4				
R5				
R6				

ISSUE STATUS

NOT FOR CONSTRUCTION

SCALE	1"=50'
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	SMT
JOB NUMBER	12254.003
DRAWING NUMBER	C102

P:\12254\PLYMOUTH_REIT\2018\56 MILLIKEN EXPANSION ENGINEERING\MAPS\DWG\PLYMOUTH_REIT_SITE_PLAN.DWG 11/6/2019 3:38 PM



LOCATION MAP: USGS QUADRANGLE: PORTLAND WEST
MAPTECH® USGS TOPOGRAPHIC SERIES™,
©MAPTECH®, INC. 978-933-3000
WWW.MAPTECH.COM/TOPO
SCALE: 1"=2000'

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
UTILITY POLE		
POWER BANK		NA
SITE LIGHT		NA
DRAINAGE MANHOLE		
CATCH BASIN		
HYDRANT	NA	
PROPERTY LINE		NA
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
MAJOR FOOT CONTOUR	100	100
MINOR FOOT CONTOUR	98	98
WATER LINE	WL	W
SANITARY SEWER LINE	SS	SS
OVERHEAD UTILITY	OHD	NA
UNDERGROUND UTILITY	NA	UGU
STORMDRAIN	SD	SD
UNDERDRAIN	UD	UD
ROOF DRAIN	RD	RD
SILT FENCE	NA	SF
GRAVEL SURFACE	NA	
PAVED SURFACE	NA	

PROPOSED OVERALL SITE PLAN

GRAPHIC SCALE

60 0 30 120 240 480

(IN FEET)
1 inch = 60 ft.

Waterville
44 Main Street
Suite 204
Waterville, ME
T 207-680-2252
F 207-680-2204

Lewiston
44 Main Street
Lewiston, ME
T 207-795-6089
F 207-795-6168

Pittsfield
54 Main Street
PO Box 827
Pittsfield, ME
T 207-784-8412
F 207-784-8414

Bar Harbor
36 Mount Desert Street
Bar Harbor, ME
T 207-288-0587
F 207-288-0588

Rumford
145 South Main Street
PO Box 639
Rumford, ME
T 207-369-4824
F 207-369-4881

Machias
4 Court Street
PO Box 687
Machias, ME
T 207-255-0070
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
PROPOSED OVERALL SITE PLAN

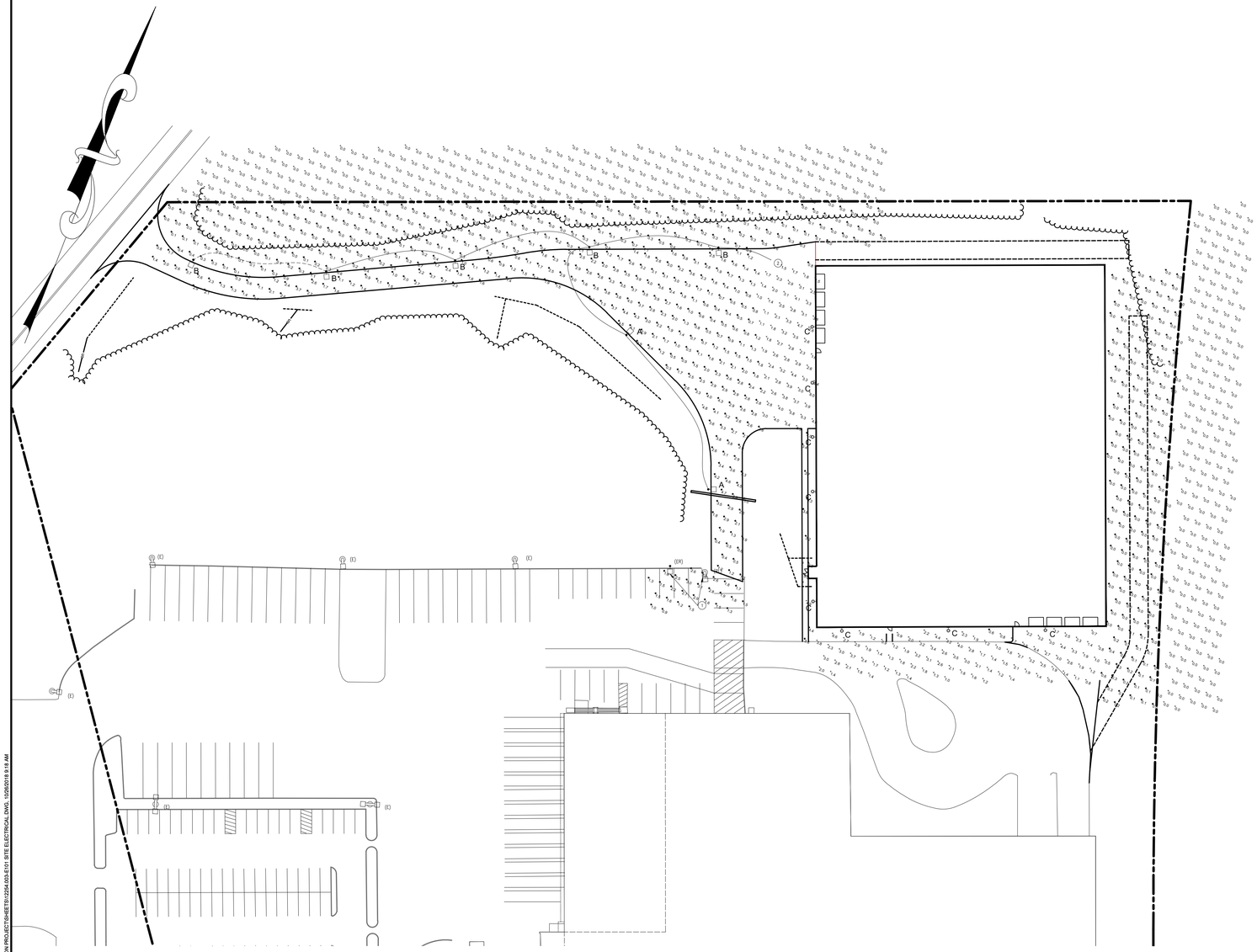
REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PER CITY REVIEW COMMENTS	2019-03-12	BLQ	JDK
R2				
R3				
R4				
R5				
R6				

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	1"=60'
DATE	2019-01-16
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	SMT
JOB NUMBER	12254.003
DRAWING NUMBER	**C001**

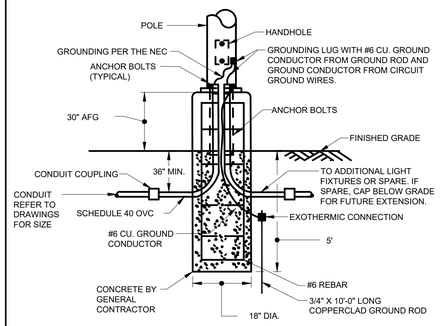
P:\12254.PLYMOUTH_RETTOS\56 MILLIKEN EXPANSION ENGINEERING\SHTCD.CAD_DRAWINGS\CIVIL\SITE\12254.003-S-DP.DWG, 2/16/2019 2:58 PM

PROPOSED 6" UNDERDRAIN
TIE EXISTING UNDERDRAIN INTO DMH-1
PROPOSED DMH-1
RIM: 81.65
INV. IN: 76.33 (UD)
INV. IN: 75.0 (RD)
INV. OUT: 73.00
25' SETBACK
PORTLAND TERMINAL COMPANY
REMOVED SECTION OF EXISTING FIRE PROTECTION WATER LINE
PROPOSED WAREHOUSE W/ OFFICE SPACE 72,000 SF F.F.E. 82.0
EXISTING FIRE PROTECTION LINE
PROPOSED CB-1
RIM: 28.7
INV. OUT: 75.0
PROPOSED LOCATION OF RELOCATED WATER LINE FOR FIRE PROTECTION
RE-DIRECT ROOF DRAIN AND TIE INTO DMH-1 ABANDON PIPING BELOW PAVEMENT IN PLACE
PROPOSED 24" HDPE
INV. OUT: 74.0
PROPOSED 24" HDPE
PROPOSED 15" HDPE
EXISTING DRAINAGE MANHOLE TO BE REMOVED
LOADING DOCKS
PROPOSED HYDRANT
PROPOSED 15" STORM DRAIN INV. OUT: 67.40
WETLAND
EXISTING CATCH BASIN
RE-DIRECT EXISTING 12" STORM DRAIN TO DMH-2 WITH 24" HDPE EXTENSION
PROPOSED DMH-2
RIM: 80.0
INV. IN: 74.25
INV. OUT: 74.25
PROPOSED DMH-3
RIM: 79.95
INV. IN: 70.60
INV. OUT: 70.60
PROPOSED HDPE CULVERT (SEE C102)
PROPOSED TIE IN LOCATION FOR RELOCATION OF EXISTING FIRE PROTECTION LINE
EXISTING SITE LIGHT TO BE REMOVED
EXISTING PLUG-IN INFRASTRUCTURE TO BE REMOVED AND SALVAGED FOR OWNER. ABANDON CIRCUIT AND CAP CONDUIT BELOW GRADE
PROPOSED 6" PVC
MULTIPLE STORY WAREHOUSE METAL SIDING AREA=200,035± SQ. FT.
BUILDING HEIGHT: 29.1'
BUILDING HEIGHT: 39.4'
BUILDING HEIGHT: 33.7'
BUILDING HEIGHT: 13.0'
SMH P2
RIM: 78.0
INV. IN: 72.40
INV. OUT: 72.35
SMH P1
RIM: 76.5
INV. IN: 69.35
INV. OUT: 69.30
CORE & BOOT INTO EXISTING SMH
INV: 66.40
BACKUP GAS GENERATOR ON CONCRETE PAD
ELECTRIC TRANSFORMER ON CONCRETE PAD
PROPOSED 6" FIRE SERVICE
PROPOSED 1" DOMESTIC WATER SERVICE
25' STREAM SETBACK
APPROX. LOCATION OF 100 YEAR FLOOD LINE "ZONE A" SEE GEN. NOTE 5
RIVERSIDE INDUSTRIAL PARKWAY
GRAVEL DRIVE
PAVED DRIVE
MARGIN BUILDING
FIRE BLDG.
CHAIN LINK FENCE
OHW
OHW
OHW

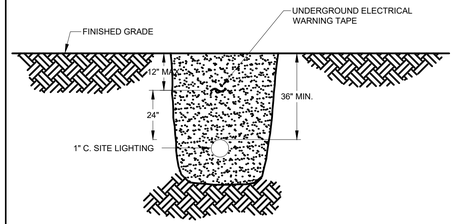


SITE ELECTRICAL PLAN

SCALE: 1"=50'



A1 NOT TO SCALE — **TYPICAL LIGHT POLE BASE DETAIL**



A2 NOT TO SCALE — **TYPICAL DIRECT BURIED CONDUIT DETAIL**

DRAWING E101
NUMBERED NOTES

1. ALL SITE LIGHTING SHALL MEET THE LATEST REQUIREMENTS OF THE CITY OF PORTLAND SITE LIGHTING STANDARDS.

DRAWING E101
NUMBERED NOTES

1. CONTRACTOR SHALL REMOVE AND RELOCATE THE EXISTING POLE LIGHT FIXTURE TO THE NEW LOCATION AS SHOWN. CUT BACK THE EXISTING CONDUITS AND PROVIDE NEW BRANCH CIRCUITS FROM THE LAST EXISTING POLE TO THE RELOCATED POLE. CONDUCTORS SHALL MATCH THE EXISTING CONDUCTORS.
2. EXTEND THE UNDERGROUND ELECTRICAL SITE LIGHTING CIRCUITS TO THE BUILDING ELECTRICAL ROOM AND CONNECT TO THE LIGHTING PANEL AS REQUIRED.

LIGHTING FIXTURE SCHEDULE

FIXTURE LETTER	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	MOUNTING	LAMPS TYPE	LAMPS WATTS	LAMPS QUANTITY	VOLTS	REMARKS
A	LED SINGLE HEAD POLE MOUNTED AREA FIXTURE, DARK SKY COMPLIANT, DARK BRONZE DIE CAST ALUMINUM HOUSING, 4000K COLOR TEMPERTURE, TYPE IV DISTRIBUTION OPTICS, MINIMUM OF 12,90 LUMENS, WITH A STANDARD DRIVER AND BUTTON PHOTOCONTROL, MOUNTED ON A 18' SQUARE STEEL DARK BRONZE POLE	BEACON VPS-48L-110-4K7-4-UNV-A-DB-7PR-TL	POLE	LED	110	N/A	UNIVERSAL	PROVIDE WITH A TWIST LOCK PHOTO CONTROL,, 18' SQUARE STEEL POLE AND CONCRETE POLE BASE
B	LED SINGLE HEAD POLE MOUNTED AREA FIXTURE, DARK BRONZE DIE CAST ALUMINUM HOUSING, 4000K COLOR TEMPERTURE, MEDIUM TYPE III DISTRIBUTION OPTICS, WITH HOUSE SIDE SHIELD ON THE BACK OF THE LENS, MINIMUM OF 600 LUMENS, WITH A STANDARD DRIVER AND BUTTON PHOTOCONTROL, MOUNTED ON A 18' SQUARE STEEL DARK BRONZE POLE	BEACON VPS-36L-80-4K7-3-UNV-A-DB-7PR-TL-HSS/VP-S/90-FB/DB	POLE	LED	87	N/A	UNIVERSAL	PROVIDE WITH A TWIST LOCK PHOTO CONTROL,, HOUSE SIDE SHIELD, 18' SQUARE STEEL POLE AND CONCRETE POLE BASE
C	LED WALL PACK, DARK BRONZE DIE CAST ALUMINUM HOUSING, FROSTED ACRYLIC DIFFUSER LENS, 4000K COLOR TEMPERTURE, TYPE IV DISTRIBUTION OPTICS, MINIMUM OF 13000 LUMENS, WITH A STANDARD DRIVER WITH BUTTON PHOTOCONTROL	HUBBELL LNC4-36L-4K-105-4-U-DB-PCU-CS	SURFACE	LED	140	N/A	UNIVERSAL	PROVIDE WITH UNIVERSAL VOLTAGE PHOTO BUTTON CONTROL

LIGHTING LEVEL STATISTICS

LOCATION DESCRIPTION	SYMBOL	LIGHTING LEVELS IN FOOT-CANDLES (fc) AVERAGE	MAXIMUM	MINIMUM	MAX/MIN	AVG/MIN
BEYOND PROPERTY LINE - EAST	+	0.0	0.0	0.0	N/A	N/A
BEYOND PROPERTY LINE - NORTH	+	0.0	0.0	0.0	N/A	N/A
BOUNDRY TO PROPERTY LINE - EAST	+	0.0	0.6	0.0	N/A	N/A
BOUNDRY TO PROPERTY LINE - NORTH	+	0.1	1.6	0.0	N/A	N/A
ENTRACNCE DRIVE	+	2.2	4.8	0.6	8.0	3.7
EXISTING TURN AROUND WITHIN 25' OF BUILDING	+	2.6	10.2	0.6	17.0	4.3
EXIT DRIVE	+	1.6	2.7	0.4	6.8	4.0
CONNECTING DRIVE	+	2.3	4.9	0.3	16.3	7.7
LOADING DOCK AREA WITHIN 25' OF THE BUILDING	+	3.4	12.7	0.7	18.1	4.9
WALKWAY	+	4.4	10.1	2.7	3.7	1.6

Issued for Regulatory Review

CES INC
Engineers • Environmental Scientists • Surveyors

Machias
Machias Bank Street
PO Box 787
Machias, ME
T:207-255-3270
F:207-255-8397

Lewiston
Lewiston Main Street
440 Main Street
Lewiston, ME
T:207-795-6128
F:207-795-6129

Saco
146 Main Street
Saco, ME
Saco, ME 04151
T:207-283-9151
F:207-283-9156

Bar Harbor
Bar Harbor Main Street
Bar Harbor Hwy 102
Bar Harbor, ME
T:207-288-5068
F:207-288-5083

Brewer
Brewer Main Street
PO Box 453
Brewer, ME 04412
T:207-989-4824
F:207-989-4881

Winterville
44 Main Street
Winterville
Waterville, ME
T:207-873-0502
F:207-680-2294

Presque Isle
549 Main Street
Main Street #12
Presque Isle, ME
T:207-764-6412
F:207-764-6414

PROJECT TITLE: SUPERVALU WAREHOUSE SITE EXPANSION PROJECT
PORTLAND MAINE

SHEET TITLE: SITE ELECTRICAL

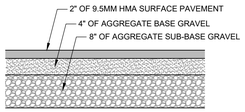
REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1				

ISSUE STATUS: **NOT FOR CONSTRUCTION**

STATE OF MAINE — PHILIP E. BADGER, III — No. 12460 — 10/26/2018 — LICENSED PROFESSIONAL ENGINEER

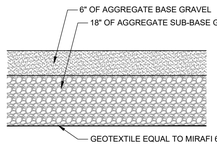
SCALE	1"=50'
DATE	2018-10-26
DRAWN BY	BTH
CHECKED BY	PEB
DESIGNED BY	PEB
APPROVED BY	JDK
JOB NUMBER	12254.003
DRAWING NUMBER	C104

P:\12254-PLYMOUTH_REITIO\3-SB MILLIKEN EXPANSION ENGINEERING-SMYGI-CAD_DRAWINGS\ELECTRICAL\SUPERVALU WAREHOUSE SITE EXPANSION PROJECT\SHEETS\12254.003-E101 SITE ELECTRICAL.DWG, 10/26/2018 8:18 AM



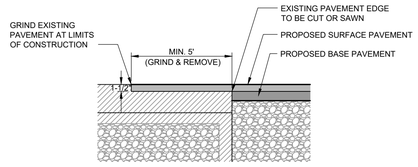
PAVEMENT BUILDUP DETAIL

N.T.S.



TYPICAL GRAVEL BUILDUP DETAIL

N.T.S.

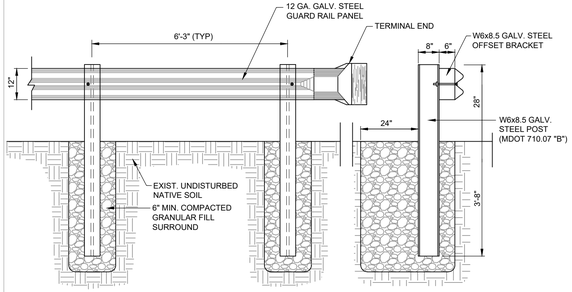


NOTES:

1. EXTEND NEW SURFACE PAVEMENT ACROSS BUTT JOINT IN BASE COURSE.
2. PROVIDE TACK COAT ON ALL SURFACES OF EXISTING PAVEMENT TO BE COVERED.

TYPICAL ASPHALT PAVEMENT GRINDING DETAIL

N.T.S.

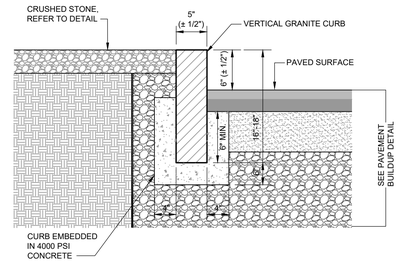


NOTES:

1. CHEVRON STICK SHALL BE INSTALLED ON EACH TERMINAL END.
2. REFLECTORIZED FLEXIBLE GUARDRAIL MARKERS SHALL BE MOUNTED ON ALL GUARDRAILS AT THE FLARED END TREATMENT TERMINALS AND IT'S TANGENT POINTS, AT BOTH THE LEADING AND TRAILING ENDS OF EACH GUARDRAIL.
3. REFLECTORIZED BEAM GUARDRAIL DELINEATOR SHALL BE MOUNTED WITHIN THE GUARDRAIL BEAM AT A MINIMUM EVERY OTHER GUARDRAIL POST.
4. GUARDRAIL COMPONENTS SHALL MEET MDOT SECTION 606 SPECIFICATIONS.

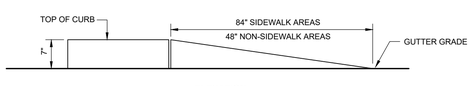
STEEL GUARDRAIL DETAIL

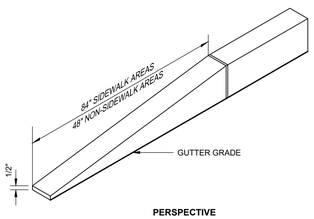
N.T.S.



TYPICAL VERTICAL GRANITE CURB DETAIL

N.T.S.



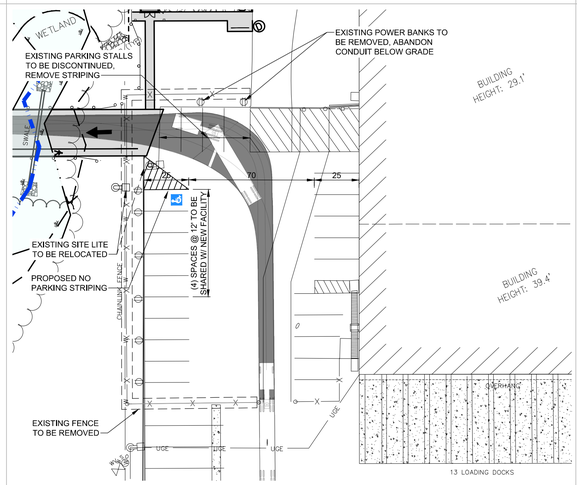


NOTE:

ALL CURBING AND TERMINATION IN CONJUNCTION WITH SIDEWALKS MUST MEET ADA REQUIREMENTS

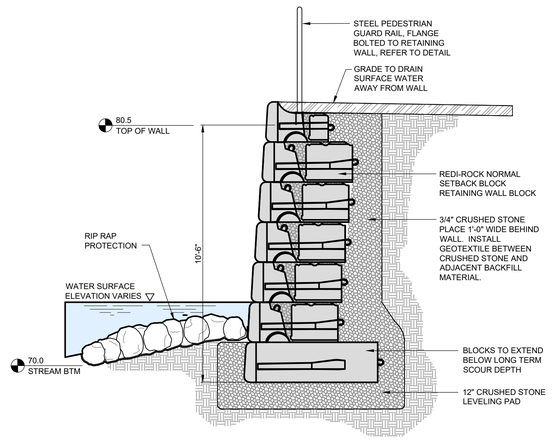
TYPICAL CURB TERMINATION DETAIL

N.T.S.



ENLARGED PARKING PLAN

N.T.S.



RETAINING WALL DETAIL

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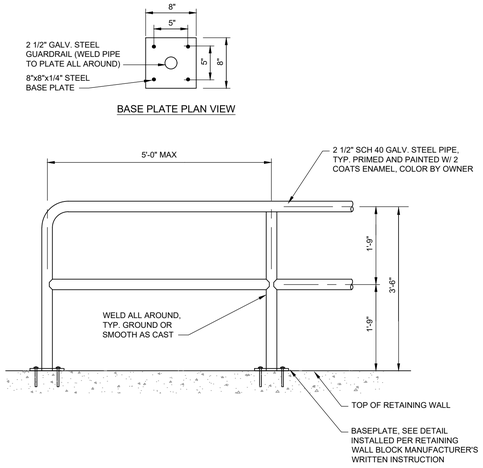
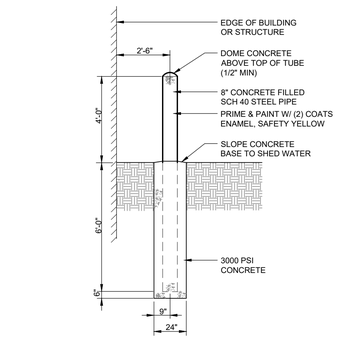


STEEL PIPE GUARDRAIL DETAIL

N.T.S.



STEEL BOLLARD DETAIL

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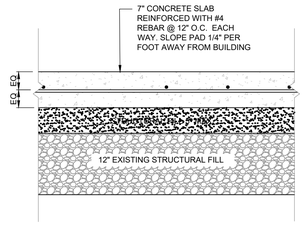
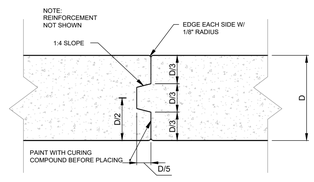


TYPICAL 7" SLAB ON GRADE DETAIL (APRON @ OHD)

N.T.S.



TYPICAL SLAB CONSTRUCTION JOINT

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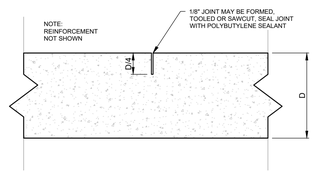
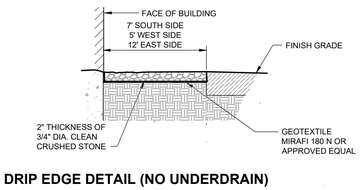


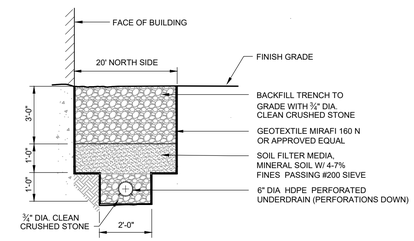
TYPICAL SLAB CONTROL JOINT

N.T.S.



DRIP EDGE DETAIL (NO UNDERDRAIN)

N.T.S.



FILTRATION DRIP EDGE DETAIL (WITH UNDERDRAIN)

N.T.S.

Waterville
44 Main Street
Suite 204
Waterville, ME
T 207-680-2252
F 207-680-2204

Lewiston
44 Main Street
Lewiston, ME
T 207-795-6099
F 207-795-6168

Presque Isle
549 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Bar Harbor
1610 State Hwy 102
Bar Harbor, ME
T 207-288-0587
F 207-288-6688

Rumford
96 South Main Street
PO Box 639
Rumford, ME
T 207-989-4824
F 207-989-4881

Machias
25 Center Street
PO Box 687
Machias, ME
T 207-255-8270
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
DETAILS

REC.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1	PER CITY REVIEW COMMENTS	2019-02-12	BLQ	JDK

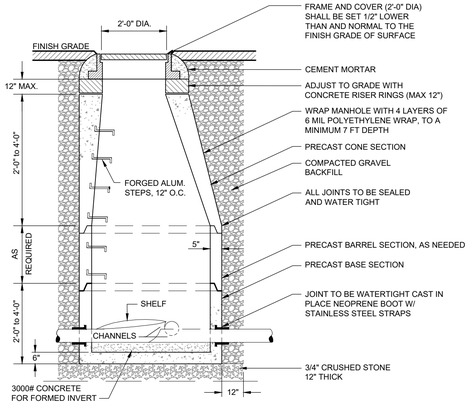
ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED PROFESSIONAL ENGINEER

SCALE	N.T.S.
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	
JOB NUMBER	12254.003

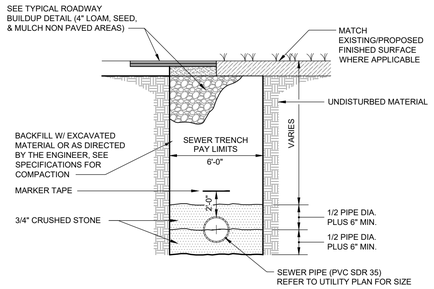
DRAWING NUMBER
C501

P:\12254 PLYMOUTH_REIT\003-56 MILLIKEN EXPANSION ENGINEERING-SMITH\CAD_DRAWINGS\DIVA\DIV04_DIV05\12254.003-C-01.DWG, 2/12/2019 2:09 PM



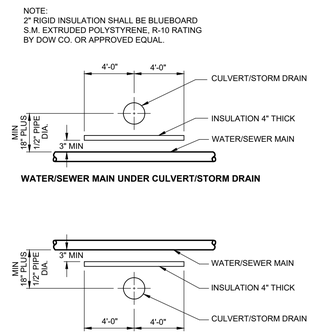
TYPICAL MANHOLE DETAIL

N.T.S.



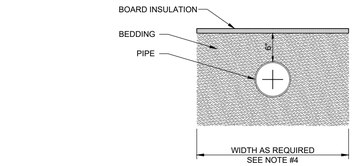
TYPICAL SEWER TRENCH DETAIL

N.T.S.



TYPICAL PIPE CROSSING INSULATION DETAIL

N.T.S.

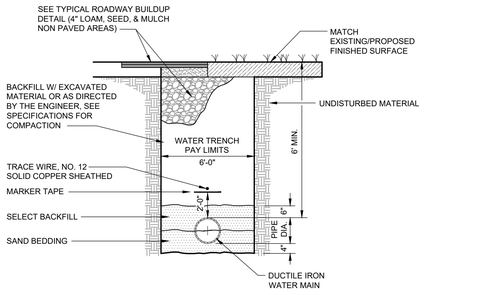


NOTES:

1. WATER AND SEWER PIPING SHALL BE INSULATED WITH 2" RIGID INSULATION BLUE BOARD BY DOW CO. SM. EXTRUDED POLYSTYRENE, (OR APPROVED EQUAL) TO BE USED IF EARTHEN COVER IS LESS THAN 6'-0".
2. CONTRACTOR MAY HAVE TO SUPPLY MORE THAN ONE LAYER OF BLUE BOARD INSULATION, IN AREAS THAT HAVE MINIMAL EARTHEN COVER TO MAINTAIN THE INSULATION VALUE OF 6'-0" COVER. 2" BLUE BOARD INSULATION HAS THE INSULATION VALUE OF APPROXIMATELY 1'-6" OF EARTHEN COVER. INSULATE PIPE TO EQUAL 6'-0" OF COVER.
3. MAINTAIN A MINIMUM OF 12" OF EARTHEN COVER OVER INSULATION AS A MECHANICAL PROTECTION. LOAM AND SEED AS NECESSARY TO PREVENT EROSION.
4. INSULATION TO BE 2 FEET WIDE FOR PIPES LESS THAN 6 INCHES IN DIAMETER AND 4 FEET WIDE FOR PIPES 6 INCHES IN DIAMETER AND LARGER, OR AS DIRECTED BY THE ENGINEER.
5. CENTER INSULATION OVER PIPES.
6. WHERE EARTHEN COVER IS LESS THAN 3'-0" INSULATE TRENCH WALLS TO BOTTOM OF TRENCH.

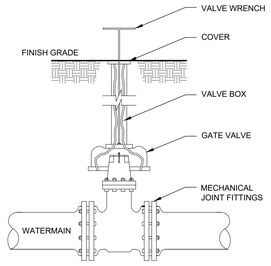
TYPICAL TRENCH PIPE INSULATION DETAIL

N.T.S.



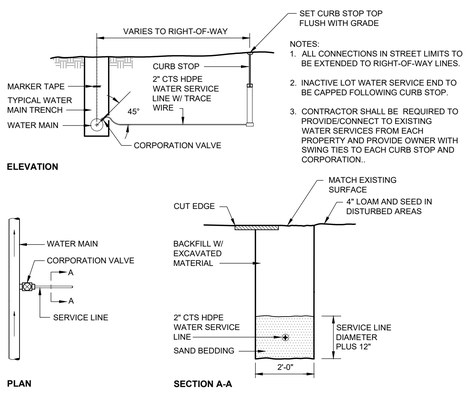
TYPICAL TRENCH DETAIL - DUCTILE IRON WATER MAIN

N.T.S.



TYPICAL GATE VALVE DETAIL

N.T.S.

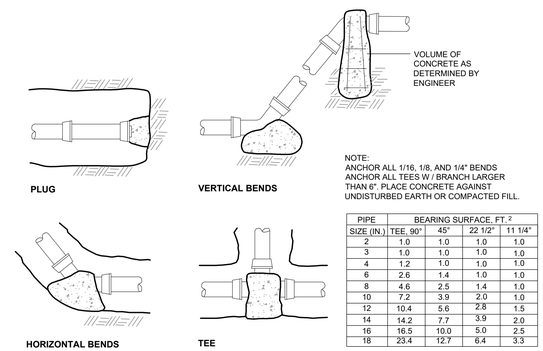


NOTES:

1. ALL CONNECTIONS IN STREET LIMITS TO BE EXTENDED TO RIGHT-OF-WAY LINES.
2. INACTIVE LOT WATER SERVICE END TO BE CAPPED FOLLOWING CURB STOP.
3. CONTRACTOR SHALL BE REQUIRED TO PROVIDE/CONNECT TO EXISTING WATER SERVICES FROM EACH PROPERTY AND PROVIDE OWNER WITH SWING TIES TO EACH CURB STOP AND CORPORATION..

TYPICAL WATER SERVICE DETAIL

N.T.S.

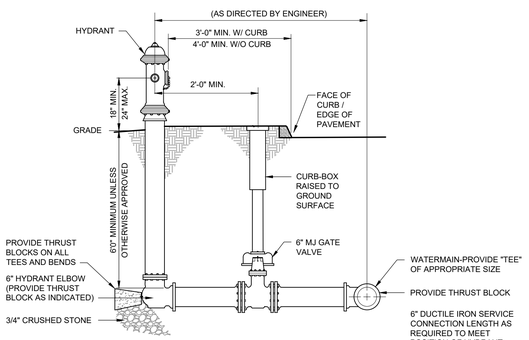


NOTE:
ANCHOR ALL 1/16, 1/8, AND 1/4" BENDS
ANCHOR ALL TEES W / BRANCH LARGER THAN 6". PLACE CONCRETE AGAINST UNDISTURBED EARTH OR COMPACTED FILL.

PIPE	BEARING SURFACE, FT ²			
SIZE (IN.)	TEE, 90°	45°	22 1/2°	11 1/4°
2	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0
4	1.2	1.0	1.0	1.0
6	2.6	1.4	1.0	1.0
8	4.6	2.5	1.4	1.0
10	7.2	3.9	2.0	1.0
12	10.4	5.6	2.8	1.5
14	14.2	7.7	3.9	2.0
16	16.5	10.0	5.0	2.5
18	23.4	12.7	6.4	3.3

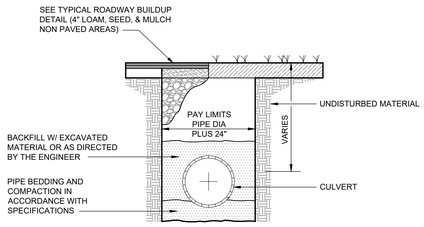
ANCHORAGE DETAILS

N.T.S.



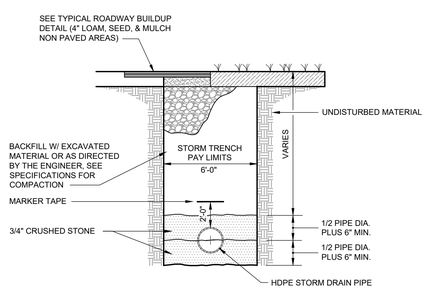
TYPICAL HYDRANT ASSEMBLY DETAIL

N.T.S.



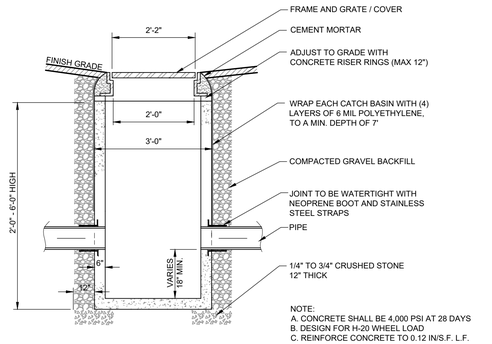
TYPICAL CULVERT TRENCH DETAIL

NTS



TYPICAL STORM DRAIN TRENCH DETAIL

N.T.S.



NOTE:
A. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS
B. DESIGN FOR H-20 WHEEL LOAD
C. REINFORCE CONCRETE TO 0.12 IN/S.F. L.F.

TYPICAL TYPE 'F' CATCH BASIN DETAIL

N.T.S.

Waterville
44 Main Street
Suite 204
Waterville, ME
T 207-680-2252
F 207-680-2204

Lewiston
44 Main Street
Lewiston, ME
T 207-795-6099
F 207-795-6168

Presque Isle
549 Main Street
PO Box 827
Presque Isle, ME
T 207-764-8412
F 207-764-8414

Bar Harbor
1 Knox Way 102
Bar Harbor, ME
T 207-288-0587
F 207-288-0588

Rumford
466 South Main Street
PO Box 639
Rumford, ME
T 207-989-4824
F 207-989-4881

Machias
26 Court Street
PO Box 687
Machias, ME
T 207-255-8370
F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
DETAILS

REC.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R7				
R6				
R5				
R4				
R3				
R2				
R1	PER CITY REVIEW COMMENTS	2018-10-22	BLQ	JDK

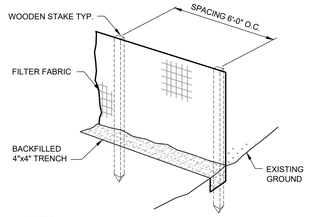
ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED PROFESSIONAL ENGINEER

SCALE	N.T.S.
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	
JOB NUMBER	12254.003

DRAWING NUMBER
C502

P:\12254.PLYMOUTH_REIT\000-56 MILLIKEN EXPANSION ENGINEERING-SMITCO CAD_DRAWINGS\CIVIL\DESIGN_DWG\12254.003-C-DT.DWG, 2/12/2019 2:08 PM

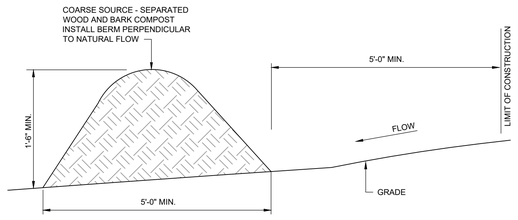


NOTES:

1. KEY FABRIC IN A 4"x4" TRENCH W/BACKFILL.
2. SILT FENCE SHALL BE A 3' FENCE WITH A MINIMUM GRAB STRENGTH OF 120 LBS.

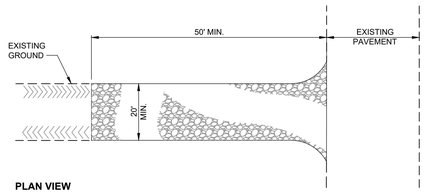
SILT FENCE DETAIL

N.T.S.



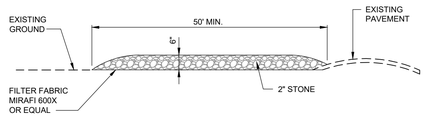
EROSION CONTROL BERM DETAIL

N.T.S. (MAY BE USED AS AN ALTERNATE TO SILT FENCE)



PLAN VIEW

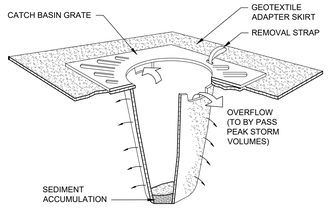
NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



SECTION

STABILIZED CONSTRUCTION ENTRANCE DETAIL

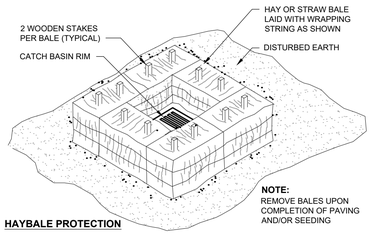
N.T.S.



NOTES:

1. CATCH BASIN PROTECTION TO BE "SILTSTACK" BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
2. INSPECT INSERT AFTER EACH RAINFALL EVENT. MAINTAIN AS REQUIRED.
3. SEDIMENT WITHIN INSERT SHALL BE EMPTIED WHEN 1/2 FULL.

SILT SACK

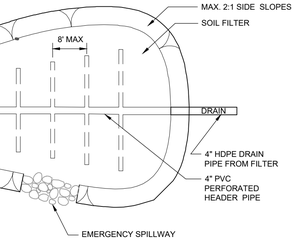


NOTE:
REMOVE BALES UPON COMPLETION OF PAVING AND/OR SEEDING

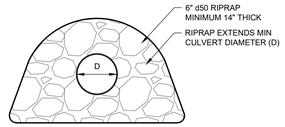
HAYBALE PROTECTION

INLET PROTECTION DETAILS

N.T.S.

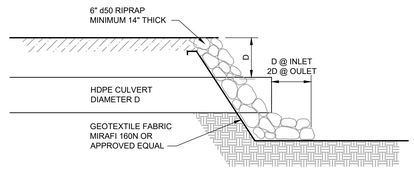


PLAN VIEW



ELEVATION

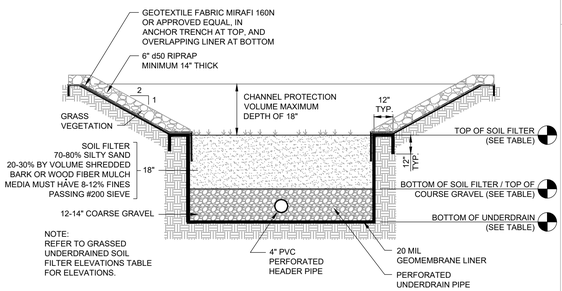
PROFILE



PROFILE VIEW

TYPICAL CULVERT INLET/OUTLET PROTECTION DETAIL

N.T.S.



SECTION

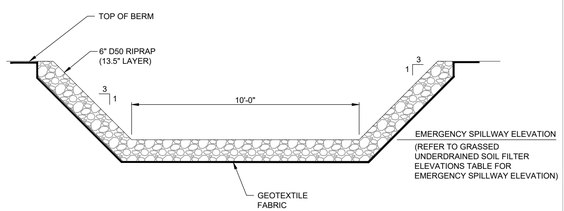
GRASSED UNDERDRAINED SOIL FILTER ELEVATIONS

USF NO.	EXISTING ELEVATION (+/-) (FT)	EMERGENCY SPILLWAY ELEVATION (FT)	OUTLET CONTROL STRUCTURE ELEVATION (FT)	PROPOSED TOP OF SOIL FILTER (FT)	PROPOSED BOTTOM OF SOIL FILTER / TOP OF COARSE GRAVEL (FT)	PROPOSED ELEVATION OF PIPE BED (FT)	PROPOSED BOTTOM OF COARSE GRAVEL (FT)	OVERFLOW OUTLET STRUCTURE RIM ELEVATION (FT)	TOP OF BERM (FT)	TREATMENT AREA REQ'D/PROVIDED	STORAGE VOLUME
1	70.0	69.5	N/A	66.4	64.9	64.07	63.73	N/A	70.5	3,496 SF/3,900 SF	7,906 CF
2	62.0	60.9	N/A	59.4	57.9	57.07	56.73	N/A	62.0	273 SF/359 SF	842 CF
3	58.0	56.9	N/A	55.4	53.9	53.07	52.73	N/A	58.0	516 SF/606 SF	1,395 CF

* NOTE: ALL PONDS ARE LINED

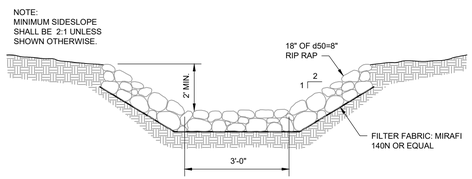
06 C504 N.T.S.

GRASSED UNDERDRAIN SOIL FILTER FIELD DETAIL

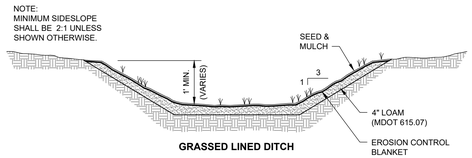


GRASSED UNDERDRAINED SOIL FILTER EMERGENCY SPILLWAY DETAIL

N.T.S.



RIPRAP LINED DITCH



GRASSED LINED DITCH

TYPICAL DITCH DETAILS

N.T.S.

EROSION CONTROL NOTES

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BMPS, PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION.
2. SILT FENCE WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION. AT A MINIMUM, ALL EROSION CONTROL DEVICES WILL BE OBSERVED WEEKLY.
3. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO CONSTRUCTION SITE.
4. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY A SUITABLE GROWTH OF GRASS. ONCE A SUITABLE GROWTH OF GRASS HAS BEEN OBTAINED, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BY THE CONTRACTOR. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THEY ARE REMOVED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED IMMEDIATELY.
5. ALL DISTURBED AREAS WILL BE SEEDED WITH 2.5 LBS. RED FESCUE AND 0.5 LBS. RYE GRASS PER 1,000 SQUARE FEET AND MULCHED AT A RATE OF 90 LBS. PER 1,000 SQUARE FEET OR EQUIVALENT APPLICATION OF SEED AND MULCH.
6. A SUITABLE BINDER SUCH AS CURASOL OR TERRTACK WILL BE USED ON THE HAY MULCH FOR WIND CONTROL.
7. IF FINAL SEEDING OF DISTURBED AREAS IS NOT COMPLETED BY SEPTEMBER 15th OF THE YEAR OF CONSTRUCTION, THEN ON THAT DATE THESE AREAS WILL BE GRADED AND SEEDED WITH WINTER RYE AT THE RATE OF 112 POUNDS PER ACRE OR 3 POUNDS PER 1000 SQUARE FEET. THE RYE SEEDING WILL BE PRECEDED BY AN APPLICATION OF 3 TONS OF LIME AND 800 LBS. OF 10-20-20 FERTILIZER OR ITS EQUIVALENT. MULCH WILL BE APPLIED AT A RATE OF 90 POUNDS PER 1000 SQUARE FEET.
8. IF THE RYE SEEDING CANNOT BE COMPLETED BY OCTOBER 1st OR IF THE RYE DOES NOT MAKE ADEQUATE GROWTH BY DECEMBER 1st, THEN ON THOSE DATES, HAY MULCH WILL BE APPLIED AT 150 POUNDS PER 1000 SQUARE FEET.
9. ALL CATCH BASINS ARE TO BE PROTECTED BY STRAW BALE OR SILTFENCE IN ACCORDANCE WITH SECTION B-3 STORM DRAIN INLET PROTECTION OF THE MAINE BMP HANDBOOK. SURROUNDING AREAS CAN BE EXCAVATED OR LEFT LOW AS A SEDIMENT TRAP. CURB INLETS SHALL BE PROTECTED BY GUTTERGATORS, OR APPROVED EQUIVALENT.
10. INTERIOR SILT FENCES ALONG CONTOUR DIVIDING FLAT AND STEEP SLOPES, AREAS WITH DIFFERENT DISTURBANCE SCHEDULES, AROUND TEMPORARY STOCKPILES OR IN OTHER UNSPECIFIED POSSIBLE CIRCUMSTANCES SHOULD BE CONSIDERED BY THE CONTRACTOR. THE INTENT OF SUCH INTERIOR SILT FENCES IS TO LIMIT SEDIMENT TRANSPORT WITHIN THE SITE TOWARD THE PROTECTED CATCH BASIN INLETS TO MINIMIZE SEDIMENT REMOVAL REQUIRED BY THE EROSION CONTROL NOTE 9 PROTECTIONS AND EXTEND LIFE OF SUCH DEVICES.
11. THE CONTRACTOR SHALL PROVIDE A SEDIMENT BASIN FOR ALL WATER PUMPED FROM EXCAVATIONS. BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES". THE CONTRACTOR SHALL SUBMIT FOR REVIEW/APPROVAL PRIOR TO BEGINNING ANY PROJECT WORK.
12. CONSTRUCTION OVERSIGHT:
THE OWNER WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE WORK HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.
13. UNDERDRAINED FILTER BASINS:
CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.
COMPACTION OF SOIL FILTER: THE SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM:
   - AFTER THE 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. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY FOR THE CANOPY COVERAGE OF 30 AND 50%.
   - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND
   - ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:
   - SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
   - PERFORM A SIEVE ANALYSIS CONFORMING TO STM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
   - PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.
14. ROOF DRIP EDGE FILTERS:
INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT EACH THE ROOF DRIP EDGE FILTER'S UNDERDRAIN CONSTRUCTION, FILTER MATERIAL PLACEMENT, AND OVERFLOW FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE FILTER.
15. DEWATERING
A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE. PLEASE FOLLOW THE DETAILS OF SUCH A PLAN.
16. BASIC STANDARDS - EROSION CONTROL MEASURES:
MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE

THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES AS PUBLISHED IN 1991 BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION HAS BEEN CHANGED TO THE "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE MAINE DEP IN 2003. ALL REFERENCES SHOULD BE CHANGED TO THE NEW MANUAL. HTTP://WWW.MAINE.GOV/DEP/BLWQ/DOCSTAND/ESCBMPS/INDEX.HTM

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F 207-255-8367

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
DETAILS

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
1	PER CITY REVIEW COMMENTS	2019-03-12	BLQ	JDK

ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED
PROFESSIONAL ENGINEER

SCALE	N.T.S.
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	
JOB NUMBER	12254.003

DRAWING NUMBER
C503

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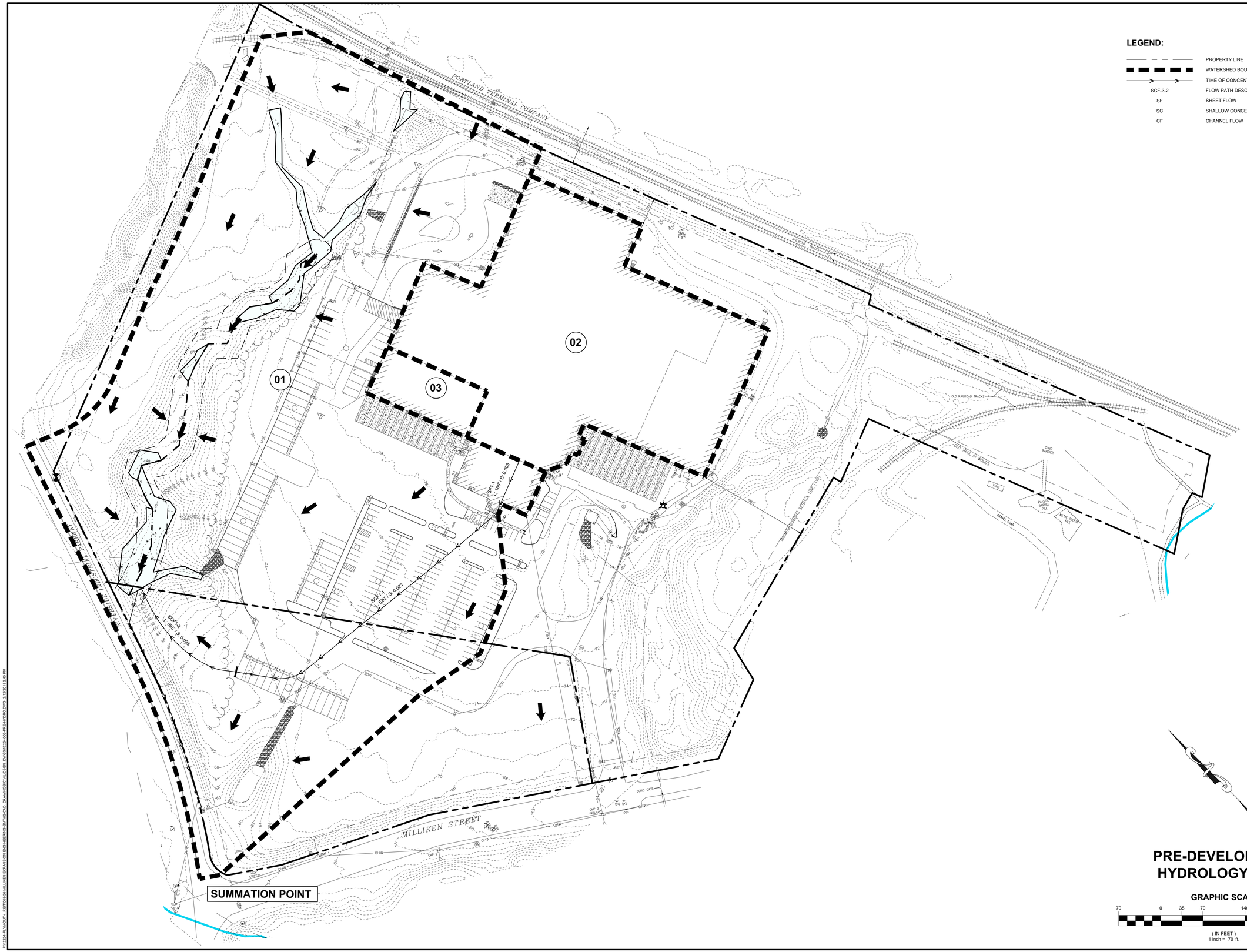

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CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
PRE-DEVELOPMENT
HYDROLOGY PLAN

REV	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PER CITY REVIEW COMMENTS	2019-02-12	BLQ	JDK
R2				
R3				
R4				
R5				
R6				

ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED PROFESSIONAL ENGINEER
2/12/2019

SCALE	1"=70'
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDM
DESIGNED BY	JED
APPROVED BY	SMT
JOB NUMBER	12254.003
DRAWING NUMBER	C701

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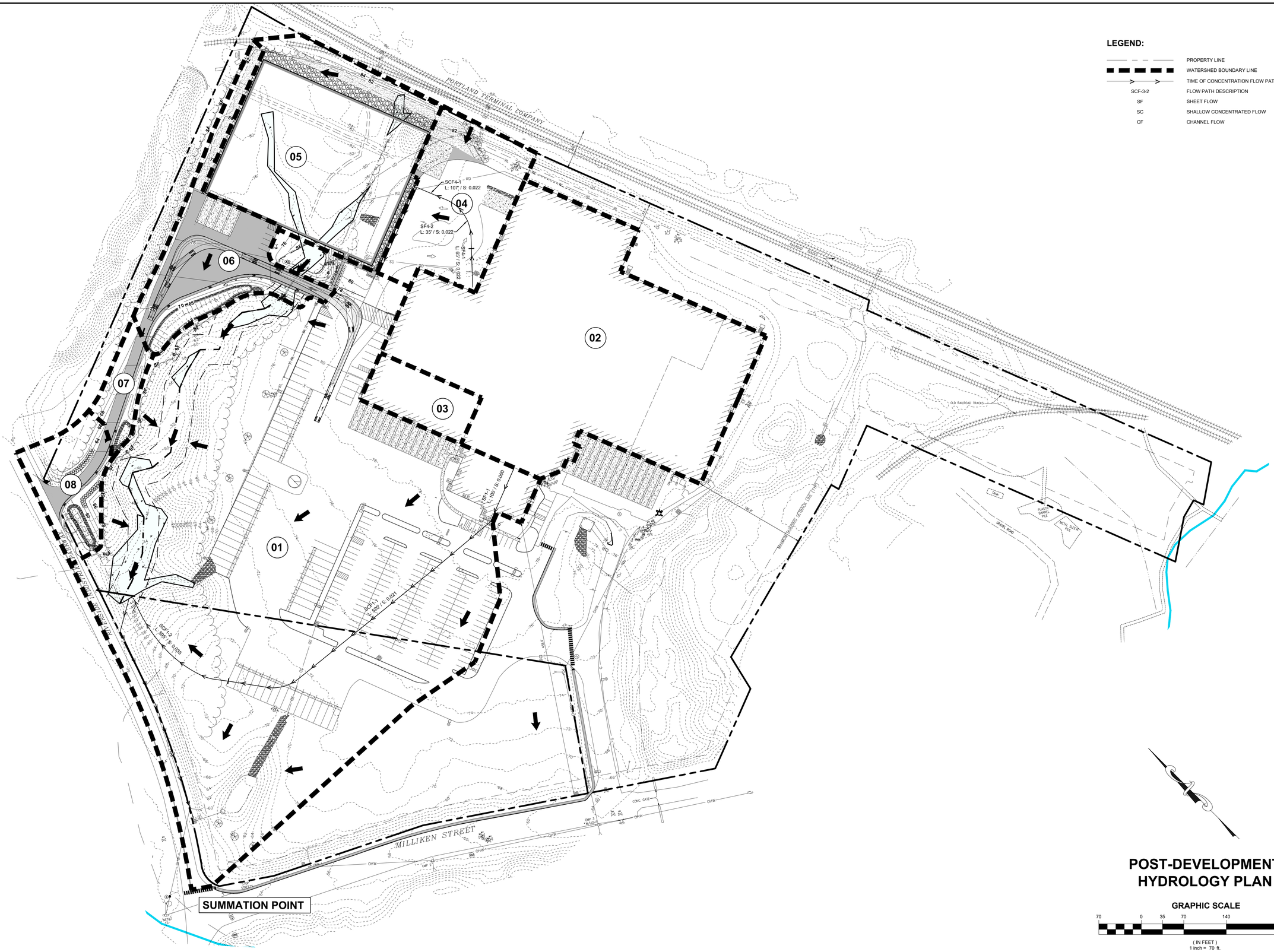

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F: 207-795-6168

CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
POST-DEVELOPMENT
HYDROLOGY PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PER CITY REVIEW COMMENTS	2019-02-12	BLQ	JDK
R2				
R3				
R4				
R5				
R6				
R7				

ISSUE STATUS
NOT FOR CONSTRUCTION

SCALE	1"=70'
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	SMT
DESIGNED BY	BLQ
APPROVED BY	SMT
JOB NUMBER	12254.003

DRAWING NUMBER
C702

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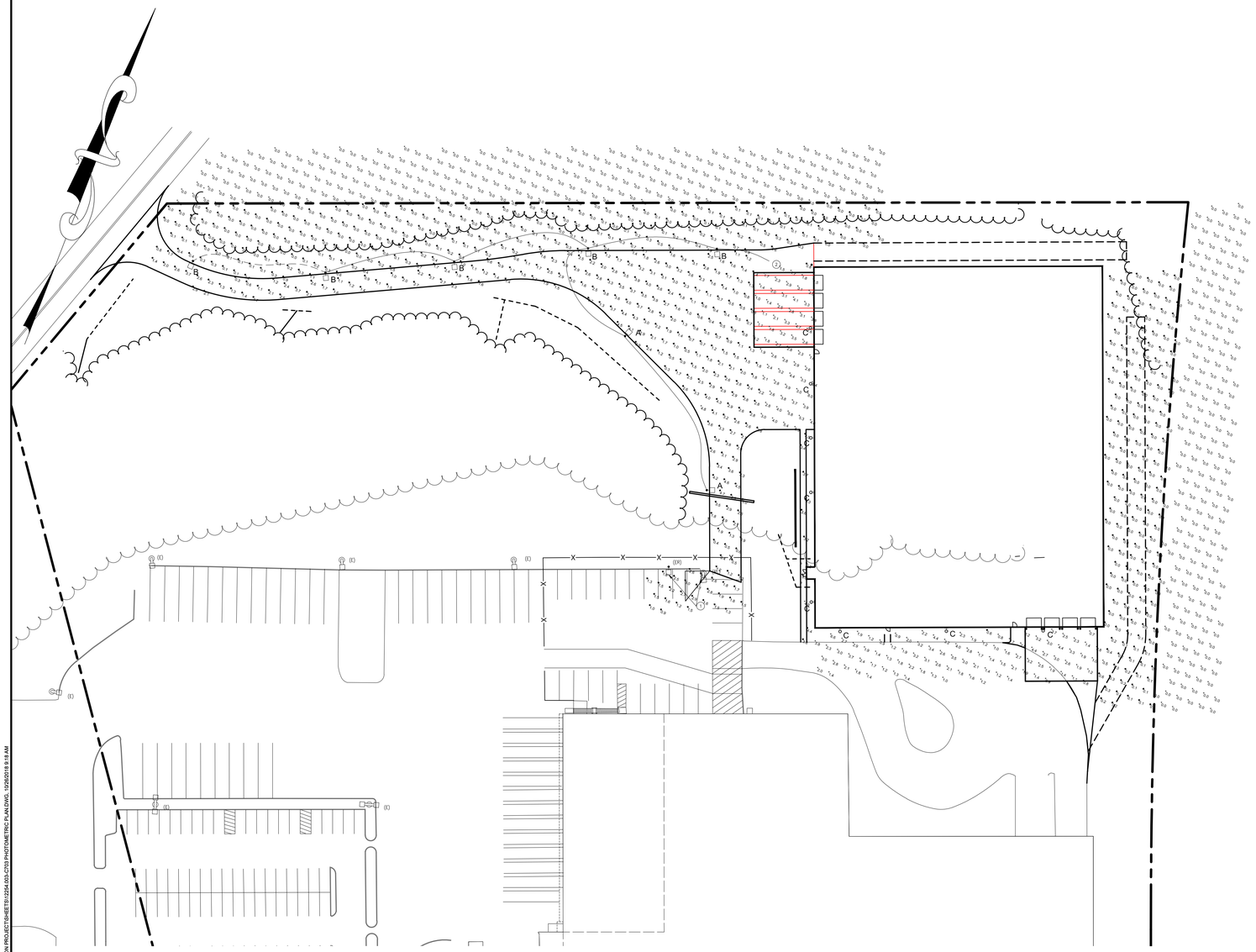
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B'
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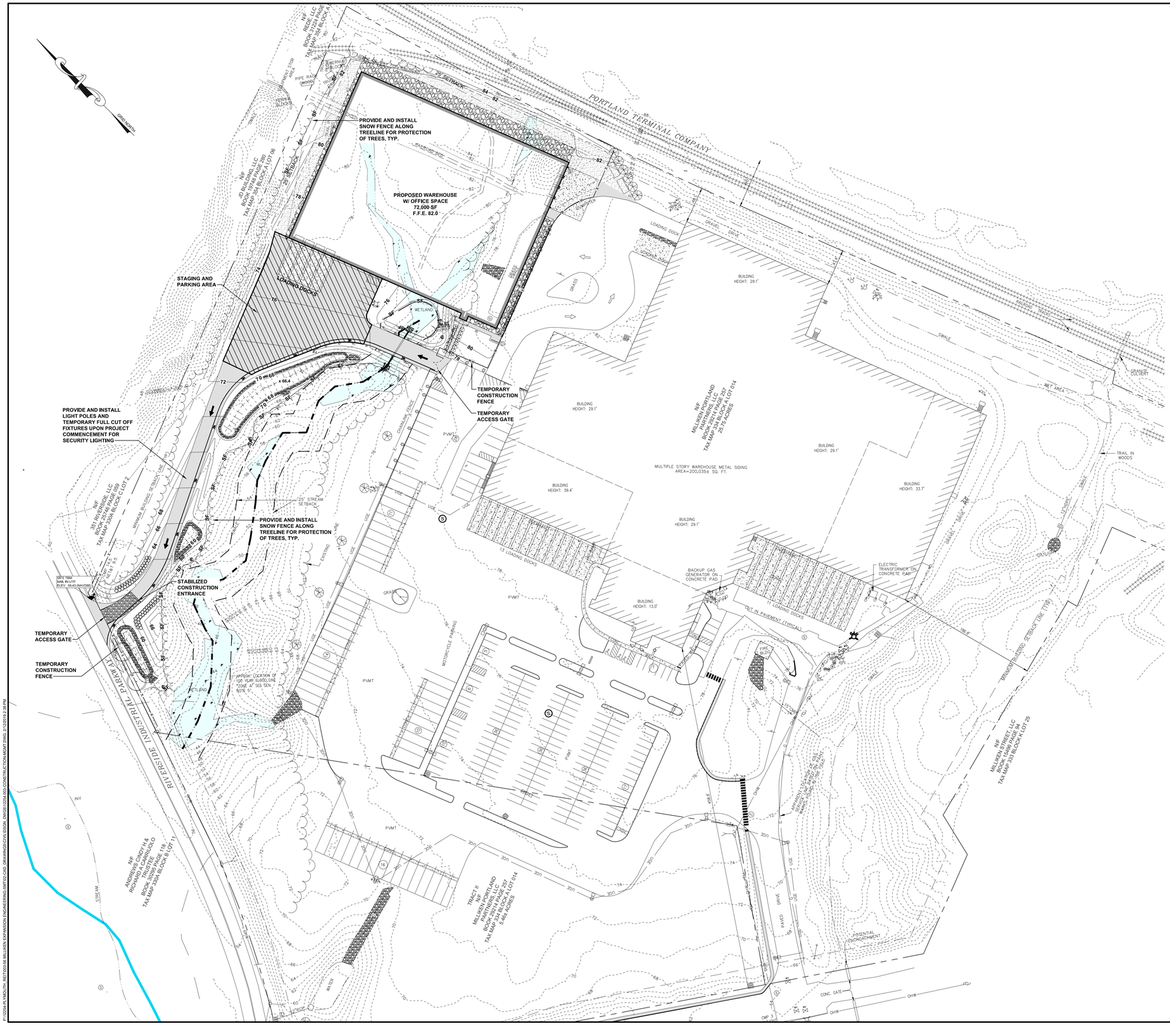

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
UTILITY POLE		
POWER BANK		NA
SITE LIGHT		NA
DRAINAGE MANHOLE		
CATCH BASIN		
HYDRANT	NA	
PROPERTY LINE		NA
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
MAJOR FOOT CONTOUR	100	100
MINOR FOOT CONTOUR	98	98
WATER LINE	WL	W
SANITARY SEWER LINE	SS	SS
OVERHEAD UTILITY	OHD	NA
UNDERGROUND UTILITY	NA	UGU
STORMDRAIN	SD	SD
UNDERDRAIN	UD	UD
ROOF DRAIN	RD	RD
SILT FENCE	NA	SF SF
GRAVEL SURFACE	NA	
PAVED SURFACE	NA	

GENERAL NOTES

1. TOPOGRAPHY SHOWN REPRESENTS RESULTS FROM TOPOGRAPHIC SURVEY PERFORMED BY CES, INC. ON AUGUST 23, 2018 AND MERGED WITH 2' LIDAR CONTOURS PROVIDED BY THE MAINE OFFICE OF GIS.
2. EXISTING CONDITIONS FROM DIGITAL RECORD DRAWING PROVIDED BY THE OWNER, FILE NAME MillikenSt_Base.dwg.
3. THE DIRECTION OF LINES AND UNDERLYING COORDINATE SYSTEM IS MAINE STATE PLANE WEST ZONE, US SURVEY FOOT, NAD 83, WITH NAVD 88.
4. WETLAND BOUNDARY SHOWN IS THE RESULT OF A WETLAND DELINEATION PERFORMED BY CES, INC.

PLAN REFERENCE

1. PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATION ON #56 MILLIKEN STREET, PORTLAND, ME PREPARED FOR PLYMOUTH INDUSTRIAL REIT, INC., 260 FRANKLIN STREET, 19TH FLOOR, BOSTON, MA 02110", PREPARED BY SGC ENGINEERING, LLC, PLAN REVISION DATE 11-20-2014.

CONSTRUCTION NOTES

1. INSTALL EROSION CONTROL MEASURES PRIOR TO EARTH DISTURBANCE OPERATIONS.
2. CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES NOT DESIGNATED FOR REMOVAL. ANY EXCESS TREE REMOVAL SHALL BE REMEDIED AT THE CONTRACTOR'S OWN EXPENSE.
3. CONTRACTOR SHALL COMPLY WITH TERMS AND CONDITIONS OF THE CITY OF PORTLAND APPROVAL, CITY OF PORTLAND CODES AND ORDINANCES, AND APPLICABLE STATE AND FEDERAL REGULATIONS.

CONSTRUCTION MANAGEMENT SITE PLAN

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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44 Main Street
Suite 204
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T 207-680-2202
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Bangor
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T 207-989-4824
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CES INC
Engineers • Environmental Scientists • Surveyors

PROJECT TITLE
PLYMOUTH INDUSTRIAL REIT, INC. SITE EXPANSION PROJECT
56 MILLIKEN STREET

SHEET TITLE
CONSTRUCTION MANAGEMENT SITE PLAN

REV.	DESCRIPTION	DATE	DRAWN BY	CHECKED BY
R1	PER CITY REVIEW COMMENTS	2019-03-12	BLQ	JDK
R2				
R3				
R4				
R5				
R6				

ISSUE STATUS
NOT FOR CONSTRUCTION

STATE OF MAINE
JOHN D. KUCHINSKI
No. 9759
LICENSED PROFESSIONAL ENGINEER

SCALE	1"=60'
DATE	2018-10-26
DRAWN BY	BLQ
CHECKED BY	JDK
DESIGNED BY	BLQ
APPROVED BY	SMT
JOB NUMBER	12254.003

DRAWING NUMBER
C801

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TRACT I

A Certain lot or parcel of land situated easterly of Riverside Industrial Parkway and Northerly of Milliken Street in the City of Portland, County of Cumberland, State of Maine, to wit;

Beginning at a point on the westerly side of land now or formerly of the Portland Terminal Company at a drill hole found in a stone at the northerly corner of the land now or formerly owned by the Portland Water District;

Thence, South 55° 14' 20" West 71.28 feet along said Water District Land to a point, thence;
Thence, North 21° 15' 40" West, 17.82 feet along said Water District Land to a point;
Thence, South 74° 52' 45" West, 31.62 feet along said Water District Land to a point near an iron pipe;
Thence, South 55° 51' 08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;
Thence, North 21° 16' 37" West, 555.77 feet along land said Milliken Street LLC land to a point near a 5/8" rebar;
Thence, South 68° 44' 47" West, 114.56 feet a point near a 5/8" rebar;
Thence, North 14° 55' 55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2' from the terminus of said course, to a point;
Thence, South 75° 08' 46" West, 328.45 feet along said Milliken Street LLC land to a point;
Thence, South 13° 13' 08" West, 61.39 feet along said Milliken Street LLC land to a point;
Thence, South 68° 44' 47" West, 143.78 feet to a point in the easterly line of Milliken Street;
Thence, leaving said easterly line North 34° 51' 20" East, 213.80 feet to a point;
Thence, North 35° 56' 16" West, 781.79 feet to a point in the easterly right-of-way of Riverside Industrial Parkway;
Thence, along said easterly right-of-way line North 18° 39' 48" East, 204.96 feet to a point;
Thence, leaving said easterly right-of-way North 68° 40' 30" East, 849.45 feet to a point in the westerly side line of said Portland Terminal Company land;
Thence; along said westerly line along a curve deflecting to the left having a radius of 2,902.78 feet, an arc of 178.13 feet, a chord bearing of South 15° 42' 18" East, a chord of 178.10 feet to a point;
Thence, along a curve deflecting to the left having a radius of 6,422.46 feet, an arc of 427.82 feet, a chord bearing of South 19° 21' 10" East, a chord of 427.74 feet to a point;
Thence, South 21° 15' 40" East, 521.66 feet, to a point;
Thence, South 57° 03' 20" West, 16.85 feet to a point;
Thence, South 21° 15' 40" East, 619.95 feet to the POINT OF BEGINNING.

Being Tract I of the premises conveyed to KDJS Partners, LLC by deed of C&S Logistics of Portland LLC, dated August 10, 2004 and recorded in the Cumberland County Registry of Deeds In Book 21653, Page 272.

TRACT II

A certain lot or parcel of land situated Easterly of Riverside Industrial Parkway & Northerly of Milliken Street in the City of Portland, County of Cumberland, Maine, to wit:

COMMENCING at a point on the westerly side of land now or formerly of the Portland Terminal Company at the northerly corner of the land now or formerly owned by the Portland Water District;

Thence, South 55° 14' 20" West, 71.28 feet along said Water District Land to a point;
Thence, North 21° 15' 40" West, 17.82 feet along said Water District Land to a point;
Thence, South 74° 52' 45" West, 31.62 feet along said Water District Land to a point near an iron pipe;
Thence, South 55° 51' 08" West, 75.26 feet along land now or formerly owned by Milliken Street LLC to a point near a 5/8" rebar;
Thence, North 21° 16' 37" West, 555.77 feet along land said of Milliken Street LLC land to a 5/8" rebar;
Thence, North 68° 44' 47" West, 114.56 feet along said Milliken Street LLC land to a point near a 5/8" rebar;
Thence, North 14° 55' 55" West, 14.08 feet along said Milliken Street LLC land, passing over an iron pipe, said pipe being distant 1.2' from the terminus of said course, to a point;
Thence, South 75° 08' 46" West, 328.45 feet along said Milliken Street LLC land to a point;
Thence, South 13° 13' 08" West, 61.39 feet along said Milliken Street LLC land to a point;
Thence, South 68° 44' 47" West, 143.78 feet to a point in the easterly line of Milliken Street;
Thence along said easterly line North 55° 10' 30" West, 92.98 feet to a point;
Thence, North 56° 04' 53" West, 117.32 feet to the TRUE POINT OF BEGINNING;
Thence continuing along the easterly line of Milliken Street North 56° 04' 53" West, 280.50 feet to a point;
Thence North 63° 50' 00" West, 258.77 feet to a point at the intersection of said easterly line and the southern line of land conveyed to ADC Building Fund Inc. by Davis-Greene Co. dated December 18, 1962, recorded in Book 2723, Page 182;
Thence leaving said easterly line along said southern line; North 55° 47' 03" West, 91.92 feet to a point at the intersection of said easterly line and said southern line;
Thence leaving said southern line along said easterly line of Milliken Street along a curve deflecting to the right having a radius of 50.00' and arc of 49.66', a chord bearing of North 06° 39' 55" East, a chord of 47.64', to a point at the intersection of said easterly line of Milliken Street and the easterly line of Riverside Industrial Parkway;
Thence leaving said easterly line of Milliken Street along said easterly line of Riverside Industrial Parkway along a curve deflecting to the left having a radius of 1171.67', an arc of 336.46, a chord bearing of North 25° 53' 24" East, a chord of 335.31 to a point;
Thence North 18° 39' 48" East, 147.48 feet to a point;
Thence leaving said easterly line along a line between Tract I & II South 35° 56' 16" East, 781.79 feet to a point;
Thence, South 34° 51' 20" West, 213.80 feet to the TRUE POINT OF BEGINNING.

Being Tract II of the premises conveyed to KDJS Partners, LLC by deed of C&S Logistics of Portland LLC, dated as of August 10, 2004 and recorded in the Cumberland County Registry of Deeds In Book 21653, Page 272.

MAP REFERENCES:

1) A PLAN ENTITLED "STANDARD BOUNDARY SURVEY WETTERAU, PORTLAND DIVISION, PORTLAND, CUMBERLAND CO., MAINE" BY RAYMOND H. FRANKENBURG DATED MARCH 1989.

2) A PLAN ENTITLED "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR DAVIS-GREENE CO." BY H.I. & E.C. JORDAN - SURVEYORS DATED NOV. 26, 1962 RECORDED IN THE REGISTRY AS PLAN BOOK 61, PAGE 69.

3) A PLAN ENTITLED "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MILLIKEN-TOMLINSON COMPANY" BY H.I. & E.C. JORDAN SURVEYORS DATED FEB. 5, 1980.

4) A PLAN ENTITLED "EXISTING CONDITIONS AND DEMOLITION PLAN, MEQUIER HILL FARM 66 MILLIKEN STREET, PORTLAND, MAINE" BY MITCHELL & ASSOCIATES DATED FEBRUARY 3, 2000.

5) A PLAN ENTITLED "CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS PRESUMPSCOT NO. MAIN INTERCEPTOR RIGHT-OF-WAY ME. TPK. TO NEAR RANDOLPH ST."

SCHEDULE B2:

COMMONWEALTH TITLE INSURANCE COMPANY
POLICY NUMBER 14030014
EFFECTIVE DATE JULY 20, 2014 AT 4:30 PM (revised 9/3/14)

SCHEDULE B, SECTION 2

1-10) NOT PLOTTABLE

11) NOT PLOTTABLE

12) RIGHTS AND EASEMENTS TO ADC BUILDING FUND, INC. FOR RIGHT-OF-WAY AND USE OF RAILROAD SPUR AS CONTAINED IN DEED FROM ADC BUILDING FUND, INC. TO DAVIS-GREENE CO. DATED DECEMBER 18, 1962 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 2723, PAGE 182 (TRACT I). PLOTTED HEREON.

13) INTENTIONALLY DELETED.

14) THE LOCUS PARCEL IS SUBJECT TO RIGHTS AND EASEMENT OF CENTRAL MAINE POWER AND NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY AS SET FORTH IN DEED BOOK 2937, PAGE 381 (TRACT I) PLOTTED HEREON.

15) RIGHTS AND EASEMENTS GRANTED TO JAMES A. SKILLINGS AND GREATER PORTLAND BUILDING FUND , INC. BY DAVIS-GREENE CO. FOR RAILROAD SIDING BY INSTRUMENT DATED SEPTEMBER 10, 1970 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 3143, PAGE 126, AND THE CONDITIONS AND RESERVATIONS SET FORTH THEREIN (TRACT I). PLOTTED HEREON.

16) RIGHTS AND EASEMENTS GRANTED TO THEODORE H. BRODIE AND GLENN A. BRODIE AS TRUSTEES OF BRODIE REALTY TRUST DATED DECEMBER 13, 1976 AND RIVERSIDE BUILDING CO. BY MILLIKEN, TOMLINSON COMPANY BY INSTRUMENT DATED DECEMBER 13, 1976 AND RECORDED IN REGISTRY OF DEEDS IN BOOK 3952, PAGE 103, AND THE CONDITIONS AND RESERVATIONS SET FORTH THEREIN (TRACT I). PLOTTED HEREON.

17) TERMS AND CONDITIONS SET FORTH IN AGREEMENT BY AND BETWEEN MILLIKEN, TOMLINSON COMPANY AND DMC METALS, INC. DATED NOVEMBER 1, 1979 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 4534, PAGE 205 (TRACT I). PLOTTED HEREON.

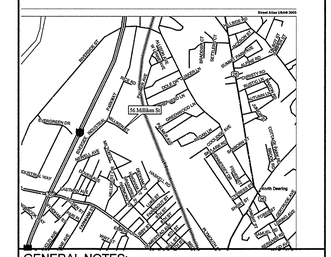
18) THE LOCUS PARCEL IS SUBJECT TO THE RIGHTS AND EASEMENT GRANTED TO CENTRAL MAINE POWER AND VERIZON NEW ENGLAND, INC AS SET FORTH IN DEED 22575, PAGE 21 (TRACT I & II). PLOTTED HEREON.

19) NOT PLOTTABLE

20) NOT PLOTTABLE

21) SUCH STATE OF FACTS AS SET FORTH ON THIS SURVEY.

VICINITY MAP: (NOT TO SCALE)



GENERAL NOTES:

1) THIS PLAN AND ALL WORK ASSOCIATED WITH IT WAS PERFORMED BY SGC ENGINEERING, LLC PURSUANT TO A PROFESSIONAL SERVICES AGREEMENT BETWEEN PLYMOUTH INDUSTRIAL REIT, INC.AND SGC ENGINEERING, LLC DATED 8/13/2014

2) NORTH AS SHOWN HEREON IS BASED ON LOCUS DEED OF RECORD DEED BOOK 11458, PAGE 221.

3) BOUNDARY AND PLANIMETRIC INFORMATION AS SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY SGC ENGINEERING, LLC BETWEEN SEPTEMBER 3, 2003 AND SEPTEMBER 9, 2003 AND VISUAL FIELD INSPECTIONS PERFORMED ON MARCH 12, 2004, MARCH 22, 2004, OCTOBER 12, 2011, AND AGAIN ON AUGUST 15, 2014.

4) NO SUBSURFACE INVESTIGATION HAS BEEN PERFORMED. DIG SAFE 811 SHOULD BE CALLED PRIOR TO ANY EXCAVATION.

5) 100 YEAR FLOOD LINE "ZONE A" AS SHOWN HEREON IS APPROXIMATE ONLY AS SCALED FROM NATIONAL FLOOD INSURANCE PROGRAM MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP, CITY OF PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBERS 230051 0001 B, EFFECTIVE DATE: JULY 17, 1986" PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. AT THE TIME OF THE SURVEY NO EXISTING IMPROVEMENTS ARE LOCATED WITHIN ZONE A.

6) ABUTTING PROPERTY OWNER INFORMATION AS SHOWN HEREON WAS OBTAINED FROM TOWN OF PORTLAND RECORDS AND REGISTRY RECORD INFORMATION AS OF THE DATE OF THE SURVEY.

7) THE LOCUS PARCEL MAY BE SUBJECT TO A SIGN EASEMENT AS DESCRIBED ON MAP REFERENCE NO.1 AND AS SHOWN HEREON. NO RECORD DOCUMENTS WERE RECOVERED BY SGC ENGINEERING, LLC OR RECEIVED AS PART OF TITLE PACKAGE DESCRIBING SAID EASEMENT.

9) THE LOCUS PARCEL MAY BE SUBJECT TO A SEWER EASEMENT ENCUMBERING SAID PARCEL AT ITS EXTREME SOUTHEASTERLY BOUNDARY AS SHOWN ON MAP REFERENCE NO.4 AND AS SHOWN HEREON.

10) THE LOCUS PARCEL PARKING AREA OF HAS 239 TOTAL PARKING SPACES.

11) THE SUBJECT PROPERTY IS LOCATED AT 56 MILLIKEN STREET, PORTLAND MAINE.

ZONING INFORMATION "I-M ZONE"

MINIMUM LOT SIZE	NONE (10,000 FOR CORRECTIONAL PRERELEASE FACILITIES)
MAXIMUM IMPERVIOUS SURFACE RATIO	75%
MAXIMUM BUILDING HEIGHT	75 FEET
MINIMUM SIDE YARDS	1 FOOT FOR EVERY FOOT OF BUILDING HEIGHT, UP TO 25 FEET
MINIMUM REAR YARDS	1 FOOT FOR EVERY FOOT OF BUILDING HEIGHT, UP TO 25 FEET
MINIMUM FRONT YARDS	1 FOOT FOR EVERY FOOT OF BUILDING HEIGHT, UP TO 25 FEET
MINIMUM STREET FRONTAGE	60 FEET
PAVEMENT SETBACK FROM LOT BOUNDARIES	10 FEET

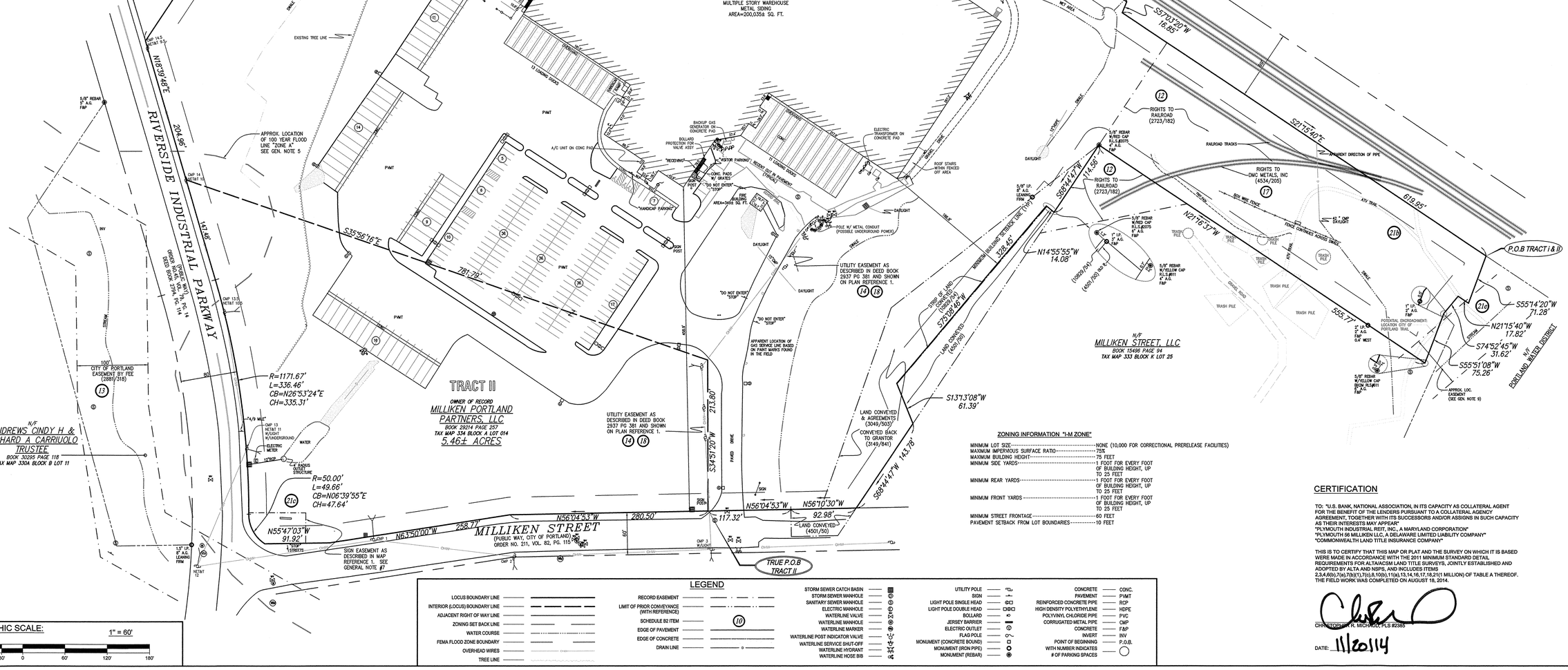
CERTIFICATION

TO: "U.S. BANK, NATIONAL ASSOCIATION, IN ITS CAPACITY AS COLLATERAL AGENT FOR THE BENEFIT OF THE LENDERS PURSUANT TO A COLLATERAL AGENCY AGREEMENT, TOGETHER WITH ITS SUCCESSORS AND/OR ASSIGNS IN SUCH CAPACITY AS THEIR INTERESTS MAY APPEAR"
"PLYMOUTH INDUSTRIAL REIT, INC., A MARYLAND CORPORATION"
"PLYMOUTH 56 MILLIKEN LLC, A DELAWARE LIMITED LIABILITY COMPANY"
"COMMONWEALTH LAND TITLE INSURANCE COMPANY"

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2,3,4,6(b),7(a),7(b)(1),7(c),8,10(b),11(a),13,14,16,17,18,21(1 MILLION) OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON AUGUST 18, 2014.

CHRISTOPHER R. MICHAUD, PLS #2385

DATE: 11/20/14



LEGEND

LOCUS BOUNDARY LINE	RECORD EASEMENT	STORM SEWER CATCH BASIN	UTILITY POLE	CONCRETE	CONC.
INTERIOR (LOCUS) BOUNDARY LINE	LIMIT OF PRIOR CONVEYANCE (WITH REFERENCE)	STORM SEWER MANHOLE	SIGN	PAVEMENT	PVMT
ADJACENT RIGHT OF WAY LINE	SCHEDULE B2 ITEM (10)	SANITARY SEWER MANHOLE	LIGHT POLE SINGLE HEAD	REINFORCED CONCRETE PIPE	RCP
ZONING SET BACK LINE	EDGE OF PAVEMENT	ELECTRIC MANHOLE	LIGHT POLE DOUBLE HEAD	HIGH DENSITY POLYETHYLENE	HDPE
WATER COURSE	EDGE OF CONCRETE	WATERLINE VALVE	BOLLARD	POLYVINYL CHLORIDE PIPE	PVC
FEMA FLOOD ZONE BOUNDARY	DRAIN LINE	WATERLINE MANHOLE	JERSEY BARRIER	CORRUGATED METAL PIPE	CMP
OVERHEAD WIRES		WATERLINE MARKER	ELECTRIC OUTLET	CONCRETE	F&P
TREE LINE		WATERLINE POST INDICATOR VALVE	FLAG POLE	INVERT	INV
		WATERLINE SERVICE SHUT-OFF	MONUMENT (CONCRETE BOUND)	POINT OF BEGINNING	P.O.B.
		WATERLINE HYDRANT	MONUMENT (IRON PIPE)	WITH NUMBER INDICATES # OF PARKING SPACES	
		WATERLINE HOSE BIB	MONUMENT (REBAR)		

ALTA/ACSM LAND TITLE SURVEY
OF PROPERTY LOCATED ON
#56 MILLIKEN STREET
PORTLAND, ME
PREPARED FOR:
PLYMOUTH INDUSTRIAL REIT, INC.
280 FRANKLIN STREET - 19TH FLOOR - BOSTON, MA 02110

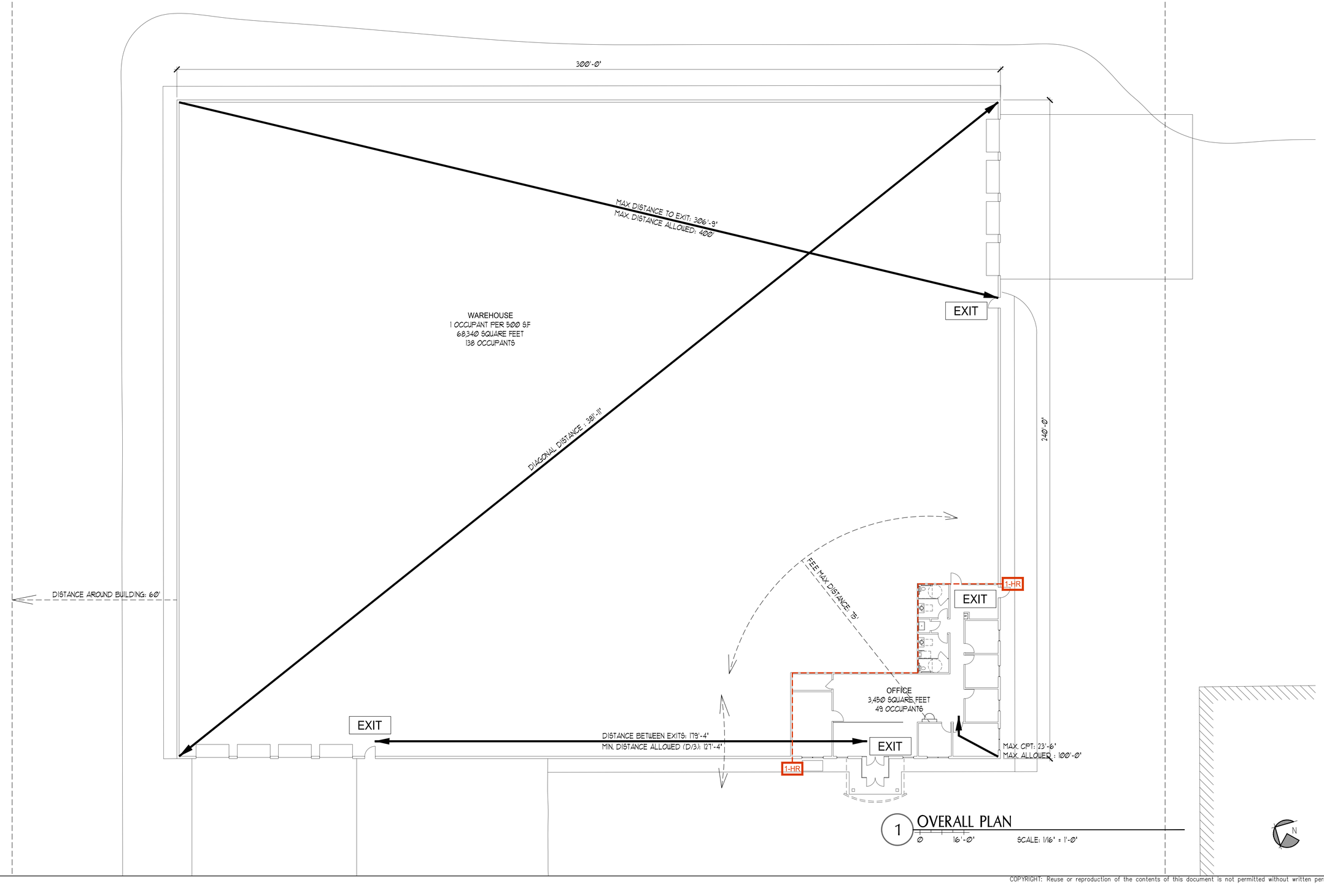
REVISIONS:

NO.	DATE	
0	08-19-2014	PRELIMINARY SUBMITTAL
1	11-19-2014	REVISIONS PER FIELD VISIT AND ATTORNEY REVIEW
2	11-26-2014	REVISIONS PER ATTORNEY REVIEW

CHRISTOPHER R. MICHAUD LICENSED PROFESSIONAL LAND SURVEYOR 2385
ONLY VALID WITH ORIGINAL STAMP

SGC ENGINEERING, LLC
• Civil Design & Survey Engineering
• Environmental & Regulatory Permitting
• Electrical Power Systems Engineering
SERVING OUR CLIENTS IN THE U.S.A. & CANADA
101 County Road, Westbrook, Maine 04092, Tel: 207.591.4101, Fax: 207.347.4101
Target Technology Center, 20 Downing Industrial Park, Saco, Maine 04072, Tel: 207.866.6021
89 Bush Street, South Portland, ME 04106, Tel: 207.805.1175, Fax: 800.863.1175
1909 East 20th Street, Suite 13, Panama City, FL 32405, Tel: 850.532.4074

DATE: 08-16-2014
SCALE: 1" = 60'
DRAWN BY: RMS
CHECK: CRM
PROJECT: 1030002
FILE: ALTA-1030002
SHEET 1 OF 1



1 OVERALL PLAN
0 16'-0" SCALE: 1/16" = 1'-0"

PORT CITY ARCHITECTURE
65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Proposed Plan

Riverside Industrial Parkway

Portland, Maine

#	DATE	DESCRIPTION

Project Number	18112
Date	Aug 20, 2018
Drawn by	DVS
Checked by	ACH

SHEET NAME
CODE REVIEW OVERALL PLAN

Drawn By DVS
Checked By ACH

P-T2.1

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Code Review - IBC 2015

Chapter 3 - Use and Occupancy Classification

This building shall be classified as:

Section 311.1 - Storage - Group S-1

Section 509.3 - Office - Incidental use

Chapter 5 - Building Heights and Areas

Section 507.4 - The building area shall not be limited.

Section 509.4 - A automatic sprinkler system is required.

Section 509.4.1 - A fire-resistence-rated is not required. A 1 hour rated will be provided.

Table 509.3 - The office area not occupy more than 10% of the building area. The office area shall be classified as Incidental.

Chapter 6 - Types of Construction

Table 601 - The building is assumed to be Type II-B construction and is not required to have fire ratings for the building elements listed in this Table.

Chapter 9 - Fire Protection Systems

Figure 903.2 - A fire alarm system is required.

Section 906.1 - Portable fire extinguishers shall be installed (see Life Safety Plan for locations).

Section 907.2.2 - A manual fire alarm system is not required.

Chapter 10 - Means of Egress

Table 1004.1.2 - See Life Safety Plan for occupant load.

Office areas: 1 person per 100 sf

Conference/Lounge/Meeting rooms: 1 person per 15 sf

Warehouse: 1 person per 500 sf

Section 1005.1- See Life Safety plan for width at exits and front corridor note.

Section 1006.1 - Means of egress lighting is required. This should be included in the Electrical drawings.

Section 1006.3.1 - 2 means of egress is required at minimum 1/3 the diagonal distance, (section 1007.1.1).

Section 1006.3.2 - Maximum common path of travel is 75 feet.

Section 1008.1.1 - See Life Safety plan for size of exit doors and egress allowed.

Section 1013.1 - Exit signs are required. See Life Safety plan for locations.

Code Review - NFPA 101 (Life Safety) 2018

Chapter 6 - Classification of Occupancy

Section 6.1.13 - This building shall be classified as Storage.

Section A.6.1.14.1.3 - The office area shall be classified as Incidental, and shall be subject to the provisions of the Code that apply to the predominant occupancy.

Table 6.1.14.4.1 - A fire-resistence-rated is not required. A 1 hour rated will be provided.

Section 6.2.2.3 - This building shall be classified as Ordinary Hazard of Contents.

Chapter 7 - Means of Egress

Table 7.3.1.2 -

Business: 150 ft2/person	49 occupants. (less than 50)
Storage: N/A	

Chapter 42 - Storage Occupancy

Section A.42.1.7 - There is no Occupant Load Factor specify; however a 500 sf2/person will be used.

Section 42.2.4 - The number of means of egress shall be not less than two. (section 7.4.1 - less than 500 occupants)

Table 42.2.5/42.2.6 -

Dead End Limit	100'
Common Path of Travel	100'
Travel Distance Limit	400'

Section 42.2.4 - Emergency lighting shall be provided.

Section 42.3.4.1.1 - A fire alarm system is not required; however, a fire alarm system will be provided.

Section 42.3.5 - Portable Fire Extinguisher is not required.

CLASSIFICATION

CONSTRUCTION TYPE: TYPE IIB

USE GROUP CLASSIFICATIONS (IBC):

STORAGE (S-1)
INCIDENTAL (OFFICE)

USE GROUP CLASSIFICATIONS (NFPA):

STORAGE
INCIDENTAL (OFFICE)
ORDINARY HAZARD

SPRINKLERED: YES

FIRE ALARM SYSTEM: YES

PROJECT INFORMATION

BUILDING AREA:
INCIDENTAL = 3,450 SF
STORAGE = 6,8550 SF
TOTAL = 12,000 SF

OCCUPANT LOAD (IBC):
INCIDENTAL = 49 OCCUPANTS
STORAGE = 138 OCCUPANTS
TOTAL = 187 OCCUPANTS

OCCUPANT LOAD (NFPA):
INCIDENTAL = 49 OCCUPANTS
STORAGE = 130 OCCUPANTS
TOTAL = 179 OCCUPANTS

DISTANCE REQUIREMENTS

DEAD END LIMIT	100'
COMMON PATH OF TRAVEL	100'
TRAVEL DISTANCE LIMIT	400'
MIN. DISTANCE BETWEEN EXITS	D/3

GENERAL NOTES

1. EXITS ARE ALLOWED TO BE ⅓ OF THE DIAGONAL DISTANCE DUE TO THE SPRINKLER SYSTEM.
2. ALL NEW RESTROOM FIXTURES TO BE ADA COMPLIANT.
3. ALL NEW DOOR HARDWARE TO BE ADA COMPLIANT.
4. THE WAREHOUSE AND THE OFFICE AREAS ARE SEPARATED WITH A 1-HOUR FULL-HEIGHT WALL ASSEMBLY.

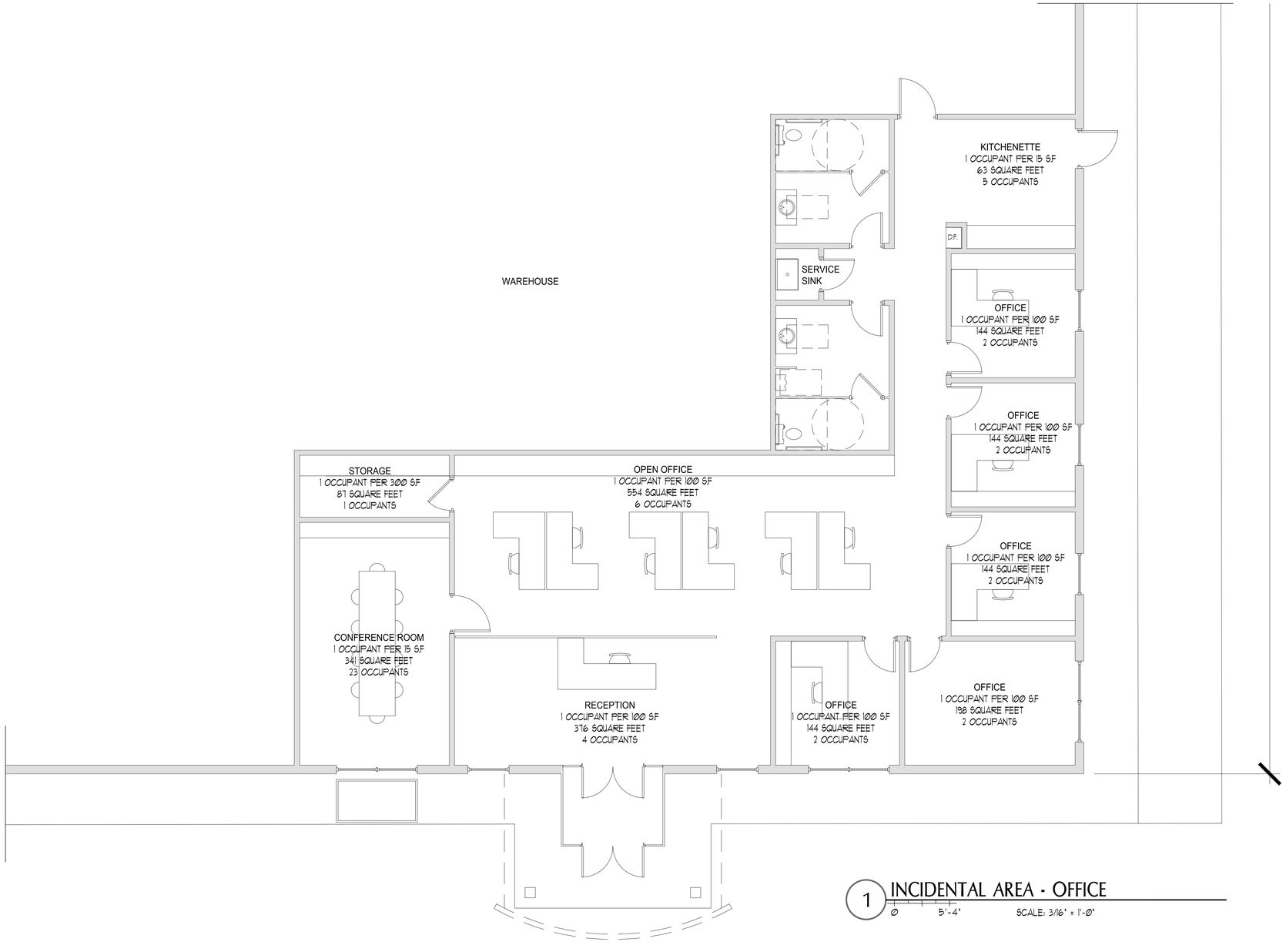
MAINE PLUMBING CODE

STORAGE:
187 OCCUPANTS: 93 MEN + 94 WOMEN

1 DRINKING FOUNTAIN REQUIRED OR A KITCHENETTE WITH CUP.

1 SERVICE SINK OR LAUNDRY TRAY.

MEN	WOMEN
(1) TOILETS	(1) TOILETS
(1) LAVATORY	(1) LAVATORY
(NO) URINAL	



1 INCIDENTAL AREA - OFFICE

0 5'-4" SCALE: 3/16" = 1'-0"

PORT CITY ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Proposed Plan

Riverside Industrial Parkway

Portland, Maine

#	DATE	DESCRIPTION

Project Number	18112
Date	Aug 20, 2018
Drawn by	DVS
Checked by	ACH

SHEET NAME

CODE REVIEW INCIDENTAL

Drawn By: DVS

Checked By: ACH

P-T2.2

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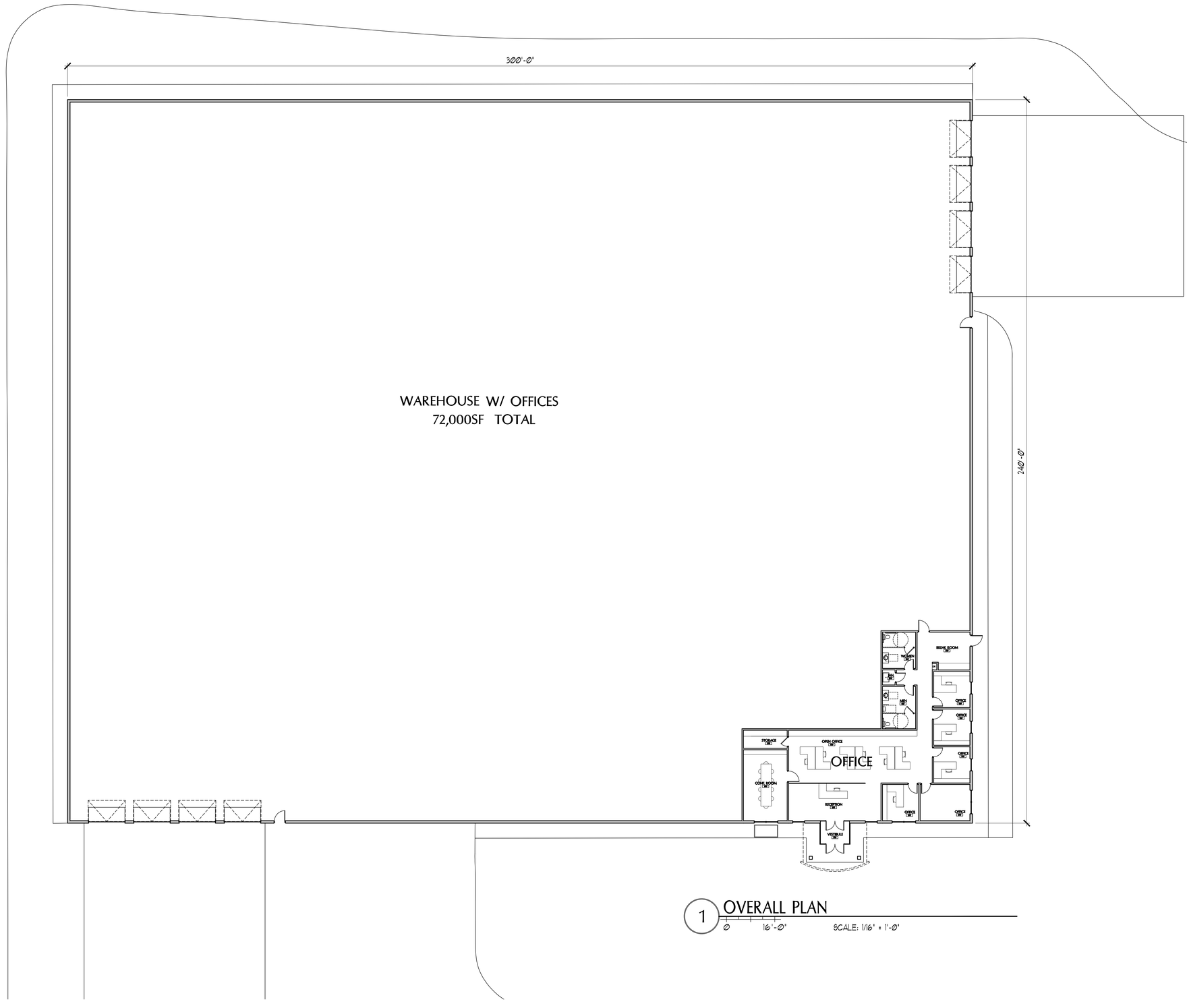

1 OVERALL PLAN

Ø 16'-Ø" SCALE: 1/16" = 1'-0"

PORT CITY ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Proposed Plan

Riverside Industrial Parkway

Portland, Maine

#	DATE	DESCRIPTION

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Checked by	ACH

SHEET NAME

OVERALL PLAN

Drawn By DVS

Checked By ACH

P-A1.1

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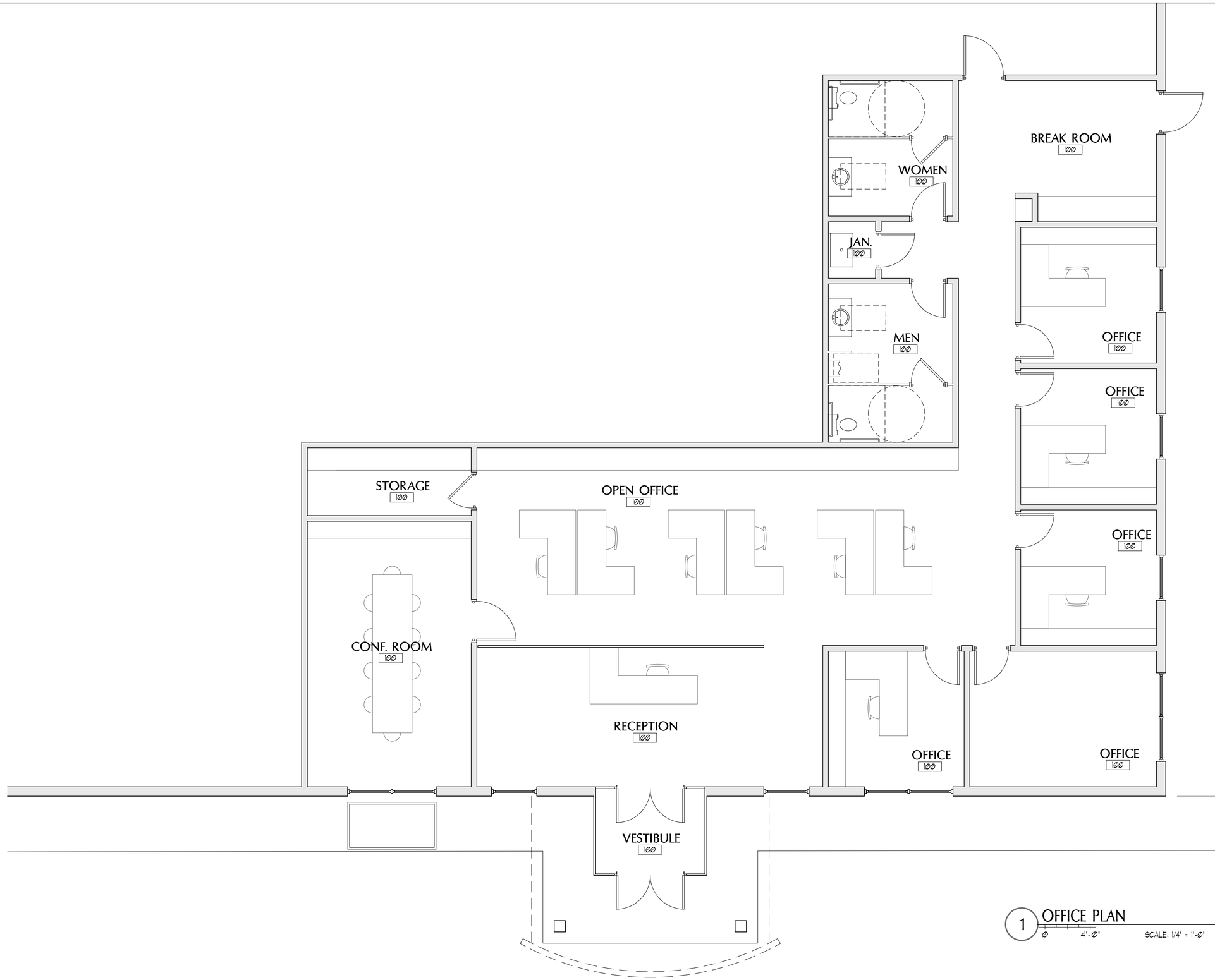

1 OFFICE PLAN

0 4'-0" SCALE: 1/4" = 1'-0"

PORT CITY
ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Proposed Plan

Riverside Industrial Parkway

Portland, Maine

#	DATE	DESCRIPTION

Project Number	18112
Date	Aug 20, 2018
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Checked by	ACH

SHEET NAME

OFFICE PLAN

Drawn By	Checked By	
DVS	ACH	**P-A1.2**

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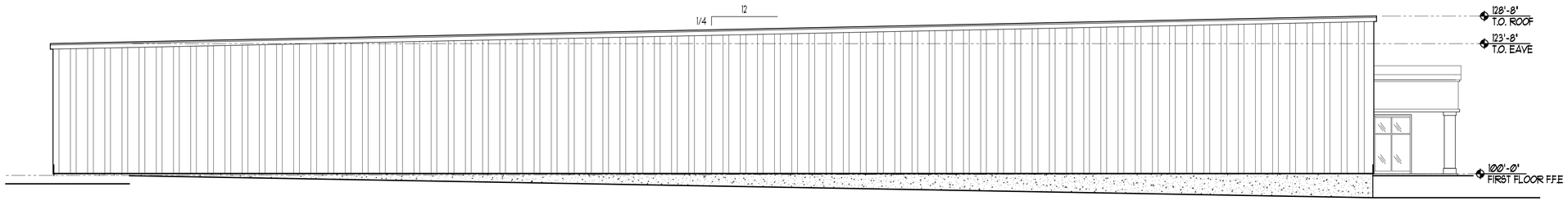
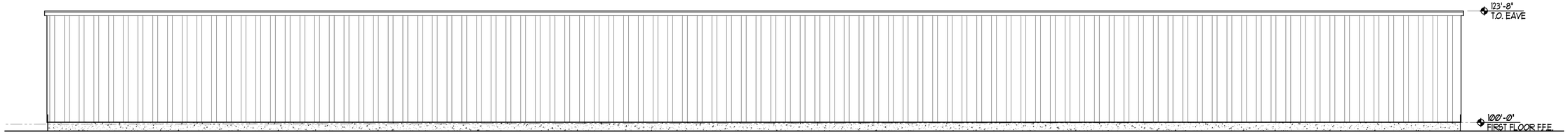


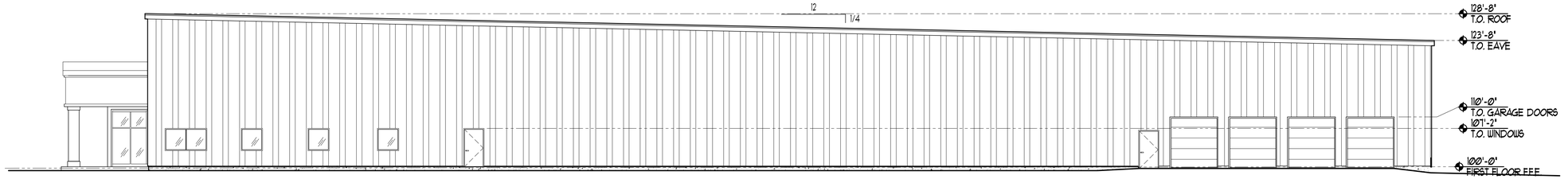
4 SIDE

0 10'-8" SCALE: 3/32" = 1'-0"



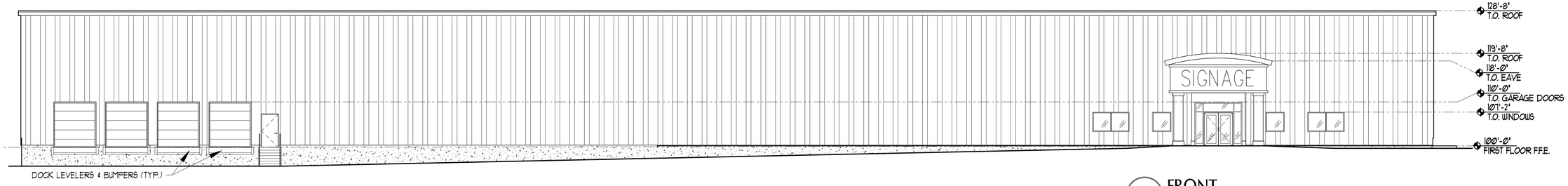
3 REAR

0 10'-8" SCALE: 3/32" = 1'-0"



2 SIDE

0 10'-8" SCALE: 3/32" = 1'-0"



1 FRONT

0 10'-8" SCALE: 3/32" = 1'-0"

PORT CITY
ARCHITECTURE

65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000

Consultants:

Proposed Plan

Riverside Industrial Parkway

Portland, Maine

#	DATE	DESCRIPTION

Project Number	18112
Date	Aug 20, 2018
Drawn by	DVS
Checked by	ACH

SHEET NAME

EXTERIOR ELEVATIONS

Drawn By: DVS

Checked By: ACH

P-A2.1

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Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Riverside Industrial Parkway and Milliken St.

1 message

Jaime Parker <jaime@trails.org> Tue, Jan 8, 2019 at 3:27 PM
To: Jean Fraser <jf@portlandmaine.gov>, Kara Wooldrik <kara@trails.org>, Mark Arienti <mtarienti@gmail.com>

Hi Jean,

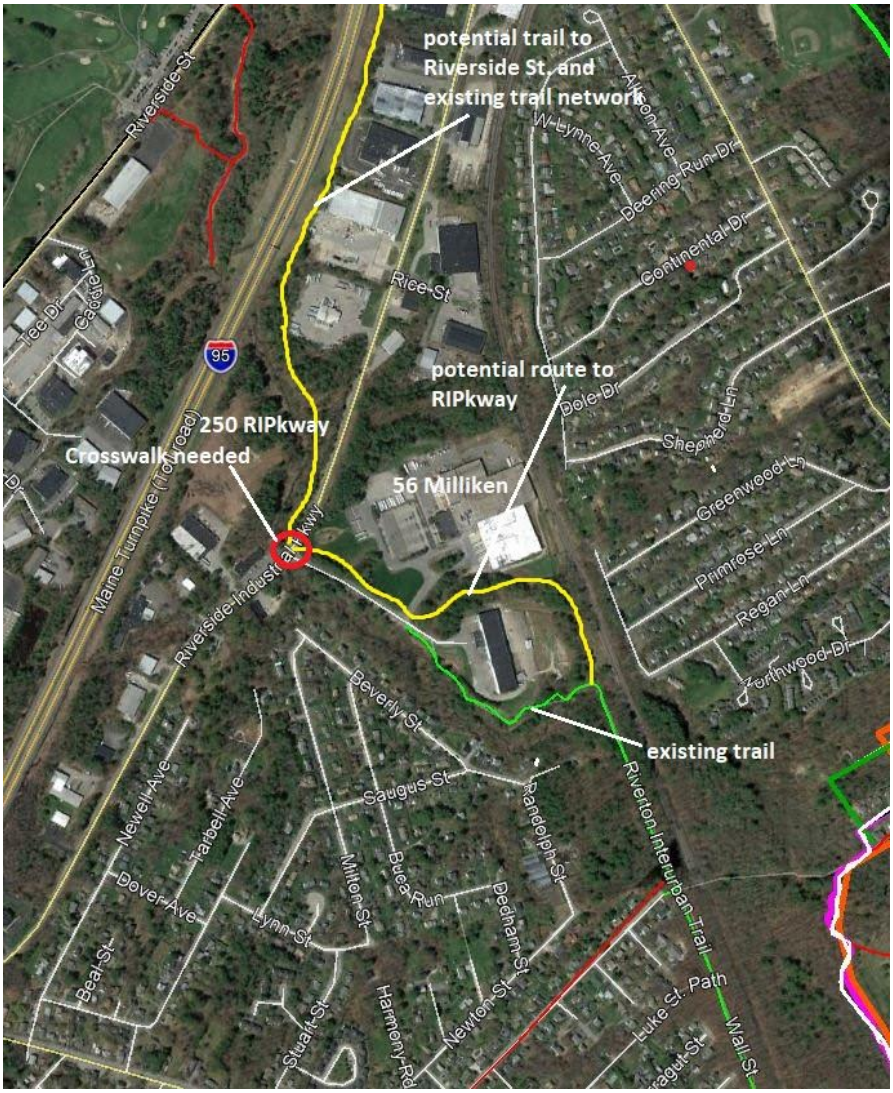
Regarding Portland Trails request for trail and connection improvements near Riverside Industrial Parkway and Milliken Street, I wanted to offer the following thoughts;

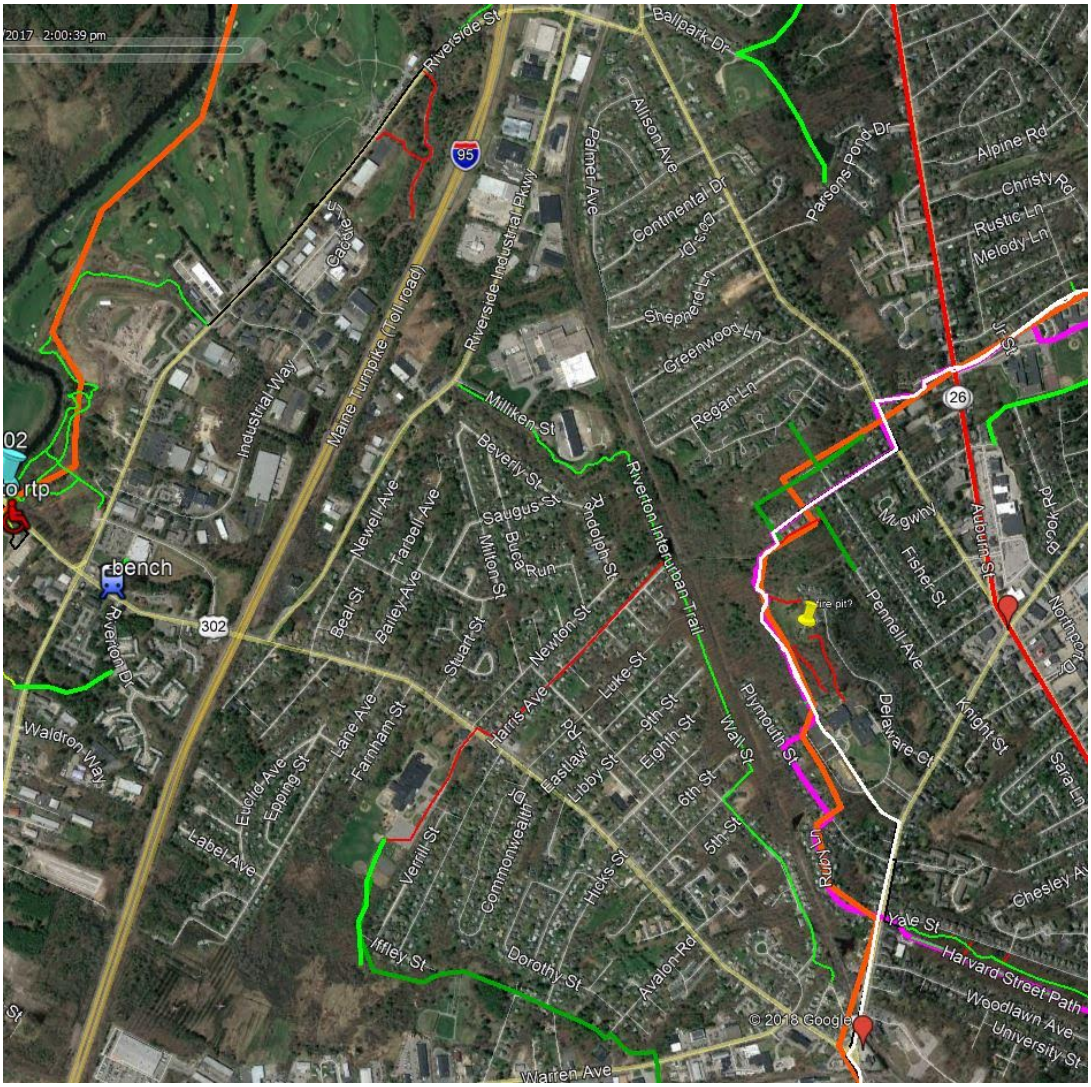
- Currently the Riverton Rail Trail connects Morril's Corner to Milliken St.
- Currently there is no "trail" along Milliken St. to access Riverside Ind. Pkway
- It would be desirable to add a connection either along Milliken, or parallel to Milliken through the 56 Milliken St. property, to allow access to the Parkway.
- A crosswalk on the Parkway to the new sidewalk being constructed by 250 Riverside Pkway, and the future trail to the north would be desirable.

I've attached a sketch of the immediate area (with potential connections in yellow), and the greater network with existing trails only. I would be happy to discuss option for trail routing with any interested parties.

Thank you,

Jaime


potential trail to Riverside St. and existing trail network
potential route to RIPkway
250 RIPkway
Crosswalk needed
56 Milliken
existing trail
Riverside St
Maine Turnpike (Toll road)
95
Riverside Industrial Pkwy
Rice St
W Lynne Ave
Alveon Ave
Deering Run Dr
Continental Dr
Dole Dr
Shepherd Ln
Greenwood Ln
Primrose Ln
Regan Ln
Northwood Dr
Beverly St
Saugus St
Randolph St
Riverton Interurban Trail
Newell Ave
Tarbell Ave
Dover Ave
Lynn St
Milton St
Bucc Run
Dedham St
Newton St
Stuart St
Harmony Rd
Beal St
Luke St. Path
Wall St



Jaime Parker
Trails and Transportation Manager
Portland Trails
jaime@trails.org
329.6180

Non Sibi, Sed Omnibus

PLANNING BOARD REPORT
PORTLAND, MAINE

Subdivision and Renovation of Building
to Create 21 Dwelling Units and 3 (existing) Commercial/Retail/Office Units

50 Monument Square

Level III Subdivision Plan and Site Plan (Project ID #PL-000390-2018)
Inclusionary Zoning Conditional Use (Project ID# CU-454-2019)
CBL 027 F001
The Lancaster Group LLC, Applicant

Submitted to Portland Planning Board Public Hearing Date: February 26, 2019	Prepared by: Jean Fraser Date: February 22, 2019

I. INTRODUCTION

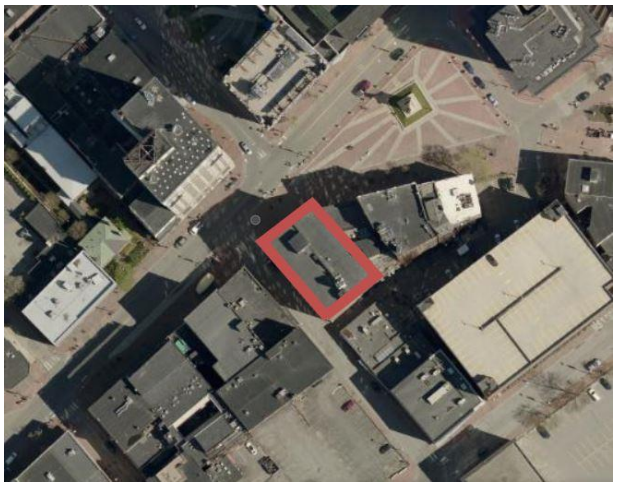
PK Realty Management, LLC, as agent for The Lancaster Group LLC, requests approval to the subdivision and site plan application and the Inclusionary Zoning Conditional Use application for the conversion of three of the upper stories of the 6-story existing building at 50 Monument Square into 21 dwelling units and associated renovations. The first, second and sixth floors are existing commercial, office and retail uses that will remain, and together with the new dwelling units result in a 24 unit subdivision. Minor external modifications are included in the proposals to support the new residential use, which are subject to review under the Historic Preservation Ordinance.

The submissions state that the proposed dwelling units will be rental apartments. The proposals are subject to the Inclusionary Zoning requirement for Workforce housing and 2 units plus a fee in lieu are proposed to meet this requirement.

The property is located within the B3 Downtown Business Zone, the Downtown Entertainment Overlay Zone, the Pedestrian Activity District and the Congress Street Historic District.

The proposals are largely internal, with the external work comprising:

- New configuration of the front entrance (including shopfront /doors/awning) facing Monument Square;
- Utility connections across the sidewalk into the ROW in Center Street;
- Additional pipes and vents on the Center Street lower level façade;
- Wall mounted lights and HVAC intakes and exhausts on the rear elevation facing the alley (Lancaster Lane).



The focus of the Planning Board review is the subdivision with several site plan elements such as utilities and impact on the ROW, as the external building proposals are minor and all are subject to Historic Preservation review and approval (see Attachment P for these elements).

Applicant: The Lancaster Group LLC
Agent: PK Realty Management LLC
Consultants: Engineer: Stantec Consulting Services Inc. (Stephen Bushey)
Architect: Archetype, PA (Katherine Detmer)
Surveyor: Owen Haskell Inc (John Swan)

II. REQUIRED REVIEWS

Review	Relevant Code
Inclusionary Zoning	Section 14-487 for the Provision of 2 one-bedroom workforce units and a fractional fee-in-lieu of $10,609
Subdivision	Section 14-497 for the division into 21 residential units and 3 commercial/retail/office units
Site Plan	Section 14-526 for the proposed multifamily residential development.

Waiver Requests - None requested.

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business; Downtown Entertainment Overlay Zone; Pedestrian Activity District; Congress Street Historic District
Existing Use	Commercial/retail/offices (3 units/6800 sf on first, second and sixth floors)
Proposed Use	Residential on floors 3,4 and 5 totaling 27,200 sf
Proposed Development Program	21 Residential Units
- Bedroom Mix	Seventeen 1-Bedroom, Four 2-Bedroom
Parcel Size	6,970 sq. ft.

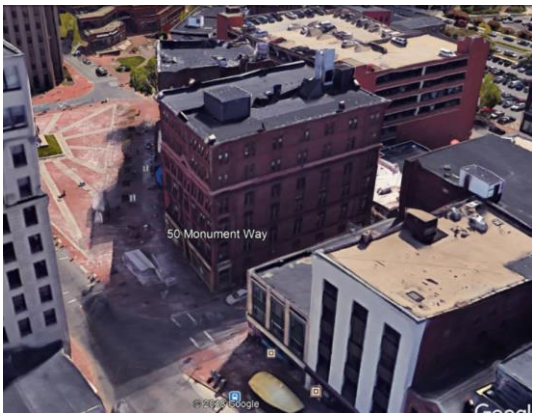
	Existing	*Proposed*	*Net Change*
Building Footprint (sq. ft.)	6,800 sf	6,800 sq ft	0
Building Floor Area (sq. ft.)	47,551 sf	47,551 sf	0
Impervious Surface Area (sq. ft.)	6,970sf	6,970sf	0
Parking Spaces	0	0	0
Bicycle Parking Spaces	0	2 In basement	2 In basement
Estimated Cost of Project	$ tbd		

IV. PUBLIC COMMENTS (There was no Planning Board Workshop on this project)

The Planning Division sent 102 notices of this agenda item to property owners within 500 feet of the site. Notice of this item also appeared in legal advertisements in the *Portland Press Herald* on February 15th and 18th , 2019. A Neighborhood Meeting was held on February 7th, 2019 attended by three neighbors. The Planning office has received one written public comment in support of the project.

V. EXISTING CONDITIONS AND PROJECT DESCRIPTION

The "site' is an existing 6 story brick building known as the Lancaster building which abuts Monument Square. The building is attached to the adjacent building at the lower level and backs onto a private alley (Lancaster Lane) in which it has rights of access and use.

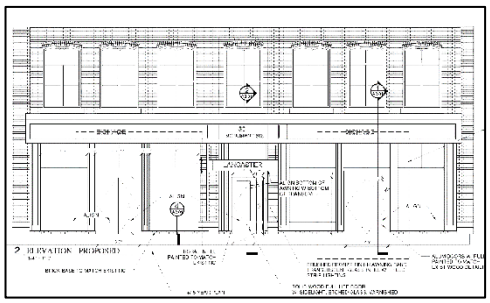


The proposals concentrate on the creation of 21 residential units on the third, fourth and fifth floors as shown in the Floor Plans (Plan P5), and include associated renovations to bring in utilities and provide ADA and safe access, heating and ventilation such as:

- Water and sewer connections to utilities in Center Street ROW (see Site and Utility Plan in Plan P2)
- Revisions to front shopfront and entrance doors facing Monument Square - modifications are needed to meet ADA requirements - plus new awning - see elevations below:

Existing

Proposed



- Addition of another boiler pipe at sidewalk level in Center Street
- Dryer vent at lower sidewalk level in Center Street
- Intake and Exhaust vents for HVAC - all levels on rear (alley) elevation

- Three new lights on alley elevation (montage at right shows existing light to remain but reviewers request replacement)

During the review the applicant was requested to address the question of the open trash storage bins in the alley (Lancaster Lane), which is a private lane benefitting abutting properties for servicing as per the deed in Attachment B. The Response Letter (Attachment O) indicates that these outside bins are not associated with the subject building and that the proposals include a trash and recycling tote storage room in the basement for residents of the new 21 units to use - and this will be accessed for tote removal from Lancaster Lane.

VI. RIGHT, TITLE AND INTEREST AND FINANCIAL CAPACITY

Lancaster Group LLC own the building and the deed is included in Attachment B. PK Realty Management LLC is the local agent and authorized to make the application and take forward the project (see letter in Attachment B). As noted above, the applicant's rights in the alley at the rear, known as Lancaster Lane, are described in a 1913 deed that is referenced on the draft plan (Plan P3) and included in part in Attachment B.

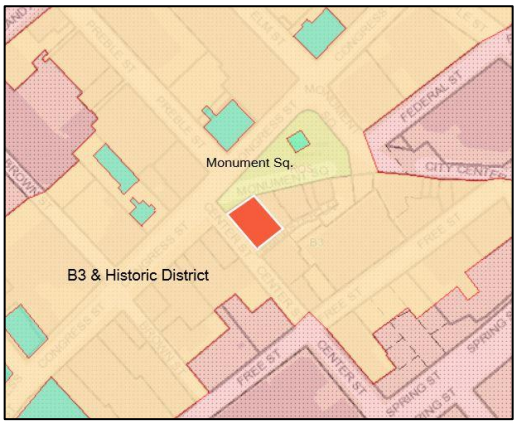
The proposed new awning on the frontage to Monument Square would require a license from the City to overhang city property, and a condition is recommended to address this requirement.

A letter confirming the financial capacity of The Lancaster Group LLC was provided by the Camden National Bank dated 7.30.2018 and included in Attachment C.

VII. ZONING ANALYSIS

Multifamily dwellings are permitted in the B3 zone and the existing building is grandfathered in respect of the PAD and dimensional requirements.

There is no zoning requirement for parking as the property is within the Congress Street Historic District, and the proposal to add 21 dwellings is a change of use in the B3 zone.



VIII. DEVELOPMENT REVIEW

A. INCLUSIONARY ZONING, SUBDIVISION and SITE PLAN SUBMISSION REQUIREMENTS (Sections 14-487, 14-497 & 14-527). The application meets the basic submission requirements. The draft Subdivision Plat (Plan P3) notes that there is 1 mercantile unit, 2 business units and 21 residential units to total 24 subdivided units. The plat will require revisions to more clearly describe the location, type and size of all units. The submitted Site and Utility Plan contains many elements that should be included on the Subdivision Plat. The standard Subdivision Condition of Approval addresses this issue.

B. INCLUSIONARY ZONING REVIEW (See Memo from Housing Program Manager in Attachment 2)

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 the Ordinance Division 30, Section 14-487 *Ensuring Workforce Housing.* This requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement. The in-lieu fee shall be paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued.

The development located at 50 Monument Square proposes the creation of 21 units of rental housing consisting of nineteen (19) one-bedroom units, and two (2) two-bedroom units. Based on the requirements outlined in Section 14-487, the development is required to provide a minimum of two (2) one-bedroom workforce units and pay a fractional obligation of 10% as a fee-in-lieu. A fractional fee-in-lieu results when the calculation of a project's inclusionary obligation results in a fractional unit. The Applicant has elected to provide two (2) one-bedroom units on-site, and pay a fractional fee-in-lieu of $10,609 into the City's Housing Trust Fund. Should at a later date any change in total unit count be considered, a revised proportional fee-in-

lieu payment will also be required. The designated Workforce unit will be restricted to households earning up to 100% of Area Median Income (AMI). As such, the project has met the minimum requirements set forth in Sec. 14-487.
Staff recommends the Planning Board approve this Conditional Use provided the Applicant agrees to:

1) Pay an agreed upon fee-in-lieu of $10,609 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy.

2) Complies with all staff recommendations as detailed in this memo, and the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Unit and will be filed as covenant to the property's deed with the Cumberland County Registry of Deeds prior to issuance of the certificate of occupancy.

(the detailed wording of the conditions has been revised to reflect the timetable for these to be met)

B. SUBDIVISION REVIEW

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) I), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)
   Staff finds the proposed project is in conformance with this standard.

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The applicant has received a capacity letter from the Portland Water District (Attachment K).

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The staff finds the proposal will not cause unreasonable traffic congestion.

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)
   The applicant has received a letter from the City confirming there is adequate wastewater capacity (Attachment K).

5. Scenic Beauty, Natural, Historic, Habitat and other Resources (Section 14-497 (a) 8)
   The proposed project will not have an adverse effect on the scenic or natural beauty of the area, thus the proposed project is in conformance with this standard.

6. Comprehensive Plan (Section 14-497 (a) 9)
   The proposed new 21 dwelling units for rent meet the following goals as set out in *Portland's Plan* 2030 (adopted 2017):

   - *Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.*
   - *Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.*
   - *Pursue policies to enable people who work in Portland to have the option to live in Portland.*

C. 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
b. Access and Circulation
c. Public Transit Access
d. Parking
e. Transportation Demand Management (TDM)

STAFF COMMENT: The proposed project is not anticipated to have any significant adverse effect on regional traffic, and parking is not required (under Zoning for the proposed new dwelling units).

A satisfactory trash storage area is provided within the basement of the building and accessible from Lancaster Lane (See Floor plans in Plan P5).

The sidewalks are in good condition in the area around the building, but the proposals require utility connections that go into Center Street, and a suggested condition requires that the sidewalk and street shall be repaired to meet City standards and this work shall be performed by a contractor licensed with the city to do work within the ROW.

The Public Transit standards apply to this project but there are no requirements as the transit facility criteria have been met in this location. The TDM standards do not apply to this project.

2. ***Environmental Quality Standards***
   a. Preservation of Significant Natural Features
   b. Landscaping and Landscape Preservation including Street Trees
   c. Water Quality, Storm Water Management and Erosion Control

STAFF COMMENT: The building occupies the entire site and the rear alley is reserved for servicing this and other abutting properties. The provision of street trees is a requirement for this project, and the applicant has confirmed (Attachment O) that they intend to address this requirement through a contribution to the City's Tree Fund and this is acceptable. The Technical Standards require a contribution of $400 per street tree, and the suggested condition of approval requires a contribution of $8400 to meet this site plan standard.

The Peer Engineer Lauren Swett has confirmed that there are no concerns regarding stormwater management except that the details for the utility connections and reinstatement of the sidewalks need to be submitted for review and approval (Attachment 1).

3. ***Public Infrastructure and Community Safety Standards***
   a. Consistency with Master Plans
   b. Public Safety and Fire Prevention
   c. Availability and Adequate Capacity of Public Utilities

STAFF COMMENT: The proposals address all of these standards as the building is sprinkled and has an acceptable rear egress door and stairs, and the lighting in the rear alley is proposed to be upgraded to improve safety and security (see below). Both the water and wastewater capacity letters have been submitted (Attachment K) although the Portland Water District letter has not confirmed the adequacy of the existing 6 inch fire water supply from Congress Street and that should be confirmed prior to the issuance of the building permit.

4. ***Site Design Standards***

a. **Massing, Ventilation and Wind Impact, Shadows, Snow and Ice Loading, View Corridors,** Noise and **Vibration. Signage and Wayfinding, Zoning Related Design Standards**

STAFF COMMENT: The building is an existing structure within an historic district, with a number of minor modifications, and these standards do not apply.

b. **Historic Resources:**

STAFF COMMENT: The building is located within the Congress Street Historic District and the proposed exterior building modifications (listed in V above) all require Historic Preservation review and approval. These fall into two categories:

- Monument Square frontage modifications (shopfront, entrance design, new awning) as shown in the Building Elevation (Plan P4) and the compilation of external elements requiring HP review (Submittal Document Attachment P) were previously reviewed by the Historic Preservation Board. These modifications are now being reconsidered in order to fully meet ADA requirements. The suggested condition of approval is based on the attached memo from the Historic Preservation Program Manager that outlines the Historic Preservation review to date and notes they are comfortable with the timetable for finalizing these details (Attachment 3).

- Minor elements on the other two elevations, such as pipes, vents and lights: Attachment P includes photomontages showing the intended location for additional exterior vents, pipes and lights to serve the new dwelling units. It is understood that the details are currently being presented to and reviewed by the Historic Preservation Program Manager and these are recommended to be reviewed and approved prior to the issuance of the building permit.

c. **Exterior Lighting**

STAFF COMMENT: The submissions are not consistent regarding the proposal for lighting in the rear alley where there is currently a security light that does not meet the Site Lighting Technical Standards. The most recent proposal (referred to in Attachments O and P) proposes that the existing light remain and two new lights (that meet the Technical Standards) be installed to either side of the existing light. The staff recommend that the existing security light be replaced using the same fixture specification as the two proposed new lights, and note that the fixture will require Historic Preservation approval.

d. **Multi-Family Design Standards**

STAFF COMMENT: The proposals are for a multi-family development and therefore must meet the following standards:

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: These standards do not apply as the development is within an existing building.

3. *Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;*

Staff comment: The building covers all of the lot and there is no opportunity for additional planting.

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 and will also be reviewed under the building code regulations when the building permit is reviewed.

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: There are no parking areas associated with the proposal.

VII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed inclusionary zoning, subdivision and site plan applications for the creation of twenty-one new residential units (including two workforce units) and three existing non-residential units, and associated exterior renovations, for the existing building at 50 Monument Square.

VIII. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

A. INCLUSIONARY ZONING CONDITIONAL USE

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 26, 2019 for application #CU-454-2019 (50 Monument Square) relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board hearing:

The Planning Board finds the conditional use (**is/is not)** in conformance with the standards of the land use code and (**approves/does not approve)** the conditional use application, subject to the following conditions of approval:

Prior to the Issuance of a Building Permit

1. That the proposals shall comply with all staff recommendations as detailed in the Housing Program Manager's Memo of February 20, 2019, and the Applicant and the City shall enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Units.

Prior to the Issuance of a Certificate of Occupancy

2. That the applicant shall pay an agreed upon fee-in-lieu of $10,609 into the City's Housing Trust Fund prior to the issuance of the certificate of occupancy.

3. The Affordable Housing Agreement shall be filed as covenant to the property's deed with the Cumberland County Registry of Deeds prior to issuance of the certificate of occupancy.

B. SUBDIVISION 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 February 26, 2019 for application #PL000390-2018 (50 Monument Square) 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 condition of approval:

Prior to the Submission of the Plat for Planning Board Signature

4. That the Subdivision Plat shall be finalized to the satisfaction of the Planning Authority, Corporation Counsel, and Department of Public Works, and include clear descriptions of the number, location, type and size of all subdivided units, along with relevant notes and conditions prior to submission for Planning Board signature.

Prior to the Issuance of a Building Permit

5. That the signed Subdivision Plat shall be recorded at the Cumberland County Registry of Deeds.

Ongoing

6. That in the event the property is converted to a condominium, that the recorded condominium documents shall be copied to the Planning Authority.

C. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 26, 2019 for application #PL000390-2018 (50 Monument Square) 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:

Prior to the Issuance of a Building Permit (unless excepted)

7. *HP Review:* That the applicant shall obtain Historic Preservation approval for the revised entrance design on the Monument Square facade prior to any demolition or alterations to the facade, and shall obtain Historic Preservation approval for all other exterior alterations or additions (vents, pipes, conduit, lights, etc.) prior to issuance of a building permit.

8. *Work in the ROW:* The details for the proposed utility connections and reinstatement of the sidewalks and streets shall be submitted for review and approval prior to the issuance of a building permit and a street opening permit. The sidewalk and street shall be repaired to meet City standards and performed by a contractor licensed with the city to do work within the ROW. If any of the work shown on the submitted plans has been completed, documentation of DPW approval shall be submitted.

9. *License for new awning for area overhanging ROW:* That the applicant shall provide legal documents and plans and take all necessary steps to secure a license from the City for the awning where it overhangs city property, and record the signed license prior to the commencement of any work related to the proposed new awning.

10. *Water capacity for sprinkler:* That the applicant shall obtain confirmation that the water supply for the sprinkler system is adequate prior to the issuance of the building permit.

11. That the applicant shall make a contribution of $8400 to the city's tree fund to address the Street Tree Site plan requirements.

Prior to the issuance of a Certificate of Occupancy

12. That the existing security light on the rear elevation (facing Lancaster Lane) shall be replaced with a light fixture that matches the two proposed lights to be installed on that elevation, and that the fixtures shall meet the City's Site Lighting Standards in Section 12 of the Technical Manual unless the Historic Preservation review determines otherwise.

13. That a separate "change of use" permit for the new residential units shall be obtained from the Permitting and Inspections Division if required.

ATTACHMENTS

Planning Board Report Attachments

1. Peer Engineer Final Comments
2. Housing Program Manager Memo Re IZ/Workforce Housing
3. Historic Preservation Program Manager Memo summarizing HP review

Public Comments

PC 1 Maura Rodway 2-7-19

Applicant's Submittals

A. Cover letter, Description & Waiver requests
B. RTI documents
C. Financial Capacity
D. Technical Capability
E. Transportation
F. Environmental_and_landscape_features
G. Environmental_and_stormwater
H. Public_infrastructure&safety
I. Site-design
J. Zoning assessment
K. Utility Capacity Letters - 50 Monument Sq
L. Accessibility statement
M. Neighborhood Meeting Certification
N. Construction-mgmt-plan
O. Comment Response letter 2.11.19
P. External Elements requiring HP approval

Applicant's Plans

P1 Survey
P2 Site and Utility Plan
P3 Draft Subdivision Plan
P4 Building Elevation
P5 Floorplans

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

50 Monument Square

1 message

Lauren Swett <lswett@woodardcurran.com> Wed, Feb 20, 2019 at 11:00 AM
To: Jean Fraser <jf@portlandmaine.gov>

Hi Jean,

50 Monument Square did not show up in my Energov list, so I'm providing my comments via email.

- The Applicant has provided adequate confirmation of utility ability to serve. The plans do not include any details. Standard details associated with utility installation should be provided.
- Additional detail should be provided on the sidewalk and street repair required for the utility installation. Standard details associated with brick sidewalk, pavement and curbing repair should be provided, and extents of these repairs should be clearly shown on the plan.

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

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CITY OF PORTLAND
Planning & Urban Development Department
Housing and Community Development Division

To: Jean Fraser, Planner, Planning & Urban Development Department
From: Victoria Volent, Housing Program Manager, Housing & Community Development Division
Date: February 20, 2019
Subject: 50 Monument Square– Inclusionary Zoning Conditional Use

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement. The in-lieu fee shall be paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued.

The development located at 50 Monument Square proposes the creation of 21 units of rental housing consisting of nineteen (19) one-bedroom units, and two (2) two-bedroom units. Based on the requirements outlined in Section 14-487, the development is required to provide a minimum of two (2) one-bedroom workforce units and pay a fractional obligation of 10% as a fee-in-lieu. A fractional fee-in-lieu results when the calculation of a project's inclusionary obligation results in a fractional unit. The Applicant has elected to provide two (2) one-bedroom units on-site, and pay a fractional fee-in-lieu of $10,609 into the City's Housing Trust Fund. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required. The designated Workforce unit will be restricted to households earning up to 100% of Area Median Income (AMI). As such, the project has met the minimum requirements set forth in Sec. 14-487.

Staff recommends the Planning Board Approve this Conditional Use provided the Applicant agrees to:

1) Pay an agreed upon fee-in-lieu of $10,609 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy.

2) Complies with all staff recommendations as detailed in this memo, and the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) before a Building Permit may be issued. The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Unit and will be filed as covenant to the property's deed with the Cumberland County Registry of Deeds prior to issuance of the certificate of occupancy.

Sincerely,

Victoria Volent, Housing Program Manager

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Status of HP review of 50 Monument Square project

1 message

Deb Andrews <dga@portlandmaine.gov> Thu, Feb 21, 2019 at 11:16 AM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: "Barhydt, Barbara" <bab@portlandmaine.gov>

Jean,

I understand that the Planning Board is reviewing a proposal for the conversion of the upper floors of the Lancaster Block at 50 Monument Square to housing. You have asked for a status report on any required Historic Preservation approvals for the project.

In August 2018, the Historic Preservation Board approved the applicant's proposal for the comprehensive exterior renovation of the existing ground floor facade of the Lancaster Block. The project calls for the redesign of the storefront bays as well as the center entry. The redesign proposal was patterned closely after the documented historic appearance of the storefronts, with some modifications to reflect existing structural constraints. No work has commenced on the project to date.

Katherine Detmer of Archetype recently informed this office that the position of the main entry might need to be adjusted in order to meet ADA requirements. We discussed the relative merits of recessing the entry further back from the front wall plane versus adjusting the grade within the public way to accommodate the original proposed position. I noted that the HP office has received several requests in recent months to install gates in front of existing recessed entries to discourage loitering and I suggested that that issue be considered when exploring potential options for meeting ADA requirements.

I understand that Archetype is still investigating options for treatment of the front entrance. I also understand that in conjunction with the planned conversion of the upper floors to housing that a number of mechanicals and vents are now being proposed on the rear and Center Street elevations of the building. This is to confirm that any revised treatment of the building's main entrance will require Historic Preservation approval as will any other exterior alterations or additions.

To meet this requirement, I suggest the following Planning Board condition of approval:
That the applicant shall obtain Historic Preservation approval for the revised entrance design on the Monument Square facade prior to any demolition or alterations to the facade, and shall obtain Historic Preservation approval for all other exterior alterations or additions (vents, pipes, conduit, lights, etc.) prior to issuance of a building permit.

Deb

--
Deb Andrews
Historic Preservation Program Manager
City of Portland
389 Congress Street
Portland, Maine 04101
(207) 874-8726

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

October 25, 2018
Revised November 2, 2018

Ms. Barbara Barhydt
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Application for Level III Site Plan Application
50 Monument Square
Tax Map 027/Lot F001

Dear Barbara:

On behalf of **PK Realty Mgmt** (Applicant), our office is pleased to provide the accompanying package of submission materials for a Level III Site Plan & Subdivision Application. This submission package is intended to meet the City's Level III Site Plan Submission requirements as outlined in the Level III Site Plan Checklist as well as Section 14-526 of the Code of Ordinances.

PROJECT DESCRIPTION

Existing Conditions

The project site is currently owned by The Lancaster Group, LLC and consists of 0.16 acres of land that is included in the City of Portland's Tax Assessors records as Tax Map 27/Block F/Lot 1 and included in the July 24, 2018 Boundary and Topographic Survey prepared by Owen Haskell, Inc. A copy of the deed is included in the Right, Title and Interest section. The site is currently in the B3 Downtown Business Zone, DEOZ Downtown Entertainment Overlay Zone, and the PAD Zone. The current uses of the site are allowable in accordance with B3 zone as well as compliance in the PAD zone.

Proposed Development

PK Realty Mgmt is proposing to construct 21 residential units in an existing 47,551 SF building located at 50 Monument Square. The applicant is proposing the reuse of the vacant 3rd, 4th, and 5th floors of the building to construct the residential units. The 1st and 2nd floors of the building are currently occupied by retail/commercial tenants and the uses will remain.

There will be no new impervious area resulting from the construction as this will be a reuse of an existing building with no building additions. The development will also include possible electrical utility, water, drainage upgrades, etc., for the redevelopment, as required. No other significant changes to the site conditions are proposed. The applicant is seeking Level III Site Plan & Subdivision approval to allow the submission of a Building Permit application for immediate construction. Our office is currently working on a recording plat with the Surveyor and will submit this under separate cover.

CLOSURE

As outlined in the Level III Site Plan submission requirements and checklist, we will upload the following materials:

- General Application Documents
  - Cover Letter/Project Description
  - Level III Application Checklist
  - Right, Title and Interest
  - Zoning Assessment
  - Existing and/or Proposed Easements (survey plan)
  - Waiver Request and Waiver Table
  - Financial Capacity
  - Technical Capability
- Transportation
- Environmental and Landscape Features
- Environmental and Stormwater
- Public Infrastructure and Safety
- Site Design
- Construction Management Plan
- Site Plan and Architectural Plans

On behalf of PK Realty Mgmt, we look forward to your continued assistance in review of the proposed project.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Darrin B. Stairs, PE
Project Manager
Tel: 207-887-3406
Darrin.stairs@stantec.com

V:\1953\resource\fst\Admin Resources\PROPOSALS\Stantec Proposals\50 Monument Square - Portland, ME\permit\ltr_barhydt_level3_20181025.docx

Merrill Lynch

50 Monument Way

Legend

50 Monument Way

30 ft

Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

FOR LEASE
UPPER FLOORS WATER VIEWS
207 772 1333
CBRE | The Boston Company

MORGAN
Florence
LOCAL MUSCLE

LANCASTER
1881
FOR LEASE
UPPER FLOORS WATER VIEWS
207 772 1333
FedEx Office
50
MONUMENT SQ.
FedEx Office
COPY & PRINT
PACK & SHIP
SIGNS & BANNERS
OFFICE SUPPLIES
DIRECT MAIL
OPEN
NO TURN ON RED
DO NOT ENTER
BEVERAGES

50 Monument Square

Level 2 Submission

Archetype Architects, Portland, Maine

7-27-18

Project Description

We are proposing the construction of 21 residential units on the 3rd 4th and 5th floors of 50 Monument Square. The spaces were historically a business use. All are currently vacant. The 4th and 5th floors have not had tenants for some years. Limited support space including laundry, bike storage and tenant storage will be in the basement.

Exterior work is currently being reviewed by the historic preservation and will include:

1. Replacement of the existing building door and addition of a new canopy.
2. New entry doors to the retail spaces on Monument Square
3. 3 new wall mounted security lights at building rear.

Compliance with applicable zoning

The building is in a B-3. Multi- family residential is a permitted use. The purpose of the zone is:

1. Encourage increased housing opportunity for a diverse residential population.
2. Preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures

Our intent is modest sized rental housing with the preservation of the building exterior.

The existing building has near 100% lot coverage. There will be no site work other than utility upgrades.

The extant of exterior work consist of a new entry door and sidelight and security lighting on rear alley way. We are currently reviewing these changes as well as other possible future work on the existing storefront with the Historic Review Board .

Parking is not required for a change of use per sec. 332.1 (e)

Portland, Maine | Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes to the left

General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

Please submit each document as a separate PDF file.

TRANSPORTATION

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

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ☐ ✔ ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ☐ ✔ ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔ ✔	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

SITE DESIGN	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appendix 1)

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

☑ **RECENT BOUNDARY SURVEY** (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☑ Existing Conditions

- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☑ Proposed Site Plan

- Ground floor area, and grade elevations for all buildings

☐ Access, Circulation, and Parking

- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☐ Site Considerations

- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☑ **UTILITY PLAN** including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

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

GENERAL APPLICATION DOCUMENTS

WAIVER REQUESTS

Not Application – No waivers are being requested.

GENERAL APPLICATION DOCUMENTS

RIGHT, TITLE & INTEREST

A Quitclaim Deed from 50 Monument LLC to The Lancaster Group LLC was executed on April 13, 2018 for the subject property. The Deed attached to this document was recorded in the Cumberland County Registry of Deeds as Book 16960; page 34780.

DLN: 1001840025115

QUITCLAIM DEED
WITH COVENANT

KNOW ALL PERSONS BY THESE PRESENTS that **50 Monument, LLC**, a Maine Limited Liability Company with a mailing address of P.O. Box 1671, Blue Hill, ME 04614 ("Grantor"), for consideration paid, grants to **The Lancaster Group LLC**, a limited liability company formed under the laws of the State of Maine, whose mailing address is 1150 Sunset Ridge, Laguna Beach, CA 92651, with Quitclaim Covenant, a certain lot or parcel of land with buildings and improvements located at 50 Monument Square in the City of Portland, County of Cumberland and State of Maine, and more particularly described in Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to Grantor herein by deed of 50 Monument Square LLC, dated September 30, 2015, and recorded in the Cumberland County Registry of Deeds in Book 32630, Page 148.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, the said Meredith Richardson, Manager of 50 Monument, LLC has caused this instrument to be executed this 13 day of the month of April, 2018

50 MONUMENT, LLC

Witness

By: _____
Meredith Richardson
Its Manager

STATE OF MAINE
Cumberland, ss.

April 13, 2018

Personally appeared the above Meredith Richardson, in his aforesaid capacity, and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said limited liability company.

_____
Notary Public/Attorney at Law

David J. Perkins
Printed Name of Notary:
My commission expires:

EXHIBIT A

A certain lot or parcel of land, together with the buildings and improvements thereon, situated at the intersection of the southerly side of Congress Street and the easterly side of Center Street, in the City of Portland, County of Cumberland, and State of Maine, being bounded and described as follows:

Beginning at the intersection of the southerly side of Congress Street with the easterly side of Center Street;

Thence easterly by Congress Street a distance of 65.83 feet to a party wall line established between J.B. Brown and A.L. Emerson Clapp dated September 11, 1851, and recorded in the Cumberland County Registry of Deeds in Book 231, Page 293, being property conveyed by Jack I. Novic et al to Maine Surplus Sale Corporation by Deed dated January 24, 1978 and recorded in the Cumberland County Registry of Deeds in Book 4166, Page 81;

Thence by property of said Maine Surplus Sales Corporation and said party wall line southeasterly with an included angle of 97° 05' 35", a distance of 98.45 feet to a passageway known as Lancaster Lane, established by Agreement between J.B. Brown & Sons and other dated April 11, 1913 and recorded in said Registry of Deeds in Book 910, Page 187;

Thence by said passageway westerly with an included angle of 89° 15' 00", a distance of 67.84 feet to said Center Street;

Thence by said Center Street northwesterly with an included angle of 89° 23' 25", a distance of 105.72 feet to the point of beginning, making an included angle of 84° 16' with Congress Street;

Also conveying all rights, title and interest of Grantor in and to Lancaster Lane and all other rights of Grantor as set forth in a certain Agreement between J.B. Brown & Sons and others, dated April 11, 1913, and recorded in said Registry of Deeds in Book 910, Page 187, subject, however, to the rights of others, as set forth in said Agreement.

The above-described premises are further conveyed subject to but with the benefit of an Agreement between J.B. Brown and A.L. Emerson Clapp dated September 11, 1851 and recorded in said Registry of Deeds in Book 231, Page 293.

Received
Recorded Register of Deeds
Apr 17,2018 01:15:27P
Cumberland County
Nancy A. Lane

Attn: Jean Fraser
City of Portland
Planning Department

2/20/19

Dear Jean,

This letter is provided to show that Jennifer Packard or David Packard, in their capacity as managers of PK Realty Management, LLC, are legally authorized to submit applications to the City of Portland on behalf of The Lancaster Group, LLC for changes to the status of a building located at 50 Monument Square. They are also authorized to otherwise represent The Lancaster Group, LLC in any hearings before the City. I am a Managing Member of The Lancaster Group, LLC.

Yours Sincerely,

Richard H. Packard
Managing Member
The Lancaster Group, LLC

Submitted to shows rights in rear alley

tions therein contained and to redemption according to law.

IN WITNESS WHEREOF, I the said Bertha W. Knight have hereunto set my hand and seal this fourth day of March A. D. 1911.

Signed, sealed and delivered in presence of

William Lyons Bertha W. Knight Seal

State of Maine. Cumberland, ss. March 4th, 1911. Then personally appeared the above named Bertha W. Knight and acknowledged the foregoing instrument to be her free act and deed, before me,

William Lyons

Justice of the Peace.

Received April 30, 1913, at 3h P. M. and recorded according to the original

---

Norton ✓ to Peacock Assignment

KNOW ALL MEN BY THESE PRESENTS, that I, Sarah T. Norton, of Augusta in the County of Kennebec and State of Maine, owner of a certain mortgage given by Mary E. Peacock of Farmingdale in said County to said Sarah T. Norton dated the twenty-third of October A. D. 1894 and recorded in Cumberland County Registry of Deeds, Book 616, Page 198, in consideration of eight hundred fifty and fifteen one-hundredths dollars, paid by Martha H. Peacock of Freeport in the County of Cumberland in said State the receipt whereof is hereby acknowledged, do hereby sell, assign, transfer and convey unto the said Martha H. Peacock the said mortgage deed, the note, debt, and claim thereby secured, and all my right, title and interest, by virtue of said mortgage, in and to the real estate therein described.

TO HAVE AND TO HOLD the same to the said Martha H. Peacock, and his heirs and assigns to their own use and behoof forever, subject, nevertheless, to the conditions therein contained and to redemption according to law.

IN WITNESS WHEREOF, I the said Sarah T. Norton have hereunto set my hand and seal this seventeenth day of May A. D. 1906.

Signed, sealed and delivered in presence of

Lendall Titcomb Sarah T. Norton Seal

State of Maine. Kennebec, ss. Augusta, May 18th, 1906. Then personally appeared the above named Sarah T. Norton and acknowledged the foregoing instrument to be her free act and deed, before me,

Lendall Titcomb

Justice of the Peace.

Received April 30, 1913, at 3h P. M. and recorded according to the original

---

J.B.Brown & Sons & ✓ Agreement

KNOW ALL MEN BY THESE PRESENTS, that whereas on the second day of October A. D. 1813, a deed of partition was made between Zachariah Marston as Guardian to Francis Hart and Sally Hart, minors, on the one part, and David Ross of the other part as appears by their deed duly registered in the Registry of Deeds for the County of Cumberland, Book 67, Page 423, of certain real estate in said deed described-

And whereas in the same partition deed a certain portion of the land in the

rear of the four stores of which partition was made as aforesaid, was reserved as a passageway to be used in common for the use and accomodation of the occupants of said stores -

And whereas by an agreement dated October 24, 1851, and recorded in the Registry of Deeds for the County of Cumberland, Book 231, Page 399, all the then owners of the property so partitioned, namely; Eben D. Choate, Sarah Choate, Alpheus Shaw and Ezekiel Whitman, all of said Portland, made a further and more specific description and delimitation of the passageway aforesaid and afterward building was had in accordance with said agreement -

And whereas by an agreement dated September 11, 1851, and recorded in the Registry of Deeds for the County of Cumberland Book 231, Page 331, certain other persons, viz: John B. Brown, Andrew L. E. Clapp, Alpheus Shaw and Ezekiel Whitman all of said Portland; and Benjamin Willis of Boston, owners of land extending from Center Street to the land partitioned as aforesaid, created a passageway fifteen feet in the clear and connecting the above mentioned passageway with Center Street-

And whereas by various additions and changes in the several buildings or structures contiguous thereto, the limits and boundaries of these several passageways have become confused and uncertain and it seems desireable and advantageous to redefine and delimit these passageways -

NOW THEREFORE J. B. Brown & Sons, a corporation duly organized and existing under the laws of the State of Maine, by its President and its Treasurer thereunto duly authorized by the By-Laws of said corporation, James P. Baxter, Bessie A. Donahue, Fred N. Dow and Malcolm F. Hammond, all of said Portland, and Charles Q. Clapp of North Weymouth in the County of Norfolk and the State of Massachusetts, do herewith declare that they are all and every the parties owning or being seized of property adjacent to and abutting upon these passageways leading from Center Street in said Portland, now practically one passageway and commonly known as "Lancaster Lane" and that for and in consideration of the mutual agreements and covenants hereinafter set forth they each, jointly and severally, for themselves, their heirs, successors and assigns do make the following agreements and covenants with the others, jointly and severally, to themselves, their heirs, successors and assigns;

First: That the bounding lines of the passageway shall be in accordance with and determined by the following description, to wit: Beginning on the easterly side of Center Street at the granite plinth of the block of stores belonging to J. B. Brown & Sons and now occupied by Loring, Short & Harmon, said point being 105.72 (one hundred five and seventy-two one hundredths) feet southerly of Congress Street at Monument Square; thence easterly from said plinth 100.39 (one hundred and thirty-nine one-hundredths) feet on a straight line to the present brick corner of a block of stores fronting on Monument Square that James P. Baxter bought of Chas. H. Adams, and being a block of stores on land formerly owned by Benjamin Willis; thence easterly on a course angling slightly to the south or right and by the southerly face of the brick wall of said Baxter's building 33.78 (thirty three

and seventy-eight one hundredths) feet to the present easterly corner on land above referred to; thence continuing easterly on a slight angle to the south or right determined by a line parallel with and 13.1 (thirteen and one-tenth) feet northerly of the brick line of the rear building on the southerly side of the passageway being described, occupied by the Express-Advertiser Publishing Co. and owned by Fred N. Dow and Malcolm F. Hammond, 69.3 (sixty nine and three-tenths) feet to the westerly face of a brick building on other land of said Dow and Hammond (not included in this agreement) - said line passes in the rear and southerly of buildings owned by James P. Baxter, Bessie A. Donahue and J. B. Brown & Sons -: thence southeasterly by the westerly face of the brick wall on said last-described land about 12 1/2 (twelve and one-half) feet to a point 8/10 (eight tenths) feet northerly of the brick wall of said rear building occupied by the Express-Advertiser Publishing Co. and above referred to as owned by said Dow and Hammond; thence westerly on a line parallel with and 8/10 (eight tenths) feet northerly of the brick wall of said last mentioned building 49.9 (forty-nine and nine-tenths) feet to a point opposite its northwesterly corner; thence southeasterly by the westerly face of the brick wall of said building 8.0 (eight) feet; thence southwesterly parallel with the line of northerly wall of said building 20.0 (twenty) feet: thence northerly parallel with the westerly wall of said building 5.0 (five) feet to a point 15 (fifteen) feet southerly of the line of the brick wall on the northerly side of the passageway being described and owned by said James P. Baxter and referred to and being on land formerly owned by Benjamin Willis; thence westerly parallel with and 15 (fifteen) feet southerly of said last mentioned brick wall about 25 1/2 (twenty-five and one-half) feet to a point one tenth of a foot northerly of the corner of a brick building on land of J. B. Brown & Sons; thence continuing westerly by said corporation's land 45.96 (forty-five and ninety-six one hundredths) feet to the northeasterly corner of a brick block fronting on Center Street and on said corporations's land; thence by the northerly wall of said block 59.05 (fifty-nine and five one hundred) feet to the northwesterly corner of said building at Center Street: thence northerly by Center Street 15 (fifteen) feet to the point of beginning.

Second: That the location of the passageway on the plan herewith attached and made a part hereof shall be accepted and considered as additionally confirming the location of the bounding lines above described.

Third: That nothing in this agreement shall debar the owners of any part of the fee of said described passageway from occupation beneath it upon constructing and maintaining a thoroughly usuable surface area over the limits owned by them in fee, and nothing in this agreement shall debar the abutting owners upon said passageway who not only own the fee of said passageway but land upon both sides of the same from building over said passageway; provided they leave a clearance of 12 (twelve) feet or more above the top surface of said passageway.

Fourth: That each party over whose land the aforesaid passageway traverses or passes doth hereby give, grant, bargain, sell and convey to each and every the

1894

SCALE 20 FT. = 1 INCH
APRIL 1913
E.C. JORDAN & COMPANY
CIVIL ENGINEERS

J.B. BROWN & SONS CORP.

11.79

BUILT 1910 AS PARTY WALL

11.82

8.79

88.36

J.B. BROWN & SONS CORP.

59.13

PLINTH ON CENTER 0.3

15

CENTER ST.

0.2

.68

J.B. BROWN & SONS CORP.

45.63

45.86

14.86

J.P. BAXTER

FRED N. DOW & M.F. HAMMOND

0.68

32.1

45.96

PASSAGE WAY

100.09

20

5

24.82

26½

15

0.8

0.8

49.9

69.3

12.5

15

33.78

0.36

105.72

J.B. BROWN & SONS CORP.

66±

J.B. BROWN & SONS CORP.

BESSIE A. DONAHUE

J.P. BAXTER

J.P. BAXTER

CHAS. Q. CLAPP

41.3

20.48

20.48

43.74

47.5

MIDDLE ST.

others all that part of his land contained within the metes and bounds of said passageway hereinbefore described to forever remain in common for the use and convenience of the several parties to pass over and upon with Teams and otherways as they may have occasion, so however as that the same shall not be incumbered at any time by any party by depositing any article to remain thereon or any obstruction other than shall necessarily result from the use of the same as a convenient passageway and each of the parties covenant with the other that they shall not in any wise obstruct or incumber the same otherwise than as before provided.

Fifth: That each and every the other parties hereby remise, release, bargain, sell, convey and forever quit-claim all its right, title and interest in and to any and all of the land of any of the several parties which was formerly contained in such passageways or passageway but is not so contained or included in the passageway herein agreed upon, and any benefit and use therein, and each and every the other parties hereby agree that the several parties may use, occupy and enjoy said property not so contained or included free from incumbrances or easements of any sort or kind whatsoever.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this eleventh day of April in the year of our Lord, one thousand nine hundred thirteen.

Signed, sealed and delivered in presence of

Charles L. Marston
to N. C. B. and P.G.B.

J. B. Brown &. Sons Corporate Seal
By Nathan C.Brown,Acting President Seal
Philip G. Brown, Treasurer

N. M. Howarth to J. P. B.

James P. Baxter Seal

George E. Fogg to
F.N.D. and M.F.H. and B.A.D.

Fred N. Dow Seal

Malcolm F. Hammond Seal

Bessie A. Donahue Seal

Chas. Quincy Clapp Seal

State of Maine. County of Cumberland, ss. April 11, 1913. A. D. Then personally appeared the above named Nathan C. Brown, Acting President, and Philip G. Brown Treasurer, of the J. B. Brown & Sons, and severally acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

Before me, Charles L. Marston

Justice of the Peace.

State of Maine. Cumberland, ss. April 11, 1913. Then personally appeared the above named James P. Baxter, Fred N. Dow, Malcolm F. Hammond and Bessie A. Donahue and severally acknowledged the foregoing instrument to be their free act and deed.

Before me, George E. Fogg

Justice of the Peace.

State of Massachusetts. Norfolk, ss. April 28, 1913. Then personally appeared the above named Charles Q. Clapp and acknowledged the foregoing instrument to be his free act and deed.

Before me, Clarence Burgin

Notary Public, Notarial Seal

Received April 30, 1913, at 2h 40m P. M. and recorded according to the original

---

KNOW ALL MEN BY THESE PRESENTS, that I, Frank A. Hewins Hewins to Spottswood Discharge
the mortgagee named in a certain mortgage given by Lincoln Spottswood to me dated May 5th, A. D. 1909, and recorded with the Cumberland County, Maine, Registry of Deeds, book ---, Page ---, do hereby acknowledge that I have received full payment and satisfaction of the debt thereby secured and of the conditions therein contained, and in consideration thereof I do hereby cancel and discharge said mortgage.

IN WITNESS WHEREOF I hereunto set my hand and seal this twenty-ninth day of April A. D. 1913.

Signed and sealed in the presence of

Charles D. Keyes Frank A. Hewins Seal

Josephine L. Bachmann

Commonwealth of Massachusetts. Suffolk, ss. Boston, April 29th, 1913. Then personally appeared the above named Frank A. Hewins and acknowledged the foregoing instrument to be his free act and deed, before me,

Charles D. Keyes

Notary Public, Notarial Seal

Received May, 1, 1913, at 9h A. M. and recorded according to the original

---

KNOW ALL MEN BY THESE PRESENTS, that I, Alonzo Knight, Knight to Cleaves Warranty
of Falmouth, in the County of Cumberland and State of Maine, in consideration of one dollar and other valuable considerations, paid by Laura H. Cleaves of Portland in said County and State, the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Laura H. Cleaves, her heirs and assigns forever, a certain lot of land with the buildings thereon situated in said Falmouth and bounded and described as follows: Beginning at the County Road at the southeast corner of land now or formerly owned by William Knight; thence running northeasterly along the line of said William Knight's land to the northeast corner of said William Knight's land; thence northwesterly along the line of said William Knight's land to the northwest corner of said William Knight's land, said point being in the dividing line between the property hereby conveyed and land now or formerly owned by Jacob Knight; thence northeasterly by said dividing line to a point which is fifty (50) rods distant on said dividing line from said County road; thence north forty-one (41) degrees east fifteen (15) rods; thence south forty-seven (47) degrees east twenty six and three-fourths (26 3/4) rods; thence north forty-eight degrees east fifteen rods; thence south forty-seven (47) degrees east thirty-four (34) rods to high water mark; thence south seventy-three (73) degrees west nine (9) rods; thence south twenty-seven (27) degrees east twelve (12) rods; thence south thirty-nine (39) degrees west eight (8) rods; thence south sixty-nine (69) degrees West thirty-four (34) rods; thence north sixty-seven (67) degrees west fourteen (14) rods; thence south sixty-seven (67) degrees west seventeen rods (17); thence north sixty-seven (67) degrees west twenty-seven (27)

GENERAL APPLICATION DOCUMENTS

FINANCIAL CAPACITY

The Applicant has adequate financial resources to undertake this project as identified in the letter from Camden National Bank which accompanies this submission.

Camden NATIONAL BANK

BROOKE WOODBURY
VICE PRESIDENT
Direct Dial: 207.699.3394
bwoodbury@camdennational.com

July 30, 2018

City of Portland
Planning & Urban Development Department
389 Congress Street
Portland, ME 04101
(207) 874-8300

RE: The Lancaster Group LLC

To Whom It May Concern:

I am writing to you on behalf of Camden National Bank regarding the planned construction at 50 Monument Square in Portland by The Lancaster Group LLC.

Camden National Bank has an extensive commercial lending relationship with the principals of The Lancaster Group LLC. We have provided financing for several of their projects in Portland and the surrounding communities. They have always managed their financial obligations to the Bank in a fully satisfactory manner and we continue to seek opportunities to expand our commercial lending relationship with them. The Bank has reviewed the owner's plans for 50 Monument Square and is supportive of the project.

Please do not hesitate to contact me if you have any further questions or would like to discuss in greater detail.

Sincerely,

Brooke Woodbury

Brooke Woodbury
Vice President

GENERAL APPLICATION DOCUMENT

TECHNICAL CAPABILITY

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

Architect	Archetype, PA Bill Hopkins, Architect 48 Union Wharf Portland, ME 04101 (207) 772.6022 – Work (207) 671-9194 – Cell hopkins@archetypepa.com
Civil Engineer	Darrin Stairs, P.E. Stantec Consulting Services, Inc. 482 Payne Road Scarborough, ME 04074 (207) 887-3406 – Work (207) 310-8574 – Cell darrin.stairs@stantec.com
Surveyor	Owen Haskell, Inc. John Swan 390 US Route 1 Falmouth, ME 04105 (207) 774-0424 – Work jswan@owenhaskell.com

The Applicant also has significant experience in the development and management of commercial projects. The applicant should be considered an exemplary landlord and landowner, who have owned and managed commercial property successfully.

The team of consultants retained has expertise and experience in the design of similar commercial projects. Resumes of key personnel for development team can be provided upon request.

TRANSPORTATION

The following statements are provided in accordance with the Section 14-526 of the ordinance.

TRANSPORTATION

(a) Transportation Standards

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*

1. *Impact on Surrounding Street Systems:*

   The project is not required to have off-street parking so we are not expecting this use to generate an impact to the surrounding street system.
2. *Traffic Impact Study*

   Not applicable.

Access and Circulation (14-526 (a) 2 a)

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

3. *Access and Circulation:*
   a. *Site Access and Circulation.*

      (i) Access to the site is provided on Congress Street as well as a fire access at the rear of the building which goes out to Center Street.

      (ii) Not Applicable

      (iii) Not Applicable

      (iv) Not Applicable – no change.

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*

2. *Access and Circulation:*
   b. *Loading and Servicing:*

      (i) Adequate provisions are made at the site for periodic loading from panel trucks to service from Center or Congress Street at the ground level through the front entrance.

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)*

2. *Access and Circulation:*
   c. Sidewalks:

      (i) The site benefits from an existing sidewalk system along Congress Street and Center Street.

Public Transit (14-526 (a) 3), if applicable

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. *Public Transit Access.*

   a. The project will include 3 floors of residential tenant spaces.

   b. There is existing Metro Stops in front of the building on Congress Street as well other Metro Services all along the Congress Street Corridor. There currently is a shelter on the corner of Center Street and Congress Street.

   c. Not Applicable.

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*

4. *Parking.*
   a. Location and Required Number of Vehicle Parking Spaces.
   c. Motorcycles and Scooter Parking.

      This requirement is not applicable as off-street parking is not required for a change of use per sec. 332.1 (e).

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)*

4. *Parking.*
   b. Location and Required Number of Bicycle Parking Spaces.

      Development with zero (0) to ten (10) required vehicle parking spaces shall provide at least two (2) bicycle parking spaces. The project will provide internal bike storage within the basement area of the building.

Snow Storage (14-526 (a) 4 d)

- *Management plan for snow removal and locate snow storage areas on plans*

4. Parking.
d. Snow Storage.

i. Not applicable; no parking is proposed and streets are cleared by the City.

Traffic Demand Management (TDM) (14-526 (a) 5), if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. Transportation Demand Management (TDM).

a. A TDM is not required for this project.

ENVIRONMENTAL AND LANDSCAPE FEATURES

The following statements are provided in accordance with the Section 14-526 of the ordinance.

(b) Environmental Quality Standards

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*

1. *Preservation of Significant Natural Features:*
    - The existing site retains no prominent significant natural features therefore no issue related to the preservation of these features applies.

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*

2. *Landscaping and Landscape Prevention:*
    a. *Landscape Preservation.*

        (i) There are no existing landscape features or elements at the site.

        (ii) Not applicable – no changes proposed.

Landscaping and Landscape Preservation (14-526 (b) 2 b i)

a. *Screening and buffering of service areas and between non-residential and residential uses*
b. *Planting plans with plant schedule and sizes*

2. *Landscaping and Landscape Prevention:*
    b. *Site Landscaping:*

        (i) Landscaped Buffers:

        (a) Not applicable.

Landscaping and Landscape Preservation (14-526 (b) 2 b ii)

Parking Lot Landscaping, if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. *Landscaping and Landscape Preservation:*
   a. *Site Landscaping.*
      (ii) Parking Lot Landscaping:

      a) thru d) Not Applicable – no parking lot proposed.

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*

2. *Landscaping and Landscape Preservation:*
   b. *Site Landscaping.*
      (iii) Street Trees:

      (a) Not applicable – no trees onsite.

ENVIRONMENTAL AND STORMWATER

The following statements are provided in accordance with the submission checklist and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

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*

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The project site is currently developed with an existing building area. The project does not include any change to the site.

(ii) Not applicable

(iii) Not applicable

(iv) Not applicable.

PUBLIC INFRASTRUCTURE AND SAFETY

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

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*

1. *Consistency with City Master Plans:*

   a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure plans.

   b. Sanitary sewer flows from the building currently go to the Portland WWTP and will continue with new development.

Public Safety and Fire Prevention (14-526 (c) 2)

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

   a. The site has been designed to promote a safe and welcoming housing environment. Three safety lights will be installed in the alley behind the building (cut sheets included with this submission).

   b. The site provides access from Congress and Center Streets for emergency vehicles.

   c. There is an existing fire hydrant located at 16 Monument Square. The existing building uses will be fully sprinklered in compliance with NFPA regulations.

   d. A summary letter to Chief Thompson is included at the end of this section.

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*

  The Applicant is securing letters from the applicable utilities stating their ability to There are existing electrical water, sewer, and gas services to the property from mains located in the abutting streets. Our office has contacted governing utility agencies and companies and will continue to coordinate the provision of new or updated services, as required throughout the design and construction phases of the project.

  We are continuing ongoing coordination with the Portland Water District for the upgraded service to the site.

Stantec Consulting Services Inc.
482 Payne Road, Scarborough Court, Scarborough, ME 04074

October 25, 2018

Division Chief Robert Thompson
City of Portland Fire Department
380 Congress Street
Portland, Maine 04101

Subject: 50 Monument Square
Fire Safety Checklist

Dear Chief Thompson:

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 reuse of vacant space of the 3rd, 4th, and 5th floors of an existing building located at 50 Monument Square. 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.*

   PK Realty Mgmt LLC
   Attn: Jennifer Packard
   33 McAlister Farm Road
   Portland, ME 04103
   949.338.8123

2. *Name, address, telephone number of architect/contractor.*

   Archetype PA
   Attn: Bill Hopkins
   48 Union Wharf
   Portland, ME 04101
   207.772.6022

3. *Proposed uses of any structures (NFPA and IBC classification).*

Building	NFPA/IBC Classification	Sprinkler
Office/Retail - Existing	B	Yes
Retail Units	B	Yes

*Systems designed to meet NFPA

4. *Square footage of all structures (total and per story).*

Building	Footprint Area (SF)
Existing 1st Floor & Mezzanine	24,249
Proposed 1st Floor & Mezzanine	22,019
Proposed 2nd and 3rd Floor (each)	10,246
Total GLA Proposed	**42,511**

5. *Elevation of all structures.*

   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 existing building does have a sprinkler system.

7. *Hydrant locations.*

   There is an existing hydrant located at approximately 160 feet south on Congress Street.

8. *Water main(s) size and location.*

   There is currently a 1.5" domestic water service and 6" fire water service to the existing building from the twelve-inch main in Congress Street. There is also a 12" main in Center Street. The new Fire sprinkler service will use the existing 6" fire service from Congress Street.

9. *Access to all structures (min. 2 sides).*

   The accompanying site plan depicts the site's access conditions that include access to two or more sides of the building.

10. *A code summary shall be included referencing NFPA 1 and all fire department technical standards.*

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The building can be directly accessed from Congress and Center Streets as well as the alley between Center Street and Monument Square.

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 ft. from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Supporting Evidence: 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.

Supporting Evidence: As depicted on the Site Plan, the proposed building layout provides for a minimum two-sided access to the structure.

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.*

Supporting Evidence: The existing building allows for safe and efficient emergency 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.

Supporting Evidence: The building is located on the corner of Congress and Center Streets and exterior doors are within 50 feet of the streets.

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

Supporting Evidence: The building is accessible from public streets that have a minimum of 9 feet of clearance height.

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

Supporting Evidence: To be provided.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Supporting Evidence: The street number is currently visible from Congress Street and will remain.

If you need any further information regarding this review, please contact our office.

Regards,

STANTEC CONSULTING SERVICES INC.

Darrin Stairs, P.E.
Project Manager
Tel: 207-887-3406
darrin.stairs@stantec.com

Attachments

c: Planning Authority

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

October 25, 2018

Mr. Brad Roland, PE
City of Portland Public Works
55 Portland Street
Portland, Maine 04104-3553

Subject: Proposed Building Reuse
50 Monument Square
Request for Ability to Serve Letter

Dear Brad:

Our office is working as a consultant in the site planning and permitting associated with the proposed reuse of a 47,551 SF building at 50 Monument Square in Portland, ME. The project site is identified on Tax Map 27/Block F/Lot 1 according to the City of Portland Tax Assessor's Maps. We would like to verify the City's wastewater division has ability to provide wastewater capacity for the project and to determine any impact fees. This building was previously approved for office use and the applicant is proposing the reuse of the vacant 3rd, 4th, and 5th floors of the building to construct the residential units. The 1st and 2nd floors of the building are currently occupied by retail/ commercial tenants and the uses will remain. We expect that the existing sanitary sewer service connection will remain in place to serve this renovated building space.

Space	Use (SF)
Retail and Office Use (1st and 2nd floor)	13,600
Residential Use (3rd – 5th floor)	20,400

The projected water use for the new building using the Maine State Plumbing Code and typical City of Portland flow information is as follows:

Building – Parking Garage/Office	Design Flow (GPD)
Retail Space – 10 Employees @ 12 gpd/employee	120
Residential Units (21 - 1 and 2 bedroom units @ 180 gpd)	3,780
Total Office/Retail/Residential	**9,960**

Based on this amount of flow, we trust that the existing sanitary sewer system has adequate capacity to serve this project.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Darrin Stairs, PE
Project Manager
Phone: (207) 887-3406
Darrin.stairs@stantec.com

Attachment: Wastewater Application

v:\2108\active\210801656\civil\admin\permitting\local\site plan\abs_ww_roland_20181025.docx

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: 10/25/2018

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

Site Address: 50 Monument Square

Chart Block Lot Number: _____

Proposed Use: Retail/Office/Residential
Previous Use: Retail/Office
Existing Sanitary Flows: _____GPD
Existing Process Flows: - 0 - GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

_____

_____

Site Category		
	Commercial *(see part 4 below)*	X
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: _____
Owner/Developer Name: PK Realty Mgmt LLC
Owner/Developer Address: 33 McAlister Farm Road
Phone: _____ Fax: _____ E-mail: _____
Engineering Consultant Name: Darrin Stairs, PE - Stantec
Engineering Consultant Address: 482 Payne Road - Scarborough, ME 04074
Phone: 207.887.3406 Fax: 207.883.3376 E-mail: darrin.stairs@stantec.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: _____ GPD
Peaking Factor/ Peak Times: State of Maine Subsurface Wastewater Disposal Rules
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: - Not Applicable -

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: - Not Applicable - 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.

SITE DESIGN

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(d) Site Design Standards.

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*

1. *Massing, Ventilation and Wind Impact:*
   a. The project proposes reuse of the existing building as office and residential space. The project will not result in any significant changes to the wind environment proximate to the site as it is an existing building.
   b. The bulk location and height of the proposed building expansion is consistent with the B3 requirements and there are no nearby developed lots that may be negatively impacted.
   c. HVAC venting will be directed through rooftop units and will not impact any adjacent public spaces.

Shadows (14-526 (d) 2), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*
   a. Not applicable as there is no change to the exterior of the building.

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.*

d. *Snow and Ice Loading:*
   a. The existing building was designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways.

View Corridors (14-526 (d) 4), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

e. View Corridors:

a. The project entails reuse of the existing building. There will be no significant changes to view corridors offered to adjacent properties.

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*

f. Historic Resources:

a. The Architect is working with Historic Preservation on the following:

- replacement of the existing building door and addition of a new canopy;
- new entry doors to the retail spaces on Monument Square;
- possible storefront modifications; and
- three new wall mounted security lights at building rear.

b. There are no known archaeological resources on the site

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)*

g. Exterior Lighting:

a. Site Lighting

(i) All new exterior lighting at the site will be full cutoff LED with no light emitted above the horizontal plane, and in accordance with Section 12 of the Technical Manual. A cut sheet is attached.

b. Architectural and Specialty Lighting

(i) Not applicable to the project.

c. Street Lighting

(i) There are existing street lights along Congress Street. No changes are currently contemplated to the existing street light conditions.

Noise and Vibration (14-526 (d) 7)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

h. Noise and Vibration:

The project noise levels will be designed to meet the permitted levels as outlined in the B3 Zone. All HVAC and mechanical equipment is mounted on the roof.

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*

i. Signage and Wayfinding:

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

(i) The Architect is working with the Historic District on any signage details.

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

Zone Related Design Standards (14-526 (d) 9)

- 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

j. Zoning Related Design Standards:

a. The Architect is working with Historic Preservation on any applicable requirements. The other specific design standards do not apply as this is a reuse of the building.

Photographs of the existing building is included with this section.

RED BOXES INDICATE WHERE LIGHTING WILL BE ADDED - PLEASE SEE CUT SHEETS.

WE'RE HERE TO HELP

LED FULL CUTOFF 30 WATT PACK LIGHT 3K 4K OR 5K, DLC LISTED

$50.00

AVAILABILITY : In Stock
PRODUCT TYPE : LED Wall Packs
VENDOR : LED Wall Packs
SKU : ESW-LEDWPCA30W-3K

LED FULL-CUTOFF WALL PACK 30 WATTS 3000K 4000K & 5000K - The LEDWPCA series is a contemporary, commercial-grade area luminaire. It features a heavy-duty, spring-loaded hinge, which provides the flexibility of focusing light near the mounting surface or projecting light forward. With a die cast aluminum housing and a polycarbonate...

Led Color Temperature

3000K 4000K 5000K

Quantity − 1 +

ADD TO CART

(/account/login)

Like 0 Tweet Share

LED FULL-CUTOFF WALL PACK 30 WATTS 3000K 4000K & 5000K - The LEDWPCA series is a contemporary, commercial-grade area luminaire. It features a heavy-duty, spring-loaded hinge, which provides the flexibility of focusing light near the mounting surface or projecting light forward. With a die cast aluminum housing and a polycarbonate lens, the LEDWPCA series will stand up to many years of punishing environmental conditions. High-efficacy, long-life LEDs provide both energy and maintenance cost savings compared to traditional, HID area lights.

- Available in 3000k (warm white), 4000k (neutral white) and 5000k (cool white) color temperatures.*
- Long-life LEDs provide 69,000 hours of operation with at least 70% of initial lumen output (L70).**
- LEDWPCA30W delivers 3,181 lumens and 114 lumens per watt (LPW) at both 3000k & 4000k, and 3,298 lumens and 120 LPW at 5000k.*
- Heavy-duty, spring-loaded hinge provides the flexibility of focusing light near the mounting surface or projecting light forward.
- Universal 100-277 AC voltage (50-60Hz) is standard.
- Watertight, compression-type electrical connectors prevent moisture intrusion.
- Power factor > 0.90.
- Total harmonic distortion < 20%.
- Color rendering index > 80.
- Die cast aluminum housing with durable, dark bronze, powder coat paint.
- Durable, UV-resistant polycarbonate lens.
- Removable, threaded plugs for side attachment of ½" rigid electrical conduit, or for button photocells.
- Easy installation in new construction or retrofit.

GENERAL APPLICATION DOCUMENTS

ZONING ASSESSMENT

See attached Zoning Analysis Table and additional information provided in project description.

ZONING ANALYSIS Relevant Zone(s) B3, DEOZ, PAD

All Projects:

	Required	Proposed
Lot Size	None	
Area Per Dwelling Unit	N/A	
Minimum Street Frontage	15'	No Change Reuse of Bldg
Front Yard Minimum	None	
Front Yard Maximum	None	
Rear Yard	None	
Yard Right	None	
Yard Left	None	
Side Street Setback	None	
Step Back	N/A	
Maximum Lot Coverage	100%	No Change Reuse of Bldg.
Minimum Lot Coverage	N/A	
Maximum Height	210'	No Change Reuse of Bldg.
Open Space	N/A	
Maximum Impervious Area	N/A	
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	N/A	
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

NOT APPLICABLE

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

CITY OF PORTLAND
Department of Public Works
Christopher C. Branch, P.E., Director

Date: February 14, 2019

Re: Wastewater Capacity Authorization

Address: 50 Monument Square
Applicant: PK Realty Mgmt LLC

Planner: Jean Fraser

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Employees at place of employment with no showers (1ST and 2nd Floors)	# Employees	10	12 GPD/Employee	120
Vacant (3rd – 5th Floors)				0
Proposed flow				
Employees at place of employment with no showers (1ST and 2nd Floors)	# Employees	10	12 GPD/Employee	120
Multiple Family Dwelling Units	1 and 2-Bedroom	21	180	3780
			Net Change	**+ 3900**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

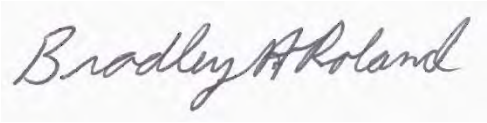
Although you will be using the existing sewer lateral connection two points should be noted:

1. The sewer the building is connected into conveys both sanitary and stormwater (Combined Sewer) and therefore a backflow preventer is suggested.
2. This building has experienced sewer odor complaints in the past and it is suggested that a review of the internal plumbing system for the building be reviewed for proper ventilation.

212 Canco Road, Ste B · Portland, ME 04103 · 207- 874- 8801
cbranch@portlandmaine.gov · www.portlandmaine.gov

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,
CITY OF PORTLAND



Bradley A. Roland, P.E.
Senior Project Engineer

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

October 25, 2018

Mr. Brad Roland, PE
City of Portland Public Works
55 Portland Street
Portland, Maine 04104-3553

Subject: Proposed Building Reuse
50 Monument Square
Request for Ability to Serve Letter

Dear Brad:

Our office is working as a consultant in the site planning and permitting associated with the proposed reuse of a 47,551 SF building at 50 Monument Square in Portland, ME. The project site is identified on Tax Map 27/Block F/Lot 1 according to the City of Portland Tax Assessor's Maps. We would like to verify the City's wastewater division has ability to provide wastewater capacity for the project and to determine any impact fees. This building was previously approved for office use and the applicant is proposing the reuse of the vacant 3rd, 4th, and 5th floors of the building to construct the residential units. The 1st and 2nd floors of the building are currently occupied by retail/ commercial tenants and the uses will remain. We expect that the existing sanitary sewer service connection will remain in place to serve this renovated building space.

Space	Use (SF)
Retail and Office Use (1st and 2nd floor)	13,600
Residential Use (3rd – 5th floor)	20,400

The projected water use for the new building using the Maine State Plumbing Code and typical City of Portland flow information is as follows:

Building – Parking Garage/Office	Design Flow (GPD)
Retail Space – 10 Employees @ 12 gpd/employee	120
Residential Units (21 - 1 and 2 bedroom units @ 180 gpd)	3,780
Total Office/Retail/Residential	**9,960**

Based on this amount of flow, we trust that the existing sanitary sewer system has adequate capacity to serve this project.

If you have any questions regarding this request, please do not hesitate to our office.

Sincerely,

STANTEC CONSULTING SERVICES INC.
Darrin Stairs, PE
Project Manager
Phone: (207) 887-3406
Darrin.stairs@stantec.com

Attachment: Wastewater Application

v:\2108\active\210801656\civil\admin\permitting\local\site plan\abs_ww_roland_20181025.docx

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: 10/25/2018

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

Site Address: 50 Monument Square

Chart Block Lot Number: _____

Proposed Use: Retail/Office/Residential
Previous Use: Retail/Office
Existing Sanitary Flows: _____GPD
Existing Process Flows: - 0 - GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

_____

_____

Site Category		
	Commercial *(see part 4 below)*	X
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: _____
Owner/Developer Name: PK Realty Mgmt LLC
Owner/Developer Address: 33 McAlister Farm Road
Phone: _____ Fax: _____ E-mail: _____
Engineering Consultant Name: Darrin Stairs, PE - Stantec
Engineering Consultant Address: 482 Payne Road - Scarborough, ME 04074
Phone: 207.887.3406 Fax: 207.883.3376 E-mail: darrin.stairs@stantec.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: _____ GPD
Peaking Factor/ Peak Times: State of Maine Subsurface Wastewater Disposal Rules
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: - Not Applicable -

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: - Not Applicable - GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

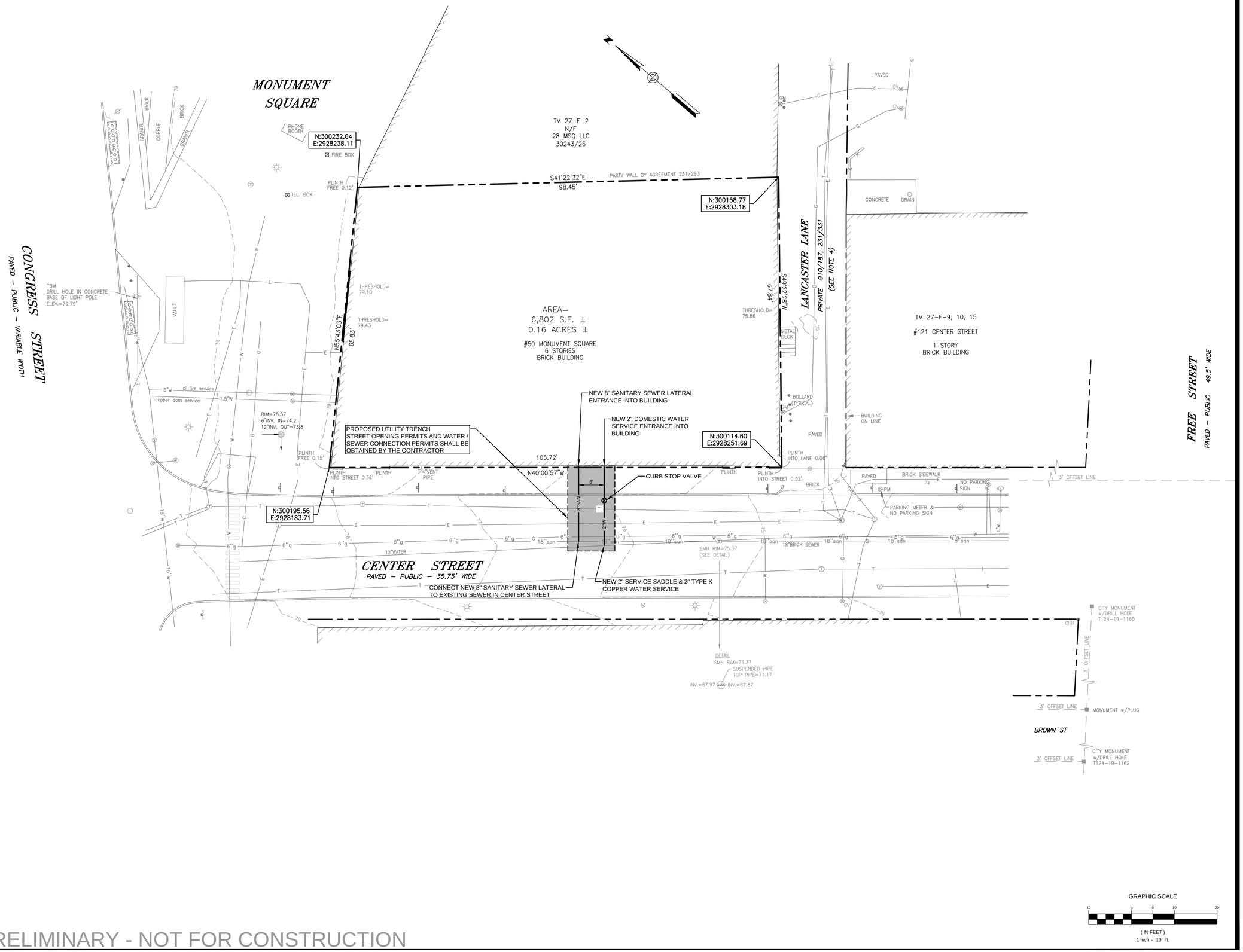
Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

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.



GRAPHIC SCALE

10 0 5 10 20

(IN FEET)

1 inch = 10 ft.

PRELIMINARY - NOT FOR CONSTRUCTION

V:\1953\resource\fs\Admin Resources\PROPOSALS\Stantec Proposals\50 Monument Square - Portland, ME\permit\dwg\50_monument_base.dwg cdb,tbr 10/24/2018 2:15 PM

Stantec

Stantec
482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Consultants

Notes

No.	Revision	By	Appd.	YY.MM.DD
1	SUBMITTED TO CITY OF PORTLAND FOR PERMITTING	DBS	DBS	18.10.24

File Name: 50_monument_base	CDD DWN.	DBS CHK'D.	DBS DSGN.	18.10.19 DATE

Permit-Seal

STATE OF MAINE
Darrin B. Smith
15118
10.24.18
LICENSED
PROFESSIONAL ENGINEER

Client/Project

PK REALTY MGMT LLC
33 McAlister Farm Rd., Portland, Me.

PROPOSED RESIDENTIAL DEVELOPMENT
50 MONUMENT SQUARE
PORTLAND, MAINE

Title

SITE PLAN

Project No.	Scale
-	1" = 10'

Sheet

C-1

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

October 17, 2018

Dustin Roma
DM Roma Consulting Engineers
PO Box 1116
Windham, ME 04062

Re: 50 Monument Square, PO
Ability to Serve with PWD Water

Dear Mr. Roma:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on August 15, 2018. Based on the information provided per plans dated October 4, 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 2-inch domestic service may be installed from the water main in Center Street. The service should enter through the properties frontage on Center Street at least 10-feet from any side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- **The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.**

- An approved backflow prevention device must be installed on the service line directly after the meter prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.

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 1.5-inch diameter copper domestic service line and 6-inch cast iron fire 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 these services.

Water System Characteristics

According to District records, there is an 12-inch diameter cast iron water main in Center Street and a public fire hydrant located approximately 100 feet from the site. The most recent static pressure reading was 78 psi on July 9, 2018.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the 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 not indicated whether 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.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Robert A. Bartels, P.E.
Senior Project Engineer

A R C H E T Y P E

February 8, 2019

50 Monument Square
Level III site plan
Access Requirements

We are bringing 50 Monument Square to the Planning Board to request a change of use and allow residential on the 3rd, 4th and 5th levels. This change of use triggers the requirement to make the entrance that accesses the elevators accessible which it is not currently. The existing conditions into the building are a 3" sloped rise to the door with no landing as required for accessibility.

The building is of historic significance per Portland's zoning so the first-floor façade went to historic board with some alterations that the owner wanted to make and the discussion with the board included where the door to access the elevators should be located in relation to the public way. Currently it is set back off of the main plane of the façade creating an undesired nook area. If we were to make an accessible entrance without crossing the property line we would have to tunnel further under the building with exterior space to open up the 5' landing making the entry even less desirable than it is now both functionally and historically.

We used historic photos to reinforce this fact showing the original doors set to the front of the building. If we bring the door back to its original location, the necessary slopes and landing for access are now pushed out past the property line onto Monument square. The area proposed is shown on A1.01. This sketch has gone to public works and it was asked that we document spot grades around the area. What complicates the discussion beyond those items is that Monument Square has a significant depression in front of 50 Monument that may affect our ability to grade for ADA.

We are now working with both public works and the historic board to try and come up with a solution that satisfies everyone. We would like to ask that the final solution be a condition of C of O while we move forward with the rest of the project.

48 Union Wharf, Portland, Maine 04101 (207) 772–6022• Fax (207) 772–4056

Neighborhood Meeting Certification

I, Stephen R. Bushey, P.E., hereby certify that a neighborhood meeting was held on Thursday, February 7, 2019 at 50 Monument Square, Portland, Maine at 4:30 P.M.

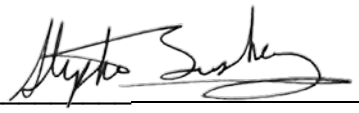
I also certify that on January 28, 2019, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, including 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,



February 11, 2019
(date)

Attached to this certification are:

1. Copy of invitation sent
2. Sign-in sheet
3. Meeting minutes

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

January 28, 2019

Dear Neighbor:

Please join us for a Neighborhood Meeting to discuss proposed renovations of the existing 50 Monument Square Building at 50 Monument Square (Tax map 027/Block F/Lot1) in Portland, Maine. The project includes interior renovations which include 21 residential units in the existing vacant 3rd, 4th and 5th floors with ancillary site improvements.

Meeting Location:	**50 Monument Square Lobby Portland, Maine**
Meeting Date:	**Thursday, February 7th, 2019**
Meeting Time:	**4:30 PM**

The City Code requires that property owners within 500 feet (except notices must be sent to property owners within 1,000 feet for industrial zoning map amendments and industrial subdivisions) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. 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. The meeting will last no more than 30-45 minutes.

If you have any questions, please feel free to contact Steve Bushey, P.E. at 207-887-3478.

Sincerely,

STANTEC CONSULTING SERVICES, INC.

Stephen Bushey, PE
Project Manager

V:\2108\active\210801656\civil\admin\permitting\local\neighborhood meeting\notice_neighborhood-meeting.docx

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Note: Under Section 14-32(C) and 14-525 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 three weeks of submitting a preliminary application or two weeks of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101 or by email to: bab@portlandmaine.gov

Neighborhood Meeting Sign-In Sheet
Project: 50 Monument Square, Portland, Maine

Date: February 7, 2019
Time: 4:30 PM
Location: 50 Monument Square

Name	Company	Telephone No.	Email Address
Steve Bushey	Stantec	207-887-3478	stephen.bushey@stantec.com
Robert Stoddard		617-331-4373	RBStoddard@gmail.com
Elizabeth Stoddard	Residential Neighbor	617-797-7092	eowstoddard@gmail.com
David Packard	PK Realty	207 799 3130	dpackard@pkrealtymgmt.com
RICH GILL	PK REALTY	207-747-8985	RG@PKREALTYMGMT.COM
Bill Stauffer	Stonney Industries	207 650 1993	bstauffer@eco-stony.com
Jen Packard	PK Realty Mgmt	949 338 8123	jp@pkrealtymgmt.com
Mary McDonough	Paragon Management	207-221-2359	mmcdonough~~788~~@gmail.com Paragon mgmnt

Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

MEETING MINUTES

Project: **50 Monument Square, Portland, Maine**

Job #: **210801656**

Date: **February 7, 2019 – 4:30 PM**

Location: **Project Site – 50 Monument Square**
Subject: **Neighborhood Meeting**

Attendees: **See Attached Sign-in Sheet**

In accordance with the City of Portland Planning Board Requirements, a Neighborhood Meeting was scheduled to discuss the proposed renovations and redevelopment of the building at 50 Monument Square.

The meeting was held on Thursday February 7, 2019, at 4:30 P.M. and Steve Bushey, representative from Stantec, was present on site from 4:30 PM–5:10 PM. Five (5) members of the public attended the meeting along with five members of the owner's development team.

Steve Bushey opened the meeting and provided a brief introduction of the owner's team and the development proposal to renovate three floors of the building to create 21 residential living units (7 units per floor). SRB outlined the review process with the City of Portland and outlined to attendees that they can attend the upcoming Public hearing with the Portland Planning Board or provide written comment to the City planning Staff on the project.

The attendees included several adjoining residents who expressed positive excitement to have more residential units in the building. The architect, Katherine Detmer, of Archetype, explained the interior fit out of the spaces and also discussed the consideration being given to the Monument Square access. The following general topics of discussion were raised:

- Lighting at the rear of the building;
- Soundproofing on the shared wall to the building to the east;
- Historic and ADA compliance issues;
- A question on the likelihood for use for short term rentals i.e. Airbnb; the owner replied that short term rental use will likely be prohibited per lease;

- Bicycle parking – to be provided in the basement;
- A general question on tenant vehicle parking needs and locations. The applicant is reviewing current parking supply conditions in the site vicinity so this can be provided to prospective tenants; and
- Discussion of the existing uses to remain in the building i.e Fedex, Portland Ovations.

Overall, the attendees expressed support for the project proposal.

The meeting concluded approximately 45 minutes after starting.

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CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan is attached to this section.

Construction Management Plan

The Lancaster Group, LLC

CONSTRUCTION MANAGEMENT PLAN

50 Monument Square, Portland
The Lancaster Group, LLC

THE PROJECT

The 50 Monument Square project consists of renovation and/or modification of three floors of existing commercial space (3rd, 4th and 5th floors) to accommodate residential units. The existing floors (Lobby, 1st and 2nd floors) will remain commercial and are not proposed for modification.

1. SCHEDULE

Construction will occur immediately upon permit approval, and is anticipated for completion First Quarter 2019.

2. ACCESS

a. Main Entrance/Public ROW

All construction access is proposed to be routed through the rear access of the building. To manage tenant traffic at the main entrance during construction, one of the two elevators (Left or First elevator, sole elevator with access to the basement floor) will be designated for transporting materials and workers to the construction floors. The other elevator (Right or Second), will be utilized by Tenants and will not have access to construction floors. To the maximum extent feasible, disruption to public walkways will be strictly avoided.

Any work within the Public Right-of-way shall be performed during off-peak hours or during the night. The contractor shall provide a traffic management plan to the department for approval prior to any sidewalk and/or street closing and commencing work in the right-of-way.

b. Truck Route

Construction traffic will be directed to enter the Delivery/Staging Area off Center Street via Congress Street or Commercial Streets. (See Exhibit B, Site Plan – Truck Routes)

c. Delivery/Staging Area

Material deliveries will be directed to the rear entrance off Center Street, which will also act as the Staging Area. (See Exhibit A, Site Plan - Main Entry and Exhibit C, Site Plan – Staging Area).

- *On-site - On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the property boundaries, making every attempt to avoid queueing on public streets.*

- *Off-Site - If adequate on-site area for holding of trucks is not available, the vehicles will hold in front of the building until access can be granted. This is consistent with historical use of that area.*

3. ACCESSIBILITY

The proposed project at 50 Monument Square is a residential rehabilitation. The ADA Standards for Accessible Design only apply to public spaces or retail units. The residential units are not governed by ADA but are often governed by Fair Housing. However, the Fair Housing guidelines do not apply to buildings that were occupied before 1991. The International Building Code has accessibility standards, but these standards have been written out of the code in the state of Maine. There are no accessibility standards that apply to the private residential portion of the building.

4. UTILITIES

Should there be a need to modify existing utility infrastructure (Including connections to Water and Stormwater), the appropriate permitting will occur, and traffic control measures will be coordinated as directed by the City of Portland.

5. STORAGE

Construction materials will be stored as follows:

- Offsite – Storage container located at 17 Westfield, Portland, Maine per written agreement with 17 Westfield, LLC
- Rear Loading Dock/Staging Area
- Basement Floor
- Construction Floor

6. ADMINISTRATION

Management during the construction period will be overseen by the following individuals/entities:

- Owner
  - The Lancaster Group
    Jennifer Packard, Principle
    207-388-8123 | jp@pkrealtymgmt.com

- Administrative
  - PK Realty Management
    Christine Rogers, General Manager
    207-749-6160 | ccr@pkrealtymgmt.com

- Construction
  - NE Services
    Nick Elias, General Contractor
    207-749-0069 | nick@ne-services.biz

7. COMMUNICATION

Temporary construction signage and Tenant notifications will provide a 24-hour customer service line. This automated system will notify all responsible parties immediately via telephone, text and email.

- Customer Service - (866) 996-7573

8. CONSTRUCTION HOURS

Construction will occur during the hours specified in the approved building permit. All structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

9. FIRE SAFETY PROGRAM

The 50 Monument Square building complies with all Fire Safety code requirements.

- Designated Safety Monitor
  - NE Services
    David Packard
    207-939-3130 nick@ne-services.biz

- Site Inspections
    - Site Inspections will occur daily to ensure site is maintained in accordance with safety requirements, and permit specifications.
    - The General Contractor will be notified of any issues requiring resolution.
- Fire Safety inspections on site will include, but not be limited to:
    - Maintaining accessibility to the site from the perimeter, including streets and hydrants for apparatus placement
    - Maintaining ingress and egress doors, stairs, and corridors in a usable condition
    - Ensuring ignition sources and processes such as smoking, heating units and hot work, including flammable gases, are properly permitted, stored and used appropriately
    - Good management of accumulation and location of combustible construction and waste materials
    - Ensuring utility shutoffs and controls for electric, gas and fuel oil are readily accessible
    - Ensuring permanently fixed or temporary alarms, standpipe and sprinkler systems and portable extinguishers are in place for immediate use

10. TRAFFIC CONTROL PLANS

Construction activity is not proposed to impact the existing public street system nor public right of ways.

11. SITE MANAGEMENT AND CONTROLS

- Trash removal services have been contracted through Scott's Disposal with regularly scheduled pickups, and construction debris will be managed off hours utilizing the rear alley by NE Services. Additional services will be contracted as needed.
- Debris and dust will be controlled within the interior of the building and are not expected to impact local streets.
- The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise.
- Snow removal is managed by the City of Portland and Unified Parking Partners.

12. PARKING DURING CONSTRUCTION

- Parking is not currently provided to existing Tenants onsite, thus is not be impacted by construction activities.
- Parking for Construction workers has been designated through an agreement with Unified Parking Partners for temporary parking spaces at the lot located at 1 Monument Square, Portland, ME 04101. (See Exhibit C, Parking)

EXHIBIT A – SITE PLAN – MAIN ENTRY

Public Area in front of the building will be utilized, only if necessary, for equipment or material deliveries. This is consistent with historical use.

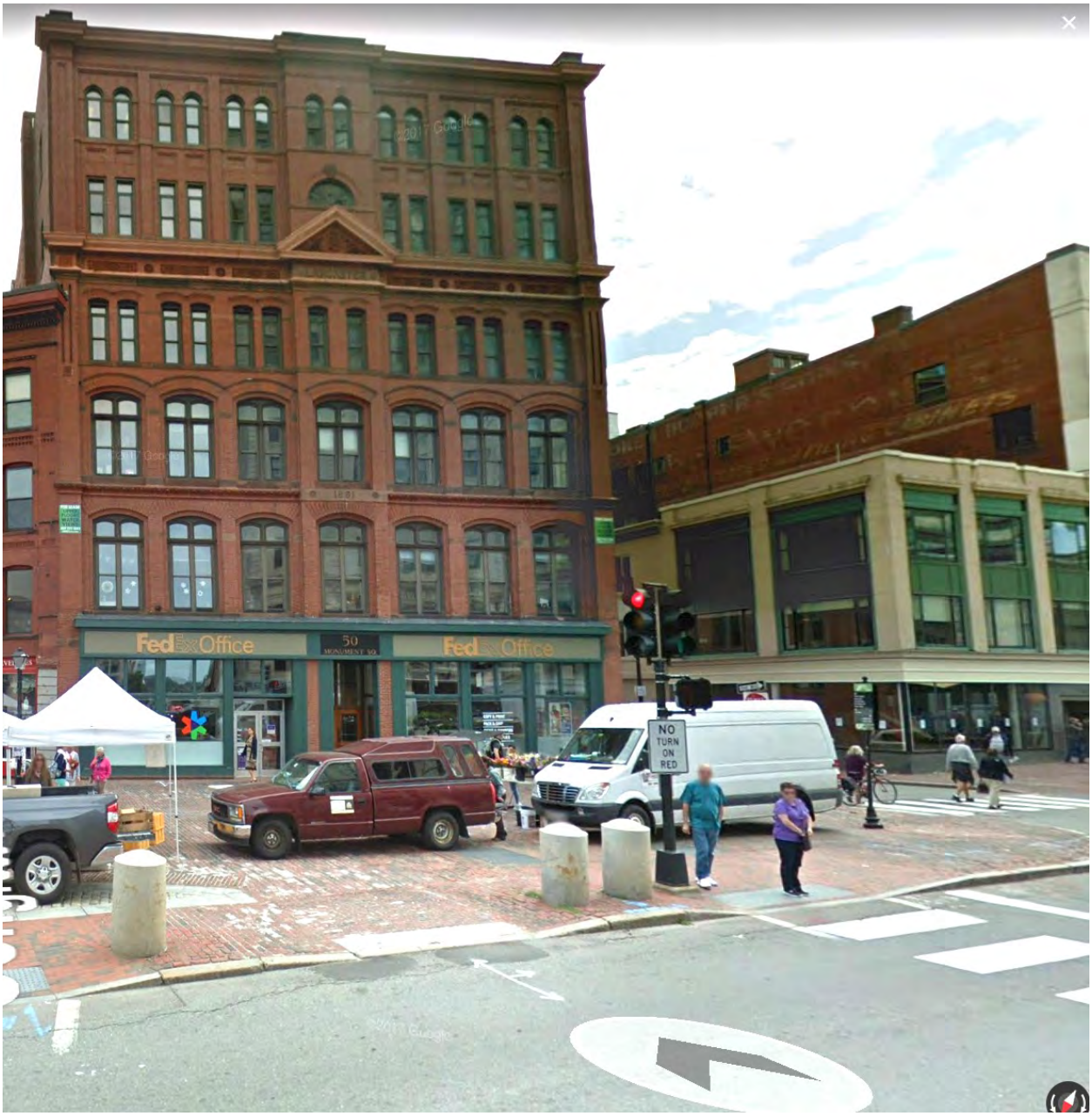


EXHIBIT B – SITE PLAN – TRUCK ROUTES

Construction traffic will be directed to enter Center Street via Congress Street or Commercial Street.

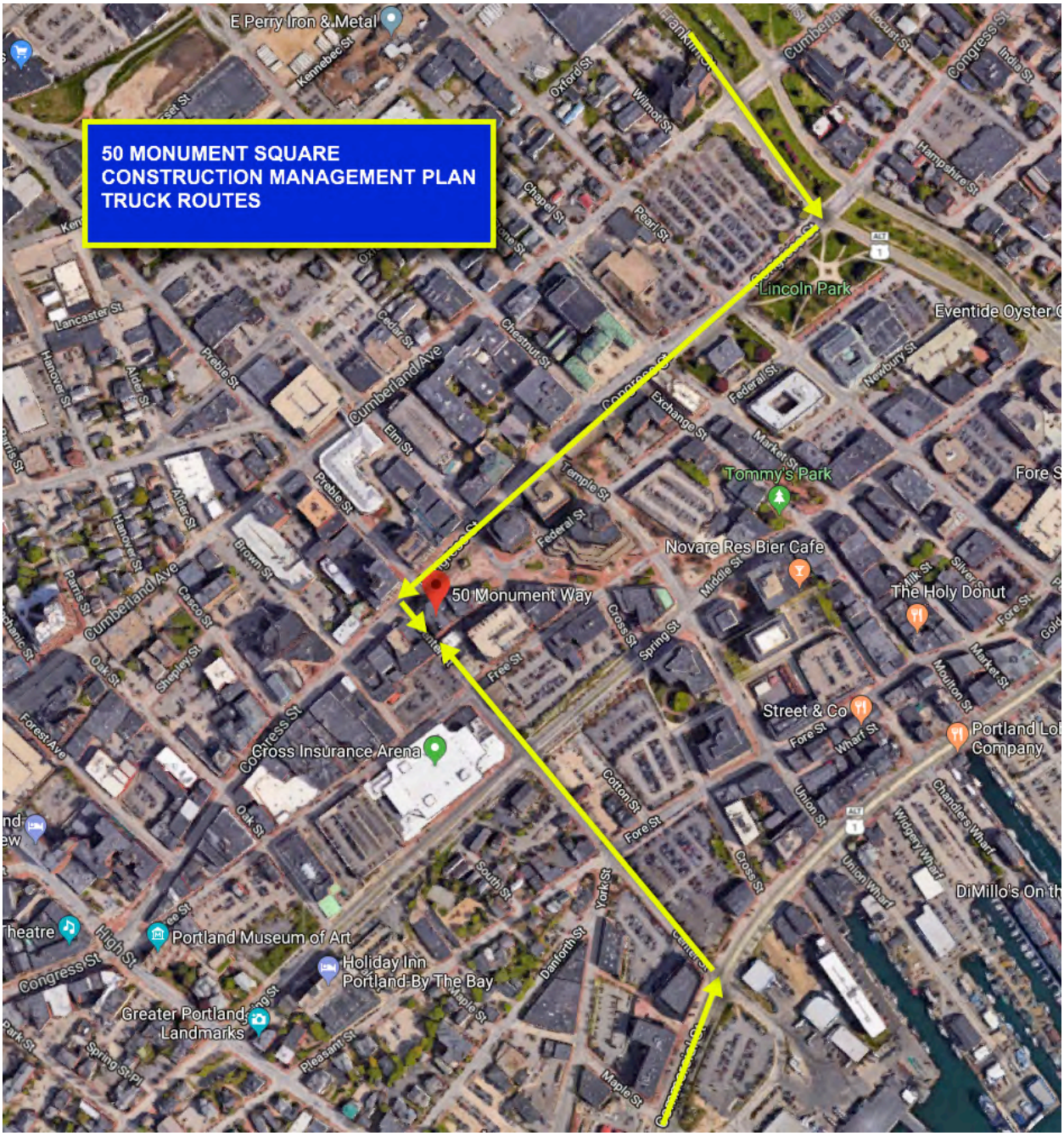
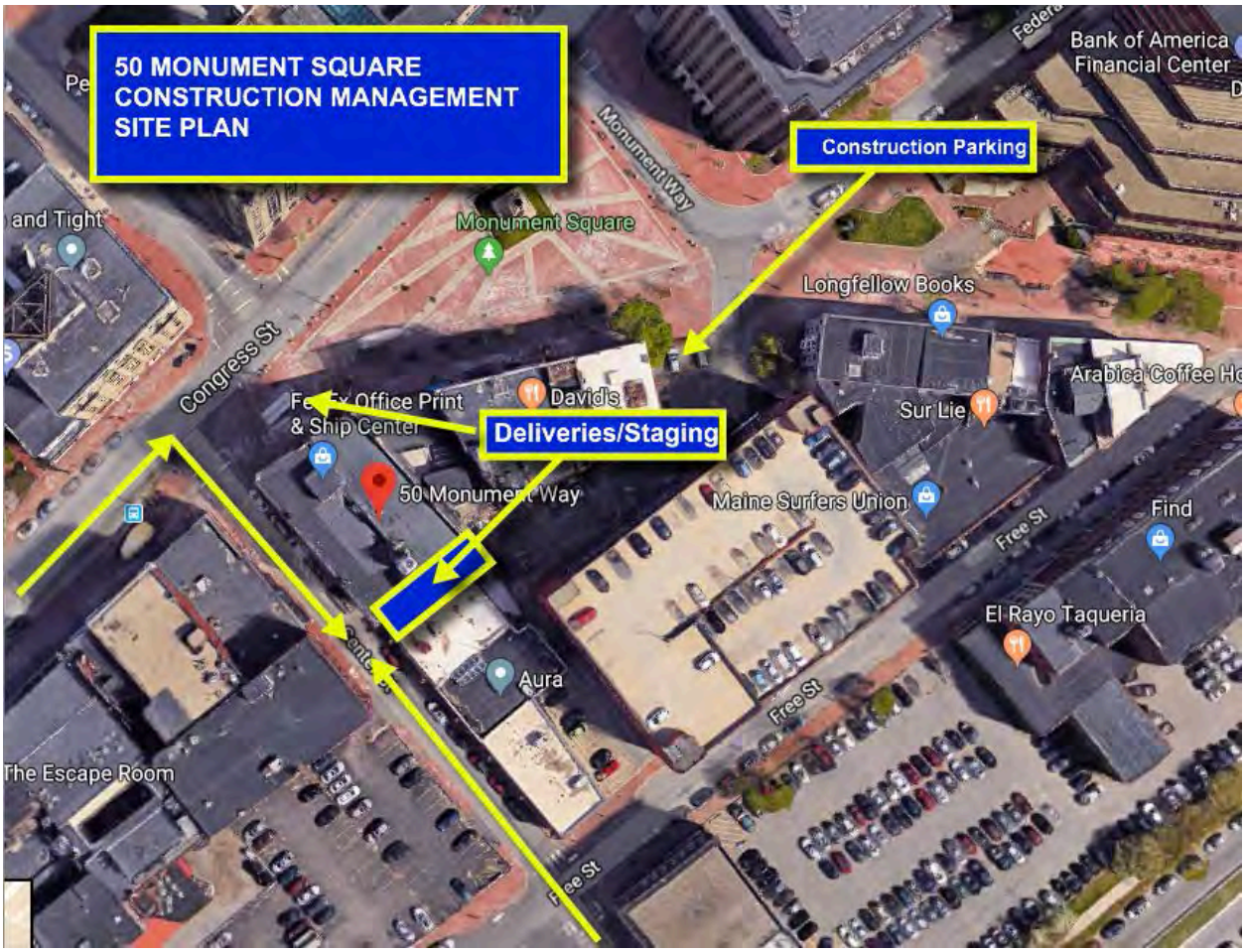


EXHIBIT C – SITE PLAN – STAGING AREA/PARKING

Deliveries will be directed to the rear loading dock, which will also act as the Staging Area, prior to relocating materials to either the Basement or appropriate Construction Floors.

In the event the Staging Area is occupied, vehicles will hold in the area in front of the entrance. This is consistent with historical use of this area.



Stantec Consulting Services Inc.
482 Payne Road Scarborough Court, Scarborough ME 04074-8929

February 11, 2019

Ms. Jean Fraser
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Level III Site Plan Review
50 Monument Square
PL-000390-2018
Letter of Response #1 to Planning Staff Review Comments

Dear Jean:

On behalf of **50 Monument Square** (Applicant), our office has received and reviewed Planning Staff review comments regarding the Level III Site Plan Application for the 50 Monument Square property. For ease of reference, we have repeated the comments in *italics* followed by our responses in **bold**.

- *Please send the subdivision plat asap and include on it the rights that the owner has in the alley at the back- (it would be helpful to have a copy of the referenced deed). The plat is the main reason it is going to the Planning Board and I don't see it in e-plan.*

Response: A Subdivision Plat has been prepared Owen Haskell and is included with this submission. The original reference deed contained in CCRD Book 910, page 187 is attached to this letter and that deed contains language pertaining to the rights that the applicant has to the Lancaster Lane right of way. We believe this deed adequately establishes the applicant's interest in the Lancaster Lane access.

- *The building has a rear staircase going to the proposed dwelling units and I believe this egresses to the rear alley. Who will be using this staircase and entrance? (The Site Plan should clarify entrances for the different floors/uses)*

Response: The rear staircase is an egress stairway only for floors 1-6. It is not intended for entrance to the building, which is provided by the main entrance off the Square. The main entrance offers access to interior stairs and the elevators that provide access to all floors. Se the architectural plans prepared by Archetype that have been uploaded as part of this letter submission.

- *The alley is part of the site and needs to be addressed; lights are mentioned in the narrative but not shown on the plan and upgrading is required to enclose bins, etc. (HP may have comments on this too)*

Response: The applicant intends to provide two additional wall pack mounted fixtures along the Lancaster Lane side of the building, to supplement an existing wall mounted security

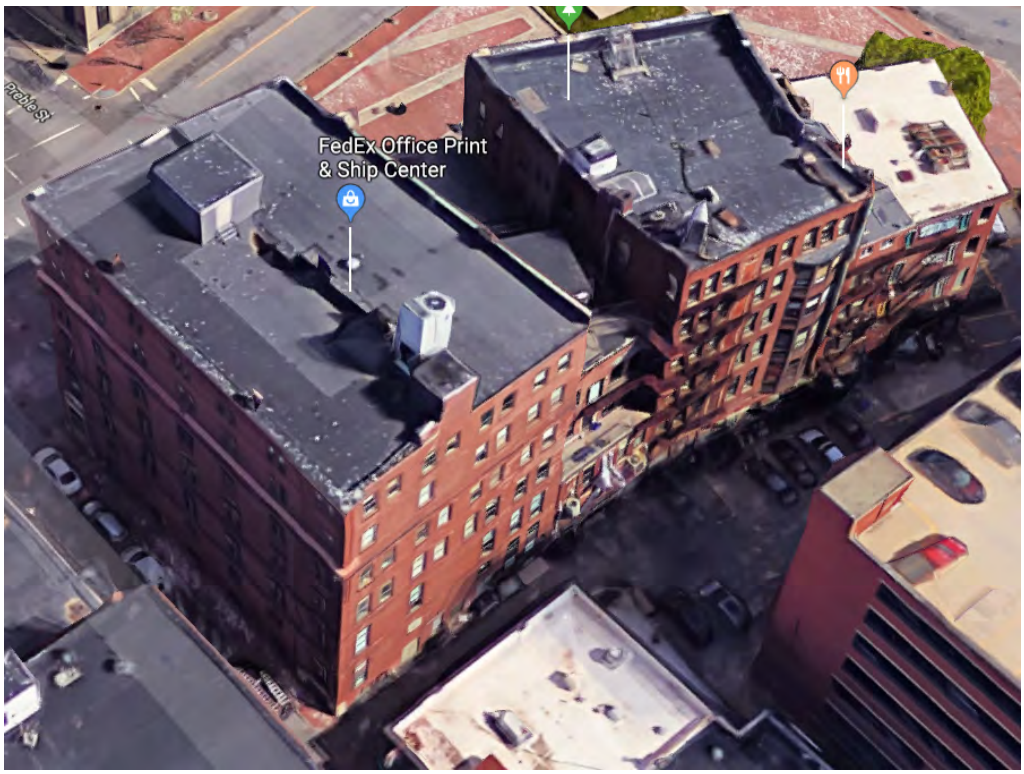
fixture. The new wall lights will be full cut off style lights. A catalog cut of the fixture accompanies this letter. The new lights will be tied to a motion sensor for control.

- *What are the proposals for trash removal and storage prior to removal, as the intensification of the use will mean there is considerable trash to remove.*

Response: The applicant proposes to provide space in the basement for the storage of trash and recycling bins (totes) that will available to residents. The applicant's building manager will be responsible for servicing these bins on a regular basis and will wheel them to Lancaster Lane where the applicant's trash vendor will empty the bins for site removal and then the bins will be returned to the basement. The applicant expects that trash and recycling removal may need to be provided at least once if not multiple times per week. There will be a building manager available to monitor and assure that the trash is taken care of as necessary. We have observed dumpster cans in the Lane, however it is understood that these are not associated with the 50 Monument Square property.

- *Please show the HVAC/heating or other mechanicals proposed for the roof on the roof plan*

Response: As depicted on the accompanying architectural roof plan the existing HVAC roof top units will remain in place. They are located at the rear of the building closer to Lancaster Lane.



- *The basement plan is not complete in that it does not show the uses listed in the narrative.*

Response: The accompanying basement plan by Archetype identifies the various uses proposed for the basement. These will include a laundry area, bicycle storage, trash/recycling room, boiler room, and storage units.

- *Utilities are part of the site plan review and need to be shown on the plans, particularly given the intensification of the use in terms of water and wastewater and sprinkling*

Response: The accompanying recording plat identifies the existing and proposed utilities serving the building. These include:

- **An existing 6" fire supply water main enters the front of the building from Congress Street;**
- **An existing 1½" domestic water supply main enters the front of the building from Congress Street;**
- **A new 2" domestic water supply main has been installed off Center Street into the building; the accompanying Ability to serve confirmation has been provided by the Portland Water District;**
- **A new 4" sanitary sewer service has been installed off Center Street into the side of the building into the basement space. We understand the installation of the new service was inspected by DPW personnel. This new sanitary service will serve the new residential units;**
- **Underground electrical service enters the front of the building from the Square;**
- **Existing natural gas service enters the rear of the building off Lancaster Lane; and**
- **The applicant is coordinating an updated communications service for high speed fiber into the building with one or more service providers.**

- *Please send DPW and City of Portland Wastewater capacity letters*

Response: A copy of the capacity availability requests letters and a response from PWD accompany this letter.

- *Please send elevations of the front showing the new doors and of the rear showing improvements*

Response: The accompanying building elevations and information from Archetype outline the proposed building improvements and issues related to Historic approvals. Archetype has been coordinating with Deb Andrews on the proposal and these issues remain to be resolved. The applicant is requesting that the resolution to the front access updates be made a condition of approval so as to not hold up the issuance of a building permit.

- *Please send a statement as to how the proposals meet State and Federal Access requirements regarding access from the sidewalk and to the elevator.*

Response: See the accompanying Accessibility Statement from Archetype.

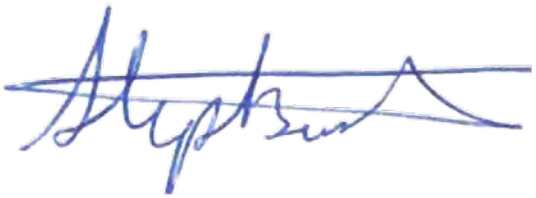
- *Street trees: Please note that 21 street trees are required but this requirement can be met a number of ways as outlined in the attached Technical Manual Section on Site Landscaping (see 4.6).*

Response: The applicant intends to contribute to the Street Tree Fund as may be determined by City staff.

A neighborhood meeting was conducted on February 7, 2019 and the accompanying certification and meeting notes are provided for the planning file. We trust the accompanying information satisfies your informational needs and we look forward to appearing before the Planning Board at their next upcoming meeting.

Sincerely,

STANTEC CONSULTING SERVICES INC.



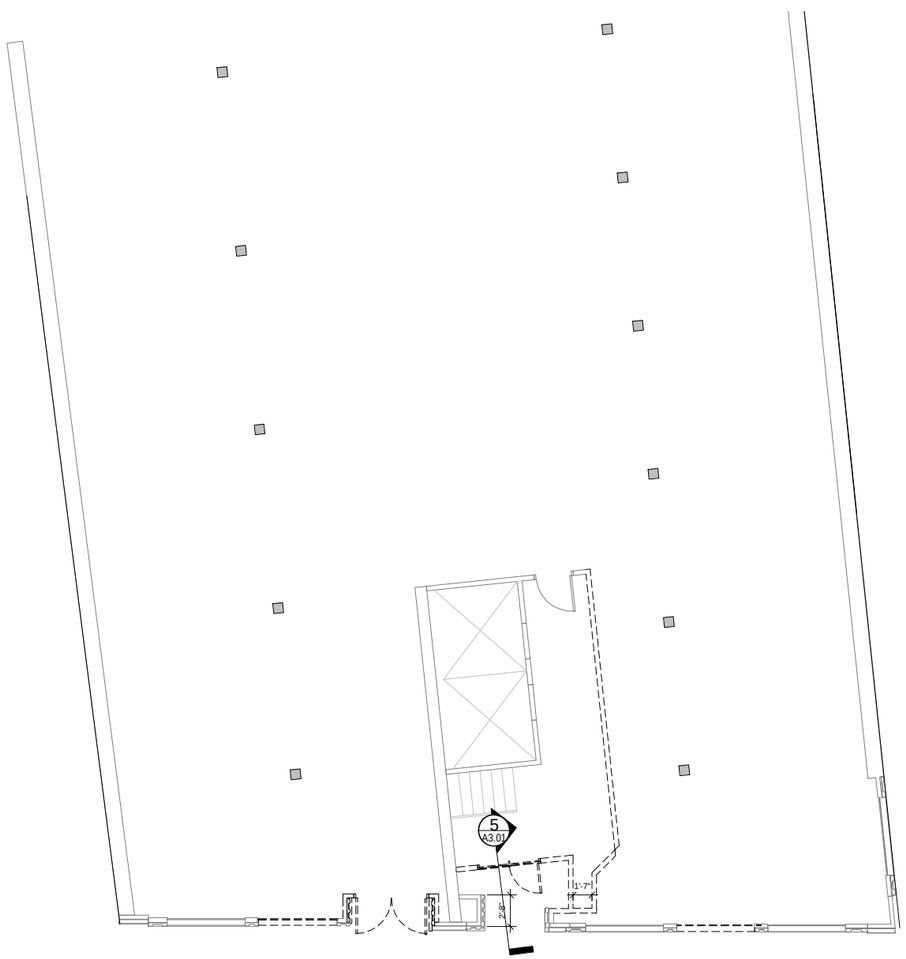
Stephen R. Bushey, P.E.
Associate
Phone: 207-887-3478
Fax: 207-887-3376
stephen.bushey@stantec.com

Enclosures

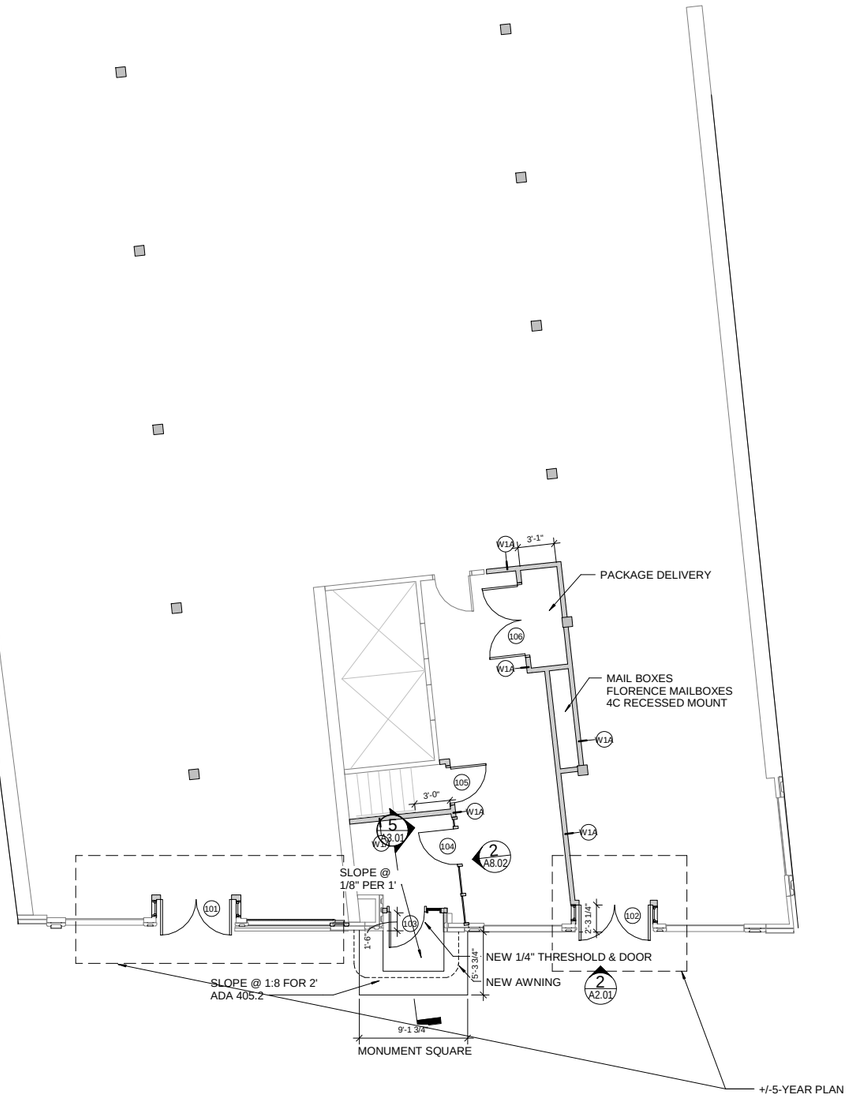
c: Katherine Detmer, Archetype Architects
Jen Packard

V:\2108\active\210801656\civil\admin\permitting\local\site plan\lor\lor_1_fraser_20190211.docx

Att. P



1 LOBBY DEMO PLAN
3/16" = 1'-0"



2 LOBBY PLAN
3/16" = 1'-0"

Architect:
ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Consultant:

Prepared For:
Lancaster Street LLC

Project:
50 MONUMENT SQUARE
Portland, Maine

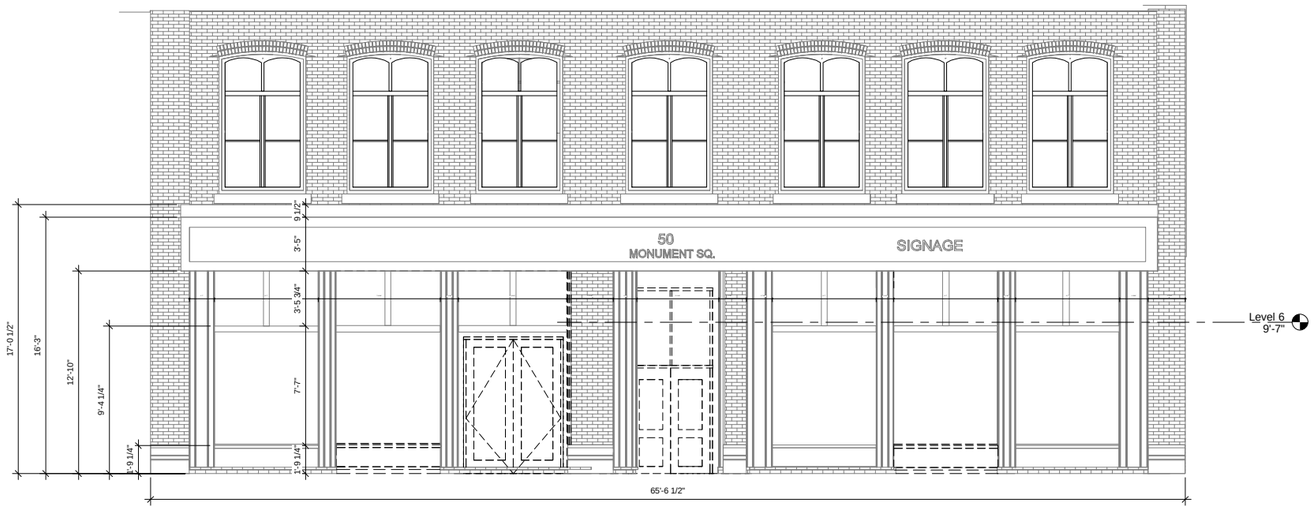
Revisions:

Scale: 3/16" = 1'-0"

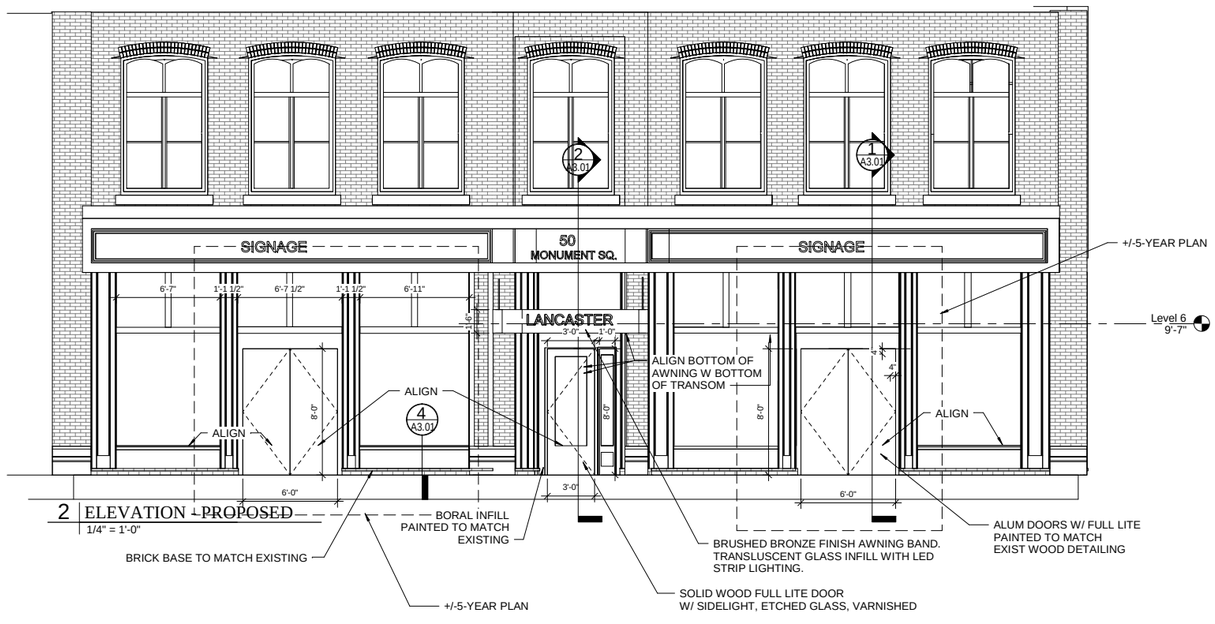
Date: 2-8-2019

FLOOR PLANS

A1.01



1 ELEVATION - EXISTING & DEMO
1/4" = 1'-0"



2 ELEVATION - PROPOSED
1/4" = 1'-0"

Prepared For:
Lancaster Street LLC

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Portland, Maine

Revisions:

Scale: 1/4" = 1'-0"

Date: 2-8-2019

BUILDING ELEVATIONS - EXISTING & DEMO

A2.01

February 8, 2019

50 Monument Square
Level III site plan
Access Requirements

We are bringing 50 Monument Square to the Planning Board to request a change of use and allow residential on the 3rd, 4th and 5th levels. This change of use triggers the requirement to make the entrance that accesses the elevators accessible which it is not currently. The existing conditions into the building are a 3" sloped rise to the door with no landing as required for accessibility.

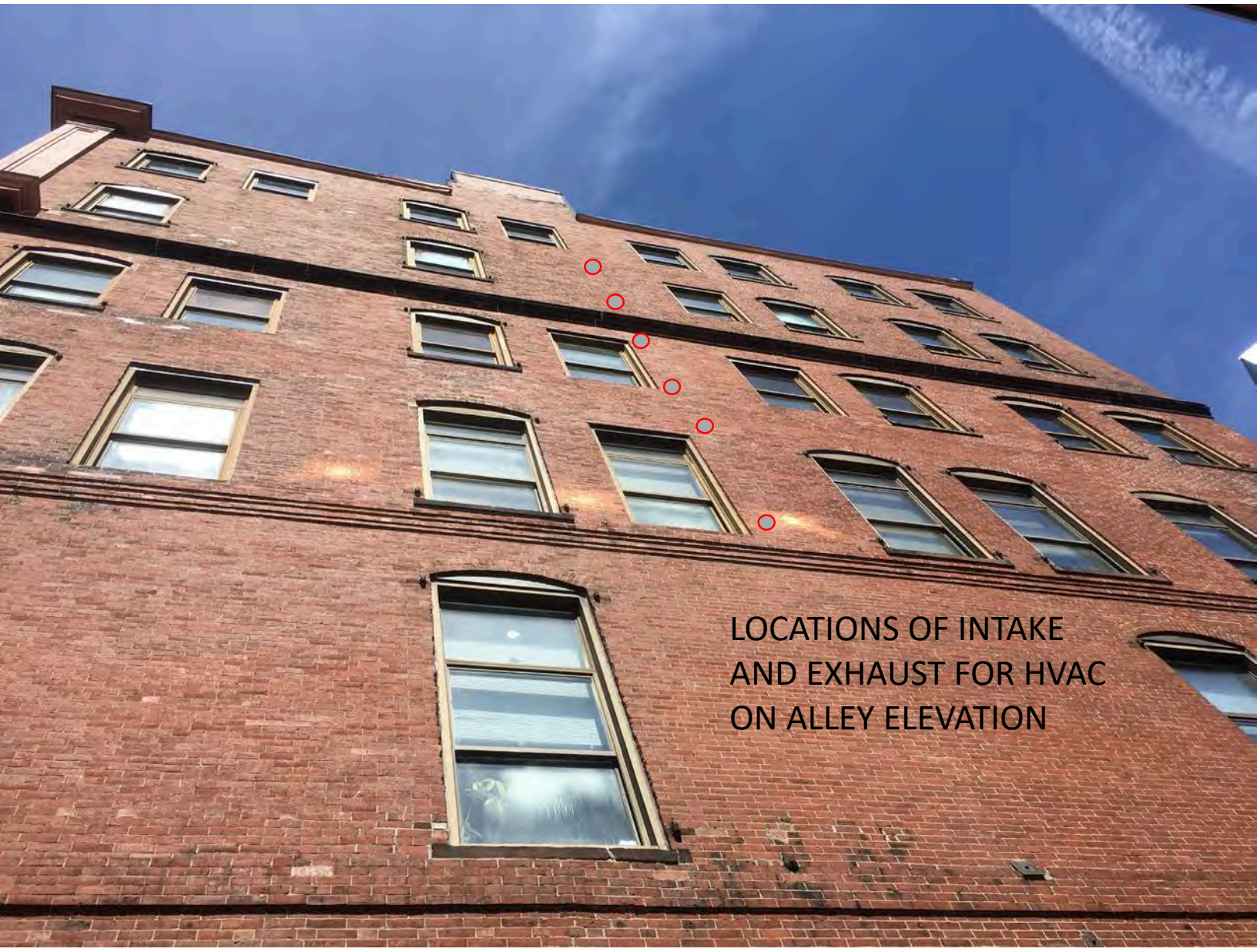
The building is of historic significance per Portland's zoning so the first-floor façade went to historic board with some alterations that the owner wanted to make and the discussion with the board included where the door to access the elevators should be located in relation to the public way. Currently it is set back off of the main plane of the façade creating an undesired nook area. If we were to make an accessible entrance without crossing the property line we would have to tunnel further under the building with exterior space to open up the 5' landing making the entry even less desirable than it is now both functionally and historically.

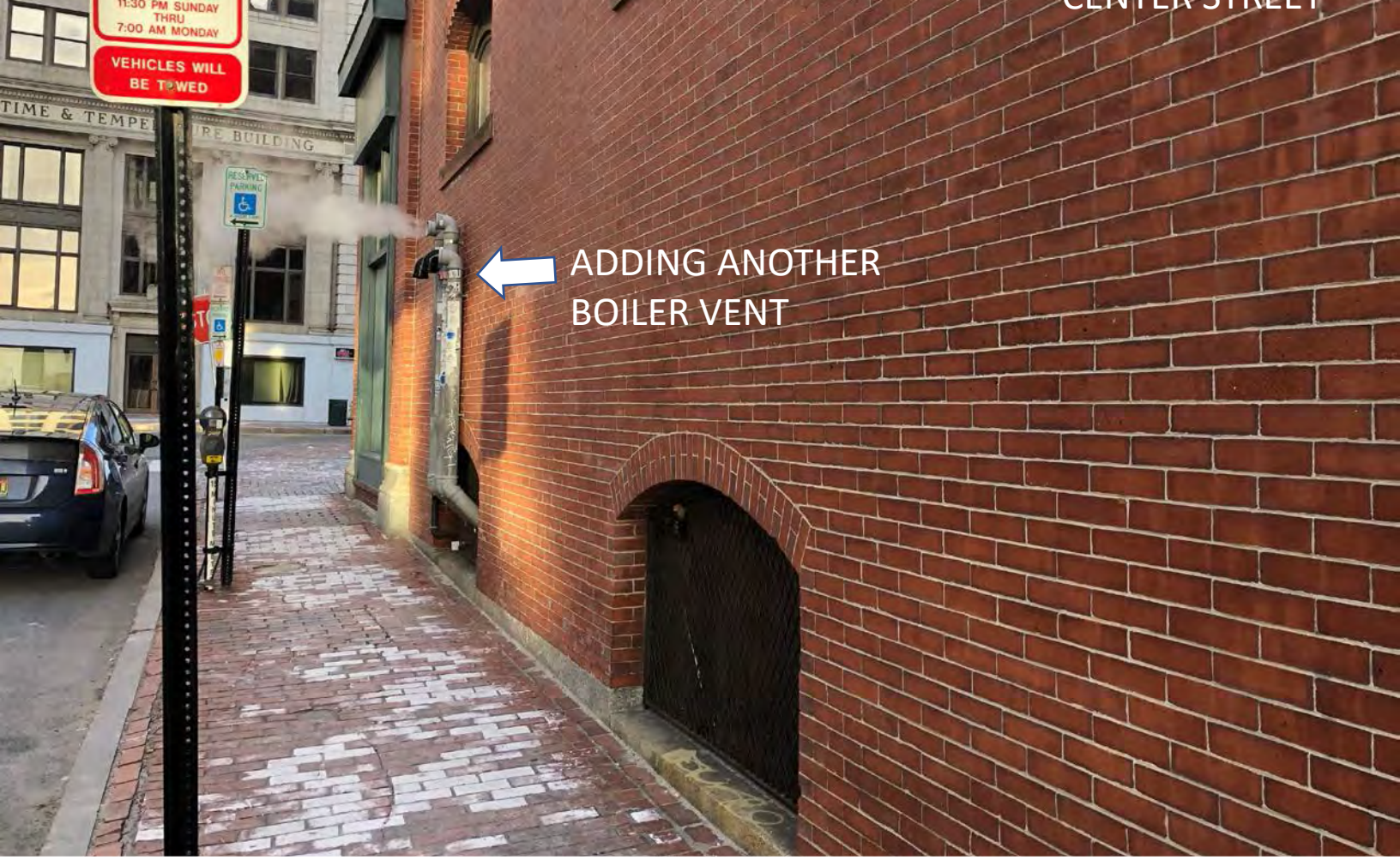
We used historic photos to reinforce this fact showing the original doors set to the front of the building. If we bring the door back to its original location, the necessary slopes and landing for access are now pushed out past the property line onto Monument square. The area proposed is shown on A1.01. This sketch has gone to public works and it was asked that we document spot grades around the area. What complicates the discussion beyond those items is that Monument Square has a significant depression in front of 50 Monument that may affect our ability to grade for ADA.

We are now working with both public works and the historic board to try and come up with a solution that satisfies everyone. We would like to ask that the final solution be a condition of C of O while we move forward with the rest of the project.

48 Union Wharf, Portland, Maine 04101 (207) 772–6022• Fax (207) 772–4056

FULL CUT OFF
EXTERIOR WALL
PACK ON SENSOR
FULL CUT OFF
EXTERIOR WALL
PACK ON SENSOR
EXISTING SECURTY
LIGHT


LOCATIONS OF INTAKE
AND EXHAUST FOR HVAC
ON ALLEY ELEVATION


11:30 PM SUNDAY
THRU
7:00 AM MONDAY
VEHICLES WILL
BE TOWED
ADDING ANOTHER
BOILER VENT

TIME & TEMPERATURE BUILDING
VENTING FOR LAUNDRY

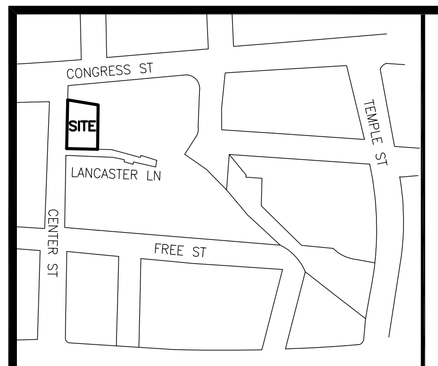
WE'RE HERE TO HELP

LED FULL CUTOFF 30 WATT PACK LIGHT 3K 4K OR 5K, DLC LISTED

$50.00

AVAILABILITY : In Stock
PRODUCT TYPE : LED Wall Packs
VENDOR : LED Wall Packs
SKU : ESW-LEDWPCA30W-3K

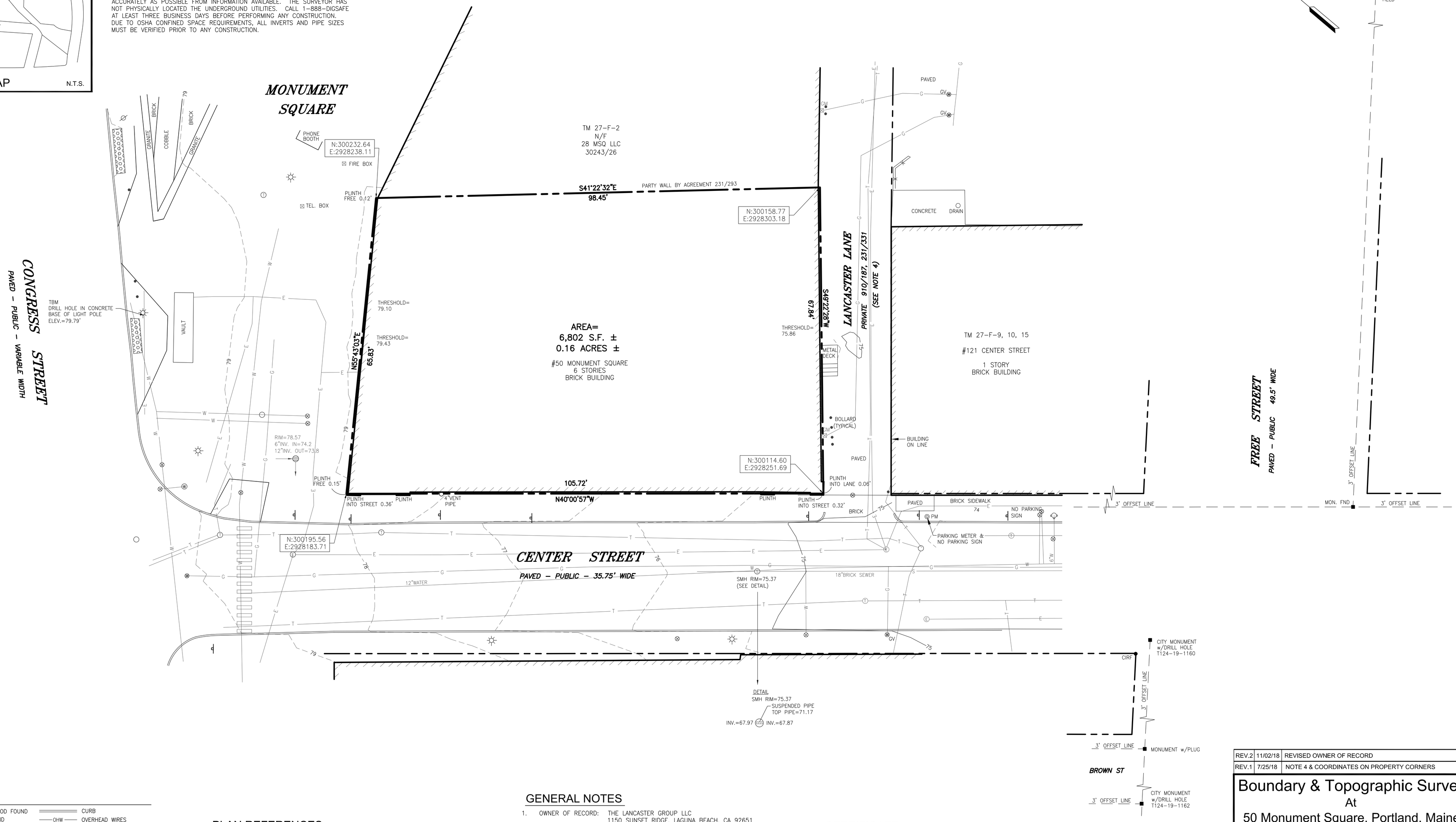
LED FULL-CUTOFF WALL PACK 30 WATTS 3000K 4000K & 5000K - The LEDWPCA series is a contemporary, commercial-grade area luminaire. It features a heavy-duty, spring-loaded hinge, which provides the flexibility of focusing light near the mounting surface or projecting light forward. With a die cast aluminum housing and a polycarbonate...



LOCATION MAP N.T.S.

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE 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.



LEGEND

● IRON PIPE OR ROD FOUND	CURB
■ MONUMENT FOUND	OHW — OVERHEAD WIRES
UTILITY POLE	UGE — UNDERGROUND POWER
MANHOLE	W — WATER LINE
SIGN	G — GAS LINE
HYDRANT	T — TELEPHONE
WATER VALVE OR SHUTOFF	SD — STORM DRAIN
LIGHT POLE	SS — SANITARY SEWER
GAS VALVE	100 — 1' CONTOUR
	IPF/IRF — IRON PIPE OR ROD FOUND
	N/F — NOW OR FORMERLY
	000/000 — DEED BOOK / PAGE

SCALE : 1" = 10'

0' 5' 10' 20'

PLAN REFERENCES

1. PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR CASCO DEVELOPMENT ASSOCIATES BY H.I. & E.C. JORDAN DATED 19 DEC. 1983 REVISED THROUGH FEB. 7, 1985.

2. LAND TITLE SURVEY AT #28 MONUMENT SQUARE PORTLAND, MAINE MADE FOR JEFFREY COHEN BY OWEN HASKELL, INC. DATED JAN. 4, 2005 REVISED THROUGH 01-23-07.

3. BOUNDARY & TOPOGRAPHIC SURVEY THE ASYLUM 121 CENTER STREET PORTLAND, MAINE MADE FOR VALERIE J. LEVY BY OWEN HASKELL, INC. DATED 3-21-16.

GENERAL NOTES

1. OWNER OF RECORD: THE LANCASTER GROUP LLC
1150 SUNSET RIDGE, LAGUNA BEACH, CA 92651

TAX MAP 27 LOT F1

C.C.R.D. DEED BOOK 34780 PAGE 33

2. BEARING ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 1983 PER CITY OF PORTLAND CONTROL POINTS T124-19-1162 AND T124-19-1160.

3. ELEVATIONS ARE BASED ON OFFICIAL CITY OF PORTLAND BENCHMARK "M" MONUMENT AT THE WESTERLY CORNER OF FOREST AND CUMBERLAND AVENUES, ELEVATION = 80.57'

4. THE LOCUS PARCEL HAS RIGHTS IN LANCASTER LANE AS DESCRIBED IN DEED BOOK 910, PAGE 187.

5. LOT AREA = 6,802 SQUARE FEET.

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.

11/02/2018
DATE

RANDY R. LOUBIER, PLS #2407

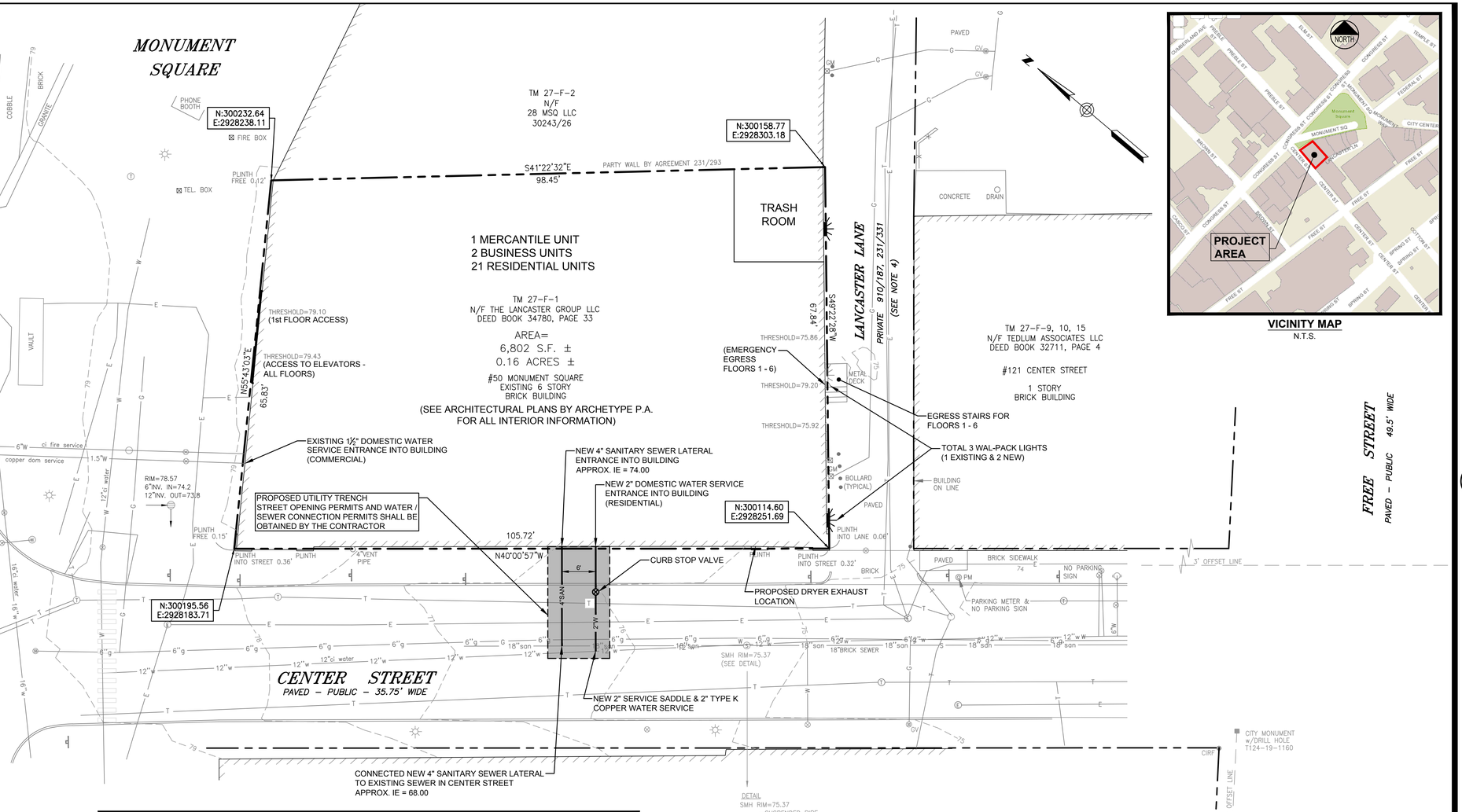
STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

REV.2	11/02/18	REVISED OWNER OF RECORD
REV.1	7/25/18	NOTE 4 & COORDINATES ON PROPERTY CORNERS

Boundary & Topographic Survey
At
50 Monument Square, Portland, Maine
Made for Record Owner
The Lancaster Group LLC
1150 Sunset Ridge, Laguna Beach, CA 92651

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RS / JLW	DATE: July 24, 2018	JOB NO. 2018-173 P	
CHECKED BY: EBC / JWS	SCALE: 1" = 10'	DRWG. NO. 1	



VICINITY MAP
N.T.S.

B3 (DOWNTOWN BUSINESS) ZONE DIMENSIONAL REQUIREMENTS		
REQUIREMENT	CURRENT ZONE STANDARD	PROVIDED
MIN. LOT SIZE	NONE	6,802 SF (0.16 ACRES)
MIN. STREET FRONTAGE	NONE	171.55 FEET
STREET WALL BUILD-TO LINE	WITHIN 5 FEET OF PROPERTY LINE	0 FEET ±
MIN. YARD DIMENSIONS	NONE	0 FEET ±
MIN. LOT WIDTH	NONE	65.83 FEET
MAX. LOT COVERAGE	100%	100% ±
MAX. LENGTH OF UNDIFFERENTIATED BLANK WALL ALONG A PUBLIC STREET OR PUBLICLY ACCESSIBLE PEDESTRIAN WAY	30 FEET	EXISTING BUILDING - NO CHANGE
MIN. BUILDING HEIGHT	35 FEET WITHIN 50 FT OF ST. FRONTAGE	EXIST. BUILD. - NO CHANGE
MAX. BUILDING HEIGHT	150 FEET	EXIST. BUILD. - NO CHANGE
MAX. STREET WALL HEIGHT	90 FEET	EXIST. BUILD. - NO CHANGE

CITY OF PORTLAND PLANNING AUTHORITY APPROVAL

CHAIRMAN _____

_____

_____

_____

_____

_____

_____

DATE _____

REGISTRY BLOCK

STATE OF MAINE

CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED _____, 20_____

AT _____h _____m _____M. AND RECORDED IN

PLAN BOOK _____PAGE _____

ATTEST _____REGISTRAR

LEGEND

EXISTING		EXISTING		PROPOSED	
MON. FND / CIRF	PROPERTY CORNER MONUMENTATION		PROPERTY LINE	8"SAN	SEWER SERVICE
E	ELECTRIC MANHOLE		BUILDING LIMIT	2"W	WATER SERVICE
T	TELEPHONE MANHOLE	6"g	GAS MAIN		WATER CURB STOP
	CATCH BASIN	18"san	SEWER MAIN		PAVEMENT SAWCUT LINE
S	SEWER MANHOLE	12"w	WATER MAIN		UTILITY TRENCH LIMITS
PM	PARKING METER	E	UNDERGROUND ELECTRIC		
	FIRE HYDRANT	T	UNDERGROUND TELEPHONE		
	WATER VALVE		FENCE		
GV	GAS VALVE		CROSSWALK		
	UTILITY POLE	GM	GAS METER WITH BOLLARDS		
	SIGN	79	GRADING CONTOUR ELEVATION		
	LIGHT POLE		CURB (GRANITE, UNLESS NOTED)		

SUBDIVISION REVIEW
The Planning Board voted that the plan is in conformance with the subdivision standards of the Land Use Code, subject to the following condition(s) of approval:

TO BE ADDED PRIOR TO SIGNING AND RECORDING OF THE PLAT.

NOTES:

1. OWNER OF RECORD: THE LANCASTER GROUP LLC, RECORDED IN C.C.R.D. BOOK 34780 PAGE 33.
2. LOCUS IS SHOWN AS LOT F1 ON THE CITY OF PORTLAND ASSESSORS MAP 27.
3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 1983. CITY CONTROL POINTS USED: T124-19-1162 AND T124-19-1160.
4. ELEVATIONS ARE BASED ON OFFICIAL CITY OF PORTLAND BENCHMARK "M" MONUMENT AT THE WESTERLY CORNER OF FOREST AND CUMBERLAND AVENUES, ELEVATION = 80.57'.
5. PROPERTY IS LOCATED IN THE CITY OF PORTLAND B3 (DOWNTOWN BUSINESS) ZONE.
6. THE LOCUS PARCEL HAS RIGHTS IN LANCASTER LANE AS DESCRIBED IN C.C.R.D. BOOK 910, PAGE 187.
7. SNOW REMOVAL AND PROPERTY MAINTENANCE SHALL BE BY THE OWNER.
8. WASTE DISPOSAL SHALL BE PRIVATE WASTE HAULER.

PLAN REFERENCES:

1. CITY OF PORTLAND, MAINE, GIS MAPS, INCLUDING TAX MAP AND ZONING MAP.
2. "50 MONUMENT SQUARE - WATER SERVICE PLAN", DATED OCT. 04, 2018, BY PORTLAND WATER DISTRICT.
3. "BOUNDARY & TOPOGRAPHIC SURVEY AT 50 MONUMENT SQUARE, PORTLAND, MAINE, MADE FOR RECORD OWNER, THE LANCASTER GROUP LLC, 1150 SUNSET RIDGE, LAGUNA BEACH, CA 92651", BY OWEN HASKELL, INC., DATED JULY 24, 2018, WITH LATEST REVISION OF 11/02/18.
4. "RECORDING PLAT AT 50 MONUMENT SQUARE, PORTLAND, MAINE, MADE FOR RECORD OWNER, THE LANCASTER GROUP LLC, 1150 SUNSET RIDGE, LAGUNA BEACH, CA 92651", BY OWEN HASKELL, INC., DATED AUGUST 8, 2018, WITH LATEST REVISION OF 11/02/18.

PRELIMINARY - NOT FOR CONSTRUCTION

DRAFT

Stantec
482 Payne Road Scarborough Court
Scarborough, Maine 04074-8929
Tel. 207.883.3355
www.stantec.com

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City Approval

Consultants

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Surveyor:
OWEN HASKELL, INC.
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424
PROFESSIONAL LAND SURVEYORS

Revision	By	Appd.	YY.MM.DD
3 SUBMITTED TO CITY OF PORTLAND FOR REVIEW	CDD	SRB	19.02.11
2 SUBMITTED DRAFT RECORDING PLAT TO CITY OF PORTLAND	DBS	DBS	18.11.02
1 SUBMITTED TO CITY OF PORTLAND FOR PERMITTING	DBS	DBS	18.10.24

File Name: 50_monument_base	CDD	SRB	SRB	18.10.19
	DWN.	CHK'D.	DSGN.	DATE

Permit-Seal

STATE OF MAINE
STEPHEN R. BUSHEY
02.11.19
LICENSED PROFESSIONAL ENGINEER

Client/Project
PK REALTY MGMT LLC
d.b.a. THE LANCASTER GROUP LLC
33 McAlister Farm Rd., Portland, Me.
PROPOSED RESIDENTIAL DEVELOPMENT
50 MONUMENT SQUARE
PORTLAND, MAINE

Title
SITE LAYOUT & UTILITY PLAN

Project No.	Scale
210801656	1" = 10'

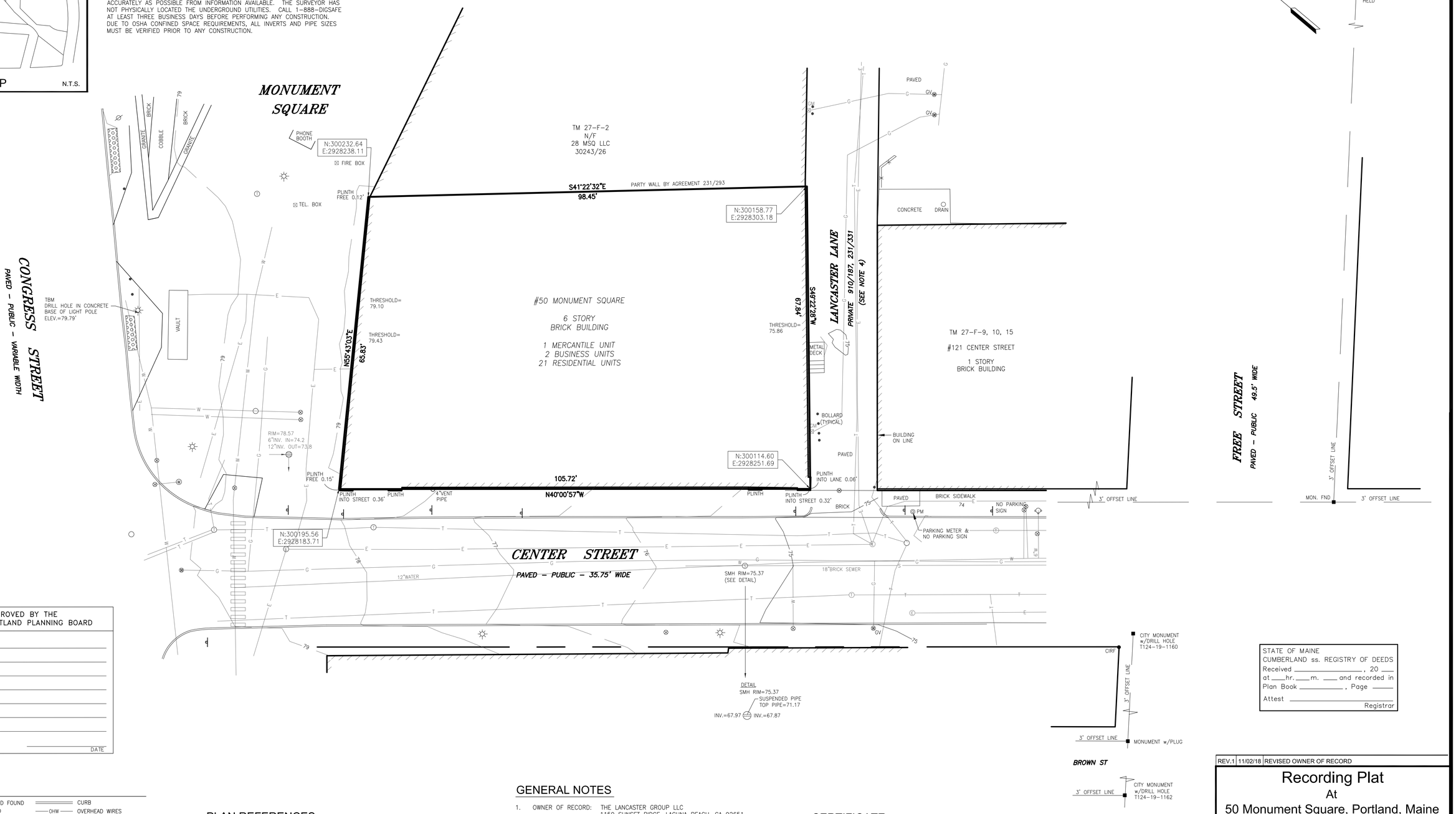
Sheet
C-1.0

V:\2108\active\210801656\civil\cadd\permit\dwg\50_monument_base.dwg cddube 2/11/2019 3:28 PM

LOCATION MAP N.T.S.

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE 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.



APPROVED BY THE
CITY OF PORTLAND PLANNING BOARD

DATE

STATE OF MAINE
CUMBERLAND ss. REGISTRY OF DEEDS
Received _____, 20 ____
at ____ hr. ____ m. ____ and recorded in
Plan Book _____, Page _____
Attest _____
Registrar

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- SIGN
- HYDRANT
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- GAS VALVE

SCALE : 1" = 10'
0' 5' 10' 20'

- CURB
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND POWER
- W — WATER LINE
- G — GAS LINE
- T — TELEPHONE
- SD — STORM DRAIN
- SS — SANITARY SEWER
- 100 — 1' CONTOUR
- IPF/IRF — IRON PIPE OR ROD FOUND
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK / PAGE

PLAN REFERENCES

1. PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR CASCO DEVELOPMENT ASSOCIATES BY H.I. & E.C. JORDAN DATED 19 DEC. 1983 REVISED THROUGH FEB. 7, 1985.

2. LAND TITLE SURVEY AT #28 MONUMENT SQUARE PORTLAND, MAINE MADE FOR JEFFREY COHEN BY OWEN HASKELL, INC. DATED JAN. 4, 2005 REVISED THROUGH 01-23-07.

3. BOUNDARY & TOPOGRAPHIC SURVEY THE ASYLUM 121 CENTER STREET PORTLAND, MAINE MADE FOR VALERIE J. LEVY BY OWEN HASKELL, INC. DATED 3-21-16.

GENERAL NOTES

1. OWNER OF RECORD: THE LANCASTER GROUP LLC
1150 SUNSET RIDGE, LAGUNA BEACH, CA 92651

TAX MAP 27 LOT F1

C.C.R.D. DEED BOOK 34780 PAGE 33

2. BEARING ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 1983 PER CITY OF PORTLAND CONTROL POINTS T124-19-1162 AND T124-19-1160.

3. ELEVATIONS ARE BASED ON OFFICIAL CITY OF PORTLAND BENCHMARK "M" MONUMENT AT THE WESTERLY CORNER OF FOREST AND CUMBERLAND AVENUES, ELEVATION = 80.57'

4. THE LOCUS PARCEL HAS RIGHTS IN LANCASTER LANE AS DESCRIBED IN DEED BOOK 910, PAGE 187.

5. LOT AREA = 6,802 SQUARE FEET.

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.

11/02/2018
DATE

RANDY R. LOUBIER, PLS #2407

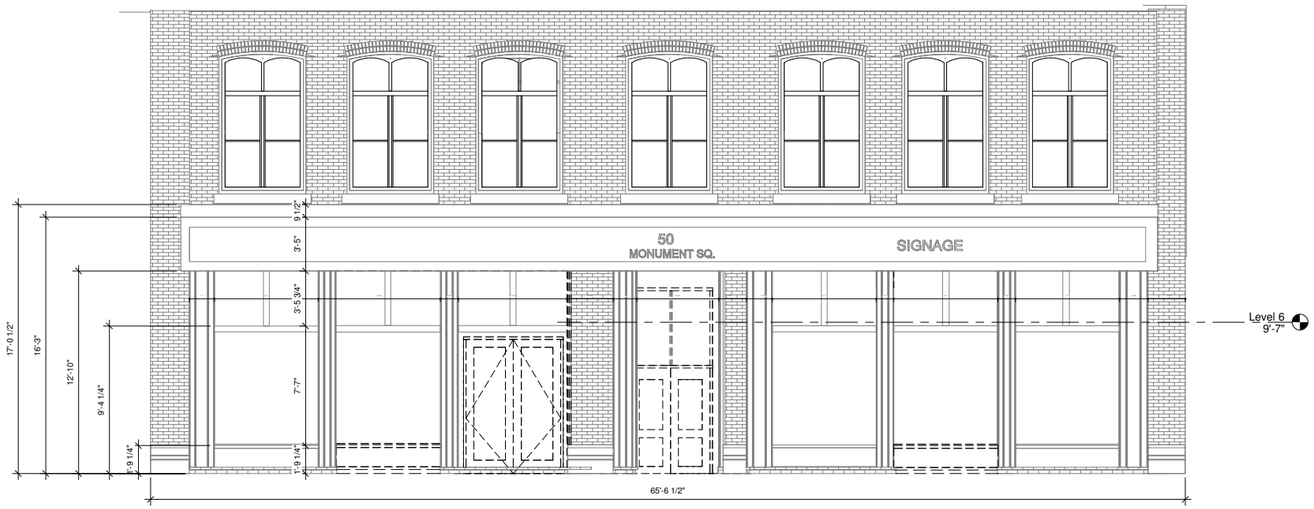
STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

REV.	DATE	DESCRIPTION
1	11/02/18	REVISED OWNER OF RECORD

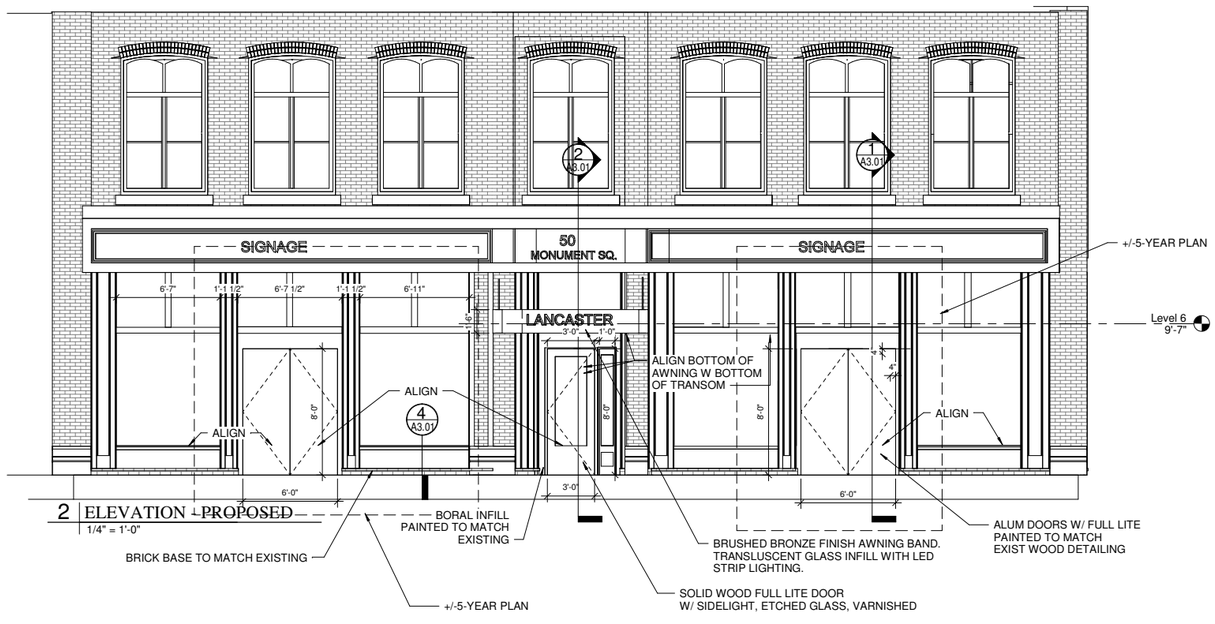
Recording Plat
At
50 Monument Square, Portland, Maine
Made for Record Owner
The Lancaster Group LLC
1150 Sunset Ridge, Laguna Beach, CA 92651

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RS / JLW	DATE: AUGUST 8, 2018	JOB NO. 2018-173 P	
CHECKED BY: EBC / JWS	SCALE: 1" = 10'	DRWG. NO. 1RP	



1 ELEVATION - EXISTING & DEMO
1/4" = 1'-0"



2 ELEVATION - PROPOSED
1/4" = 1'-0"

Prepared For:
Lancaster Street LLC

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Portland, Maine

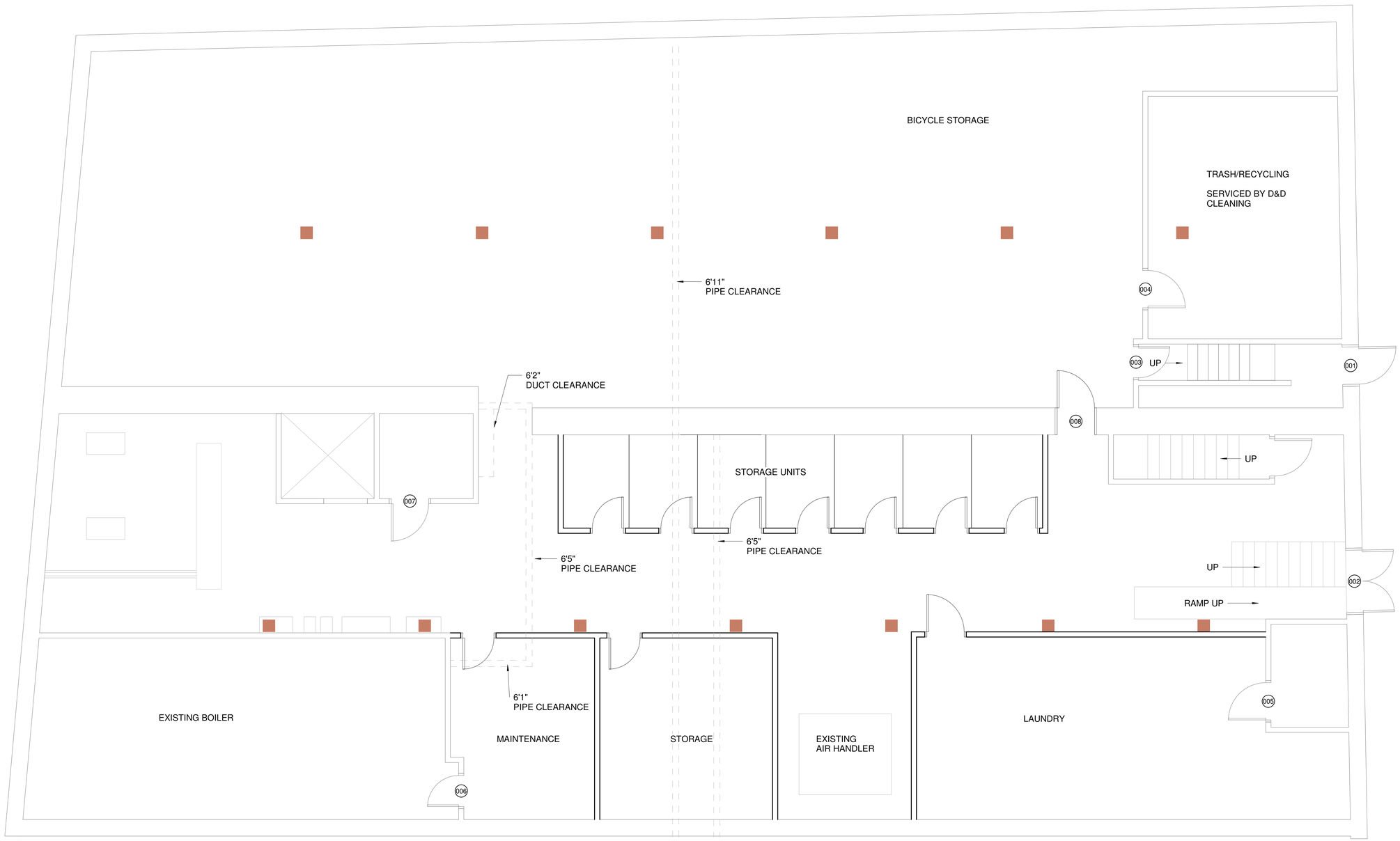
Revisions:

Scale: 1/4" = 1'-0"

Date: 2-8-2019

BUILDING ELEVATIONS - EXISTING & DEMO

A2.01



1 BASEMENT
1/4" = 1'-0"

Prepared For:

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Address
City, State

Revisions:

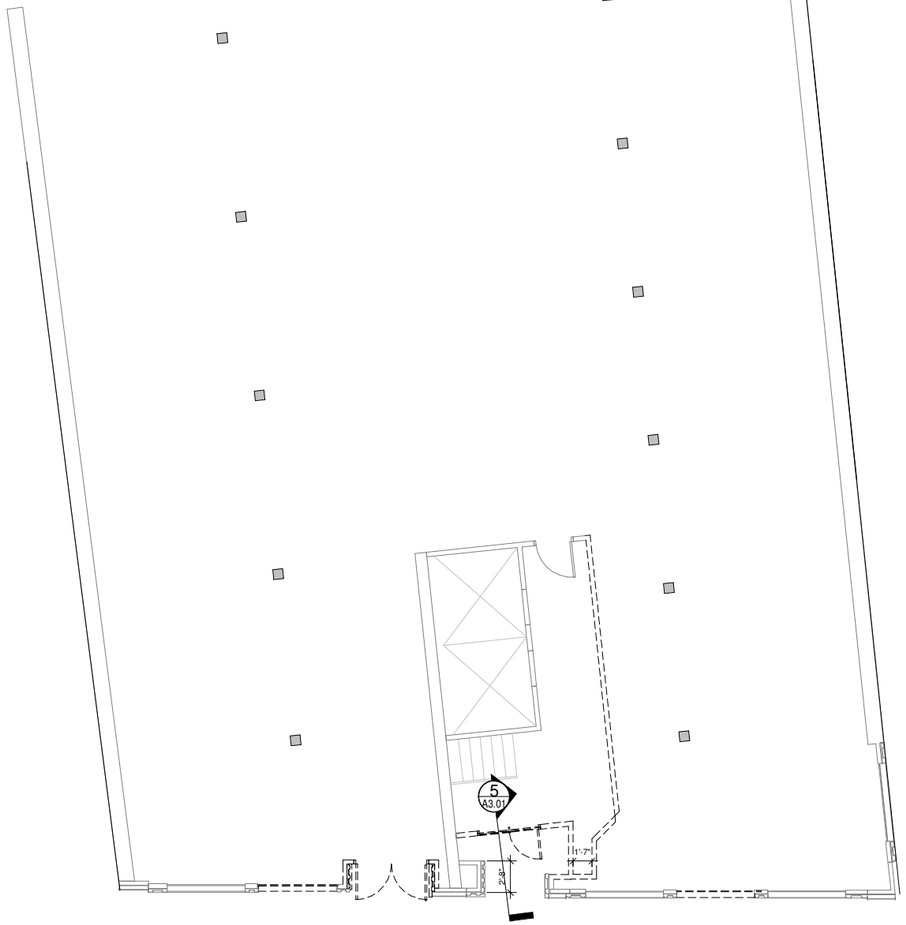
Scale: 1/4" = 1'-0"

Date: 2-7-2019

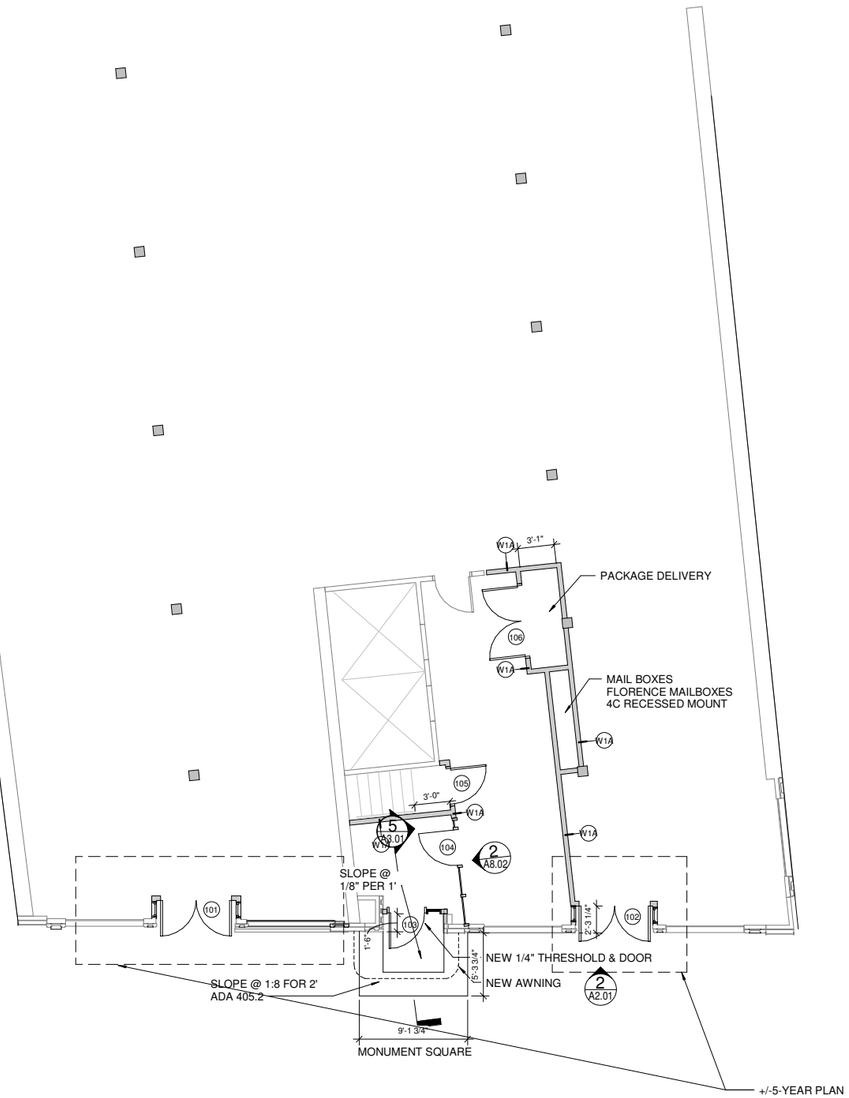
BASEMENT

A1.00

2/8/2019 10:25:24 AM



1 | LOBBY DEMO PLAN
3/16" = 1'-0"



2 | LOBBY PLAN
3/16" = 1'-0"

Architect:
ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Consultant:

Prepared For:
Lancaster Street LLC

Project:
50 MONUMENT SQUARE
Portland, Maine

Revisions:

Scale: 3/16" = 1'-0"

Date: 2-8-2019

FLOOR PLANS

A1.01

1 | 3RD FLOOR PLAN
1/4" = 1'-0"

LICENSED ARCHITECT
WILLIAM K. HOSKINS
No. 1050
STATE OF MAINE

Prepared For:

Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022-ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE

Address
City, State

Revisions:

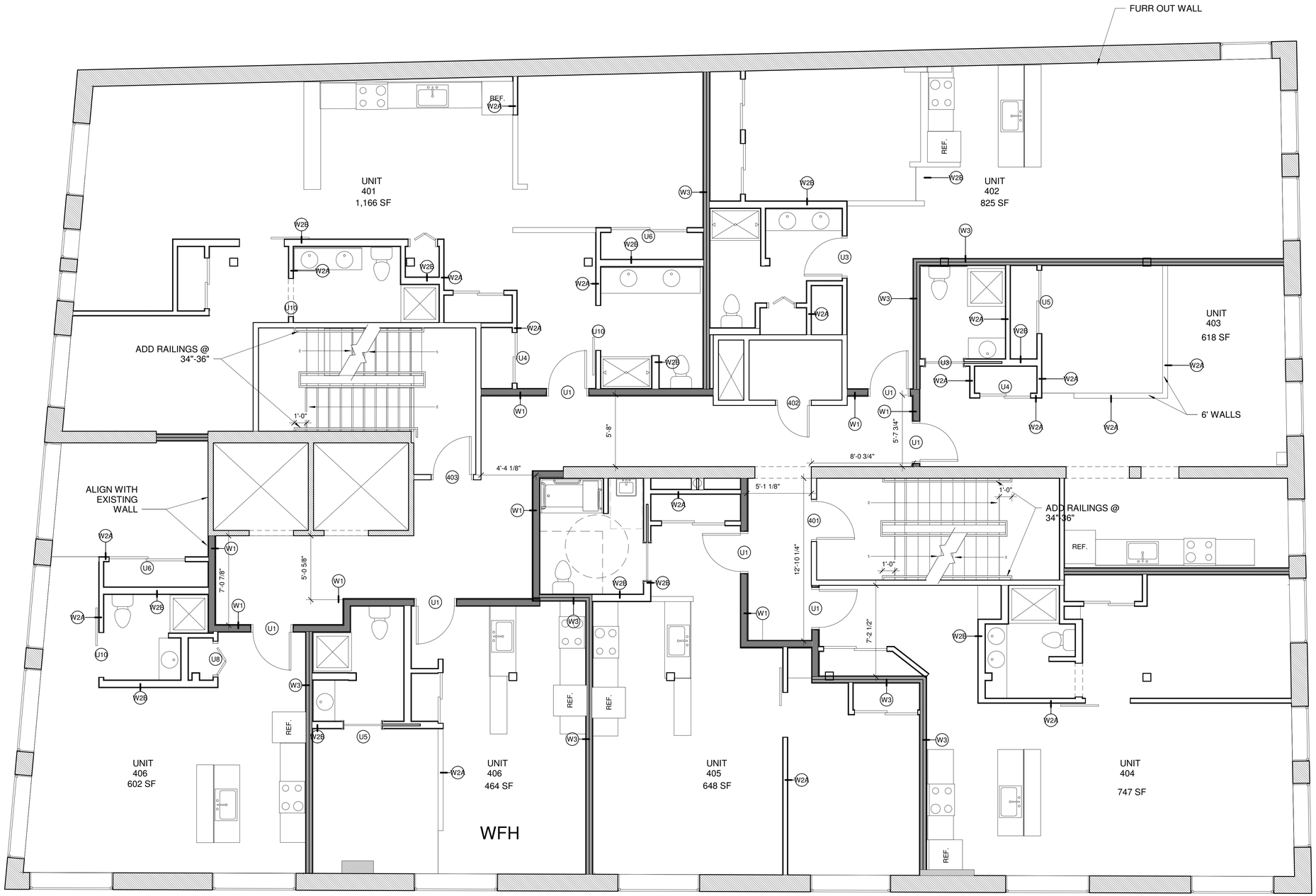
Scale: 1/4" = 1'-0"

Date: 10-31-2018

3RD FLOOR PLAN

A1.03

11/12/2018 12:35:01 PM



- 5,555 SF

1 | 4TH FLOOR PLAN
1/4" = 1'-0"

WFH - WORKFORCE HOUSING UNIT

PROJECT TOTAL BED COUNT - 24
24(.1) = 2.4 = 2 BEDS TO WORKFORCE HOUSING

UNITS 406 & 506

Prepared For:

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Address
City, State

Revisions:

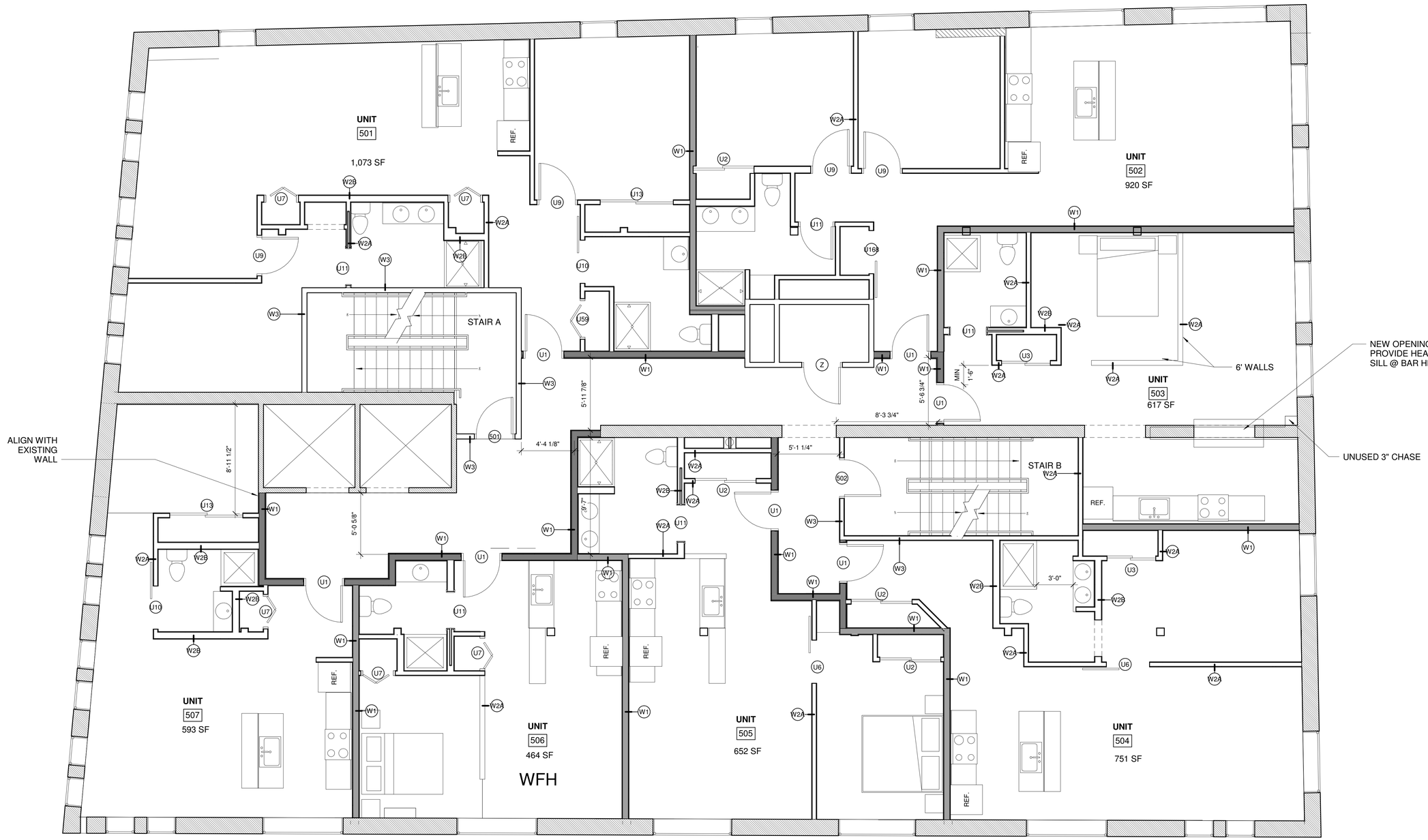
Scale: 1/4" = 1'-0"

Date: 10-31-2018

4TH FLOOR PLAN

A1.04

11/12/2018 12:35:51 PM



- 5,548 SF

1 FIFTH FLOOR PLAN .
1/4" = 1'-0"

Prepared For:
Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Address
City, State

Revisions:

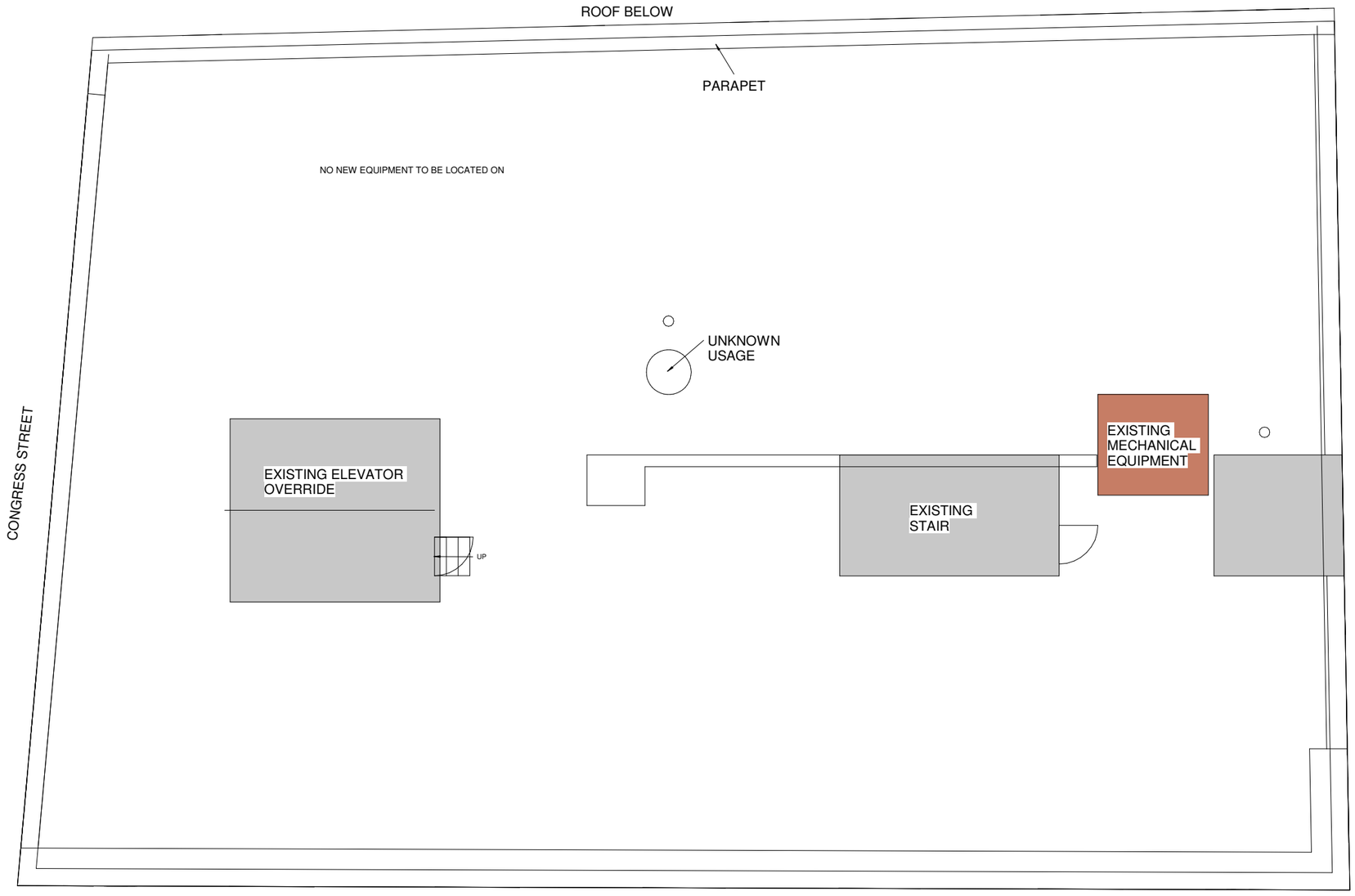
Scale: 1/4" = 1'-0"

Date: 2-7-2019

5TH FLOOR PLAN

A1.05

2/19/2019 3:05:42 PM



1 ROOF
1/4" = 1'-0"

Prepared For:

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6023 ARCHETYPE@ARCHETYPEPA.COM

Project:
50 MONUMENT SQUARE
Address
City, State

Revisions:

Scale: 1/4" = 1'-0"

Date: 2-7-2019

ROOF PLAN

A1.06

2/8/2019 10:31:51 AM

Google Groups

Fwd: 50 Monument Square Renovations

me <jmy@portlandmaine.gov> Feb 7, 2019 10:21 AM
Posted in group: **Planning Board**

Jennifer Munson, Office Manager
Planning and Urban Development
City of Portland
389 Congress St., 4th Floor
Portland ME 04101
jmy@portlandmaine.gov
(207) 874-8719
(207) 756-8258 (fax)

---------- Forwarded message ---------
From: **Barbara Barhydt** <bab@portlandmaine.gov>
Date: Thu, Feb 7, 2019 at 9:41 AM
Subject: Fwd: 50 Monument Square Renovations
To: Jean Fraser <jf@portlandmaine.gov>, Munson, Jennifer <jmy@portlandmaine.gov>

public comment
Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

---------- Forwarded message ---------
From: **maura rodway** <mikeydoodle@earthlink.net>
Date: Thu, Feb 7, 2019 at 9:38 AM
Subject: 50 Monument Square Renovations
To: <bab@portlandmaine.gov>
Cc: <stephen.bushey@stantec.com>

My husband, Peter, and I are owners of 30 City Center. While we will not be in attendance at the meeting today, we are in full support of the proposed renovations at 50 Monument Square.

Additionally I think that the use of the upper floors for apartments are a great idea. I wish the owners luck with the project and hope all goes smoothly.

Maura Rodway