

CITY OF PORTLAND, MAINE

PLANNING BOARD



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

AGENDA PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on Tuesday, October 27, 2020, 4:30 p.m. This meeting will take place using Zoom.

Virtual meetings are allowed using emergency legislation approved by LD 2167; 1 M.R.S. §403-A, that authorizes cities and towns to conduct meetings online.

Allow your computer to install the free Zoom app to get the best meeting experience.

For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be un-muted by the host when it is time for public comment.

ZOOM MEETING INSTRUCTIONS

You are invited to a Zoom webinar.

When: Oct 27, 2020 04:30 PM Eastern Time (US and Canada)

Topic: Planning Board Workshop and Public Hearing 10/27/2020

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/86583653696>

Or iPhone one-tap :

US: +13126266799,,86583653696# or +19292056099,,86583653696#

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Dial(for higher quality, dial a number based on your current location):

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Webinar ID: 865 8365 3696

International numbers available: <https://us02web.zoom.us/j/86583653696>

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<https://www.portlandmaine.gov/remotepud>

Public comments will be taken for each item on the agenda and written comments should be submitted to planningboard@portlandmaine.gov

WORKSHOP - 4:30 PM

- i. Level III Site Plan, Subdivision and Conditional Use; 52 Hanover Street; Tom Watson & Co., Applicant. (estimated time 4:30 – 6:00 p.m.) The Planning Board will hold a workshop to consider a proposal for a six to eight-story, 239,000 square foot mixed-use building with 171 dwelling units and ground-floor retail space at 52 Hanover Street. The subject property is 59,625 square feet in size and is zoned B-2b Community Business.
- ii. Level III Site Plan and Subdivision; 12 White Birch Lane; Birchlane, LLC., Applicant. (estimated time 6:00 – 7:00 p.m. The Planning Board will hold a workshop to consider the development of a three-story, three-unit residential building at 12 White Birch Lane. The subject property is 7,172 square feet in size, is, zoned R-3 and R-5 Residential, and is located within a Planned Residential Unit Development (PRUD).

PUBLIC HEARING - 7:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON OCTOBER 20, 2020

Afternoon Workshop

5 Portland Street: Chann, Dundon, Dunfey, Mazer, Silk, Smith, and Stanley present.

32 Thomas Street: Chann, Dundon, Dunfey, Mazer, Silk, Smith, and Stanley present.

Evening Hearing

1006 Congress Street: Chann, Dundon, Dunfey, Mazer, Silk, and Stanley present; Smith recused.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON OCTOBER 20, 2020

- i. Level III Site Plan Amendment; 1006 Congress Street; 1006 Congress St., LLC., Applicant. Stanley moved and Dundon seconded a motion to find the plan in accordance with the subdivision standards of the land use code with two conditions of approval. Vote 6-0, Smith recused. Stanley moved and Dundon seconded a motion to find the plan in accordance with the site plan standards of the land use code with one condition of approval. Vote 6-0, Smith recused. Stanley moved and Dundon seconded a motion to find the proposed conditional use for workforce housing to meet the standards of Section 14-484 of the land use code with two conditions of approval. Vote 6-0, Smith recused.
- ii. Suspension of Order of Proceedings Rule 6 – Agenda Items after 10 pm. Stanley moved and Dundon seconded a motion to suspend the Order of Proceedings rule prohibiting the commencement of new agenda items after 10:00 pm in order to allow the consideration of 1006 Congress Street. Vote 7-0.

5. NEW BUSINESS

- i. Level III Site Plan Amendment; 75 Chestnut Street; Procopio Co., Applicant. (estimated time 7:00 – 7:30 p.m.) The Planning Board will hold a public hearing to consider an amendment to the Inclusionary Zoning Conditional Use approval for 75 Chestnut Street, a previously-approved seven-story, 75,350 square foot mixed use building with 52 dwelling units and ground-floor commercial space. This project was originally approved by the Planning Board on December 13, 2016 as PL-002016-184 and subsequently amended on April 18, 2018 as PL-002018-046. The applicant seeks to amend the Inclusionary Zoning Conditional Use approval to provide an in-lieu fee contribution to meet City inclusionary zoning requirements. The subject property is 92.202 square feet in size and is zoned B-7.



Memorandum
Planning and Urban Development Department
Planning Division

To: Brandon Mazer, Chair and Members of the Portland Planning Board
From: Jimmy Dealaman, Planner
Date: October 23, 2020
Re: Mixed Use Development at 52 Hanover Street
Tom Watson & Co., LLC, Applicant
Project #: PL-001288-2020, CU-001325-2020
CBLs: 033 Boo8001
Meeting Date: October 27, 2020

I. INTRODUCTION

Tom Watson & Co., LLC has submitted a Level III site plan/subdivision application for redevelopment of a site at 52 Hanover Street that includes demolition of the existing garage structure and the construction of a 6-8 story, 239,000 square foot mixed use building with 171 upper-floor residential units and four ground-floor retail spaces.



Figure 1: Aerial view (South View) of 52 Hanover Street vicinity with development area highlighted

An outdoor patio space will be created along a new retail frontage (a discontinued section of Lancaster Street now called 'Lancaster Court') across from an existing outdoor plaza/patio space which runs along the retail/south side of the building at 82 Hanover Street. The city currently retains a ten (10) foot wide pedestrian access easement/way between the two outdoor spaces to maintain a public access route for pedestrians to navigate between the two sites. A structured parking garage with 194 parking spaces would also be provided onsite through this project, with this facility also fulfilling a portion of nearby 82 Hanover Street's parking needs. The site is located in the West Bayside Neighborhood and within the B-2b Community Business Zone.

This workshop is intended to provide the Planning Board with a preliminary overview of the project and introduce some of the higher-level discussion items in order to gather feedback to assist staff during the initial phase of review.

The current memo from staff will introduce several key elements (listed below) at the outset of the review process in order to glean Board/public feedback about these areas specifically, with the intended goal of

informing both staff and the applicant and factor these considerations into the review. These initial areas include:

- a) Initial Overview of the Current Project
- b) Design
- c) Traffic Movement Permit (TMP)
- d) Transportation Demand Management (TDM) Plan

Planning staff have not yet issued site plan/subdivision review comments to the applicant, but early feedback about the project was communicated to the applicant during a pre-application meeting on July 29, 2020. The city's urban designer also met with the applicant following the pre-application meeting discussion to provide feedback about building design, specifically the building orientation and active street frontage compliance; this feedback informed the current proposal.

An additional Planning Board workshop will be needed to continue discussion of the application, and the staff memo does not yet incorporate review notes on any other applicable review standards and will only cover those elements listed above.

Applicant: Tom Watson & Co., LLC (Tom Watson)

Agent and Engineer: Acorn Engineering (Will Savage & Sam Lebel)

Architect: CUBE3 (Nick Griffin)

Traffic Consultant: William Bray, Engineer

TDM Consultant: Cushman Transportation Consulting, LLC

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: Waiver for allowing 47 compact parking spaces (24% of the proposed 194 parking spaces)	City of Portland Technical Manual 1.14
Staff Comments: Review Ongoing	
Review	Applicable Standards
Site Plan	<i>Section 14-526</i>
Subdivision	<i>Section 14-497</i>
Traffic Movement Permit	<i>Section 1.1 Technical Manual - Traffic Studies</i>
Design Review	<i>B-2b Commercial Business Zones Standards and Multiple-Family Standards</i>
Conditional Use – Inclusionary Zoning	<i>Section 14-487</i>

III. PROJECT DATA

Existing Zoning	B-2b		
Existing Use	Municipal Buildings and Uses		
Proposed Use	Mixed Use (Multifamily Housing and Retail)		
Proposed Development Program	Twenty (20) efficiencies, one hundred fourteen (114) one-bedroom, and thirty seven (37) two-bedroom residential units, and four (4) ground-floor retail units		
Parcel Size	1.37 acres		
Total Area of Site (SF)	59,625 SF		
Disturbed Area	59,625 SF		
	<i>Existing Site</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	18,380 SF	46,000 SF	+27,620 SF
Building Floor Area	18,380 SF	239,010 SF	+220,630 SF
Impervious Surface Area	59,625 SF	56,644 SF	-2,981 SF
<i>Square Footage (by Use)</i>			
<i>Residential (SF)</i>	<i>0 SF</i>	<i>153,480 SF</i>	<i>+153,480 SF</i>
Commercial Space (SF)	<i>0 SF</i>	<i>7,600 SF</i>	<i>+7,600 SF</i>
<i>Industrial/Warehouse (SF)</i>	<i>18,380 SF</i>	<i>0 SF</i>	<i>-18,380 SF (demolished)</i>
<i>Residential Breakdown</i>			
<i>One-Bedroom Units</i>	-	114	114
<i>Two Bedroom Units</i>	-	37	37
Efficiency	-	20	20
TOTAL RESIDENTIAL UNITS	-	171	171
Parking Spaces (on site)	30	194	+164
Compact Spaces	0	35	+35
Handicapped Spaces	0	6	+6
Bicycle Parking Spaces	0	75	+75

IV. BACKGROUND & EXISTING CONDITIONS

The property at 52 Hanover Street is located in the West Bayside neighborhood. The site was formerly part of an assemblage of City-owned parcels (previously 44 Hanover Street) that also included the nearby 82 Hanover Street and 55 Portland Street, the latter of which received subdivision approval on March 22, 2018 (#2018-001). The property at 52 Hanover Street previously served as the Department of Public Works vehicle maintenance facility and also offered a fuel station for city vehicles. The building was constructed in 1982 and the City's architect also reports that early records (circa 1882) show that the site was previously filled with housing before the City acquired it.



Figure 2: Photo provided by Cushman Transportation Consulting, LLC of West Elevation View along Parris Street view of Existing Building

The disposition of the site to the applicant was conditioned under a purchase and sale agreement by the City Council in 2018 for use as a maker space, but this plan was abandoned by the applicant in favor of the current development proposal. An amendment to the purchase and sale agreement was later approved by the City Council to allow for the current development proposal.

The property at 82 Hanover Street was recently redeveloped with the site plan approval issued by the Planning Board in May 17, 2018 (#2018-042) to Tom Watson & Co, LLC. The development plan at 82 Hanover included the adaptive reuse of the former municipal building into a mixed-use development containing a mix of ground-floor commercial uses.

V. DEVELOPMENT PROPOSAL

The existing maintenance garage would be demolished and the lot would be developed into a new 6-8 story mixed-use building with a footprint that would encompass the majority of the lot. The proposed building is shown in the Plan set and described in the applicant's submittal. The new construction includes a development program of covered onsite parking at the ground level (91 spaces) and first level (103 spaces) floors, which are accessed by driveway entrances on Hanover and Parris streets, respectively, totaling 194 parking spaces. The north side

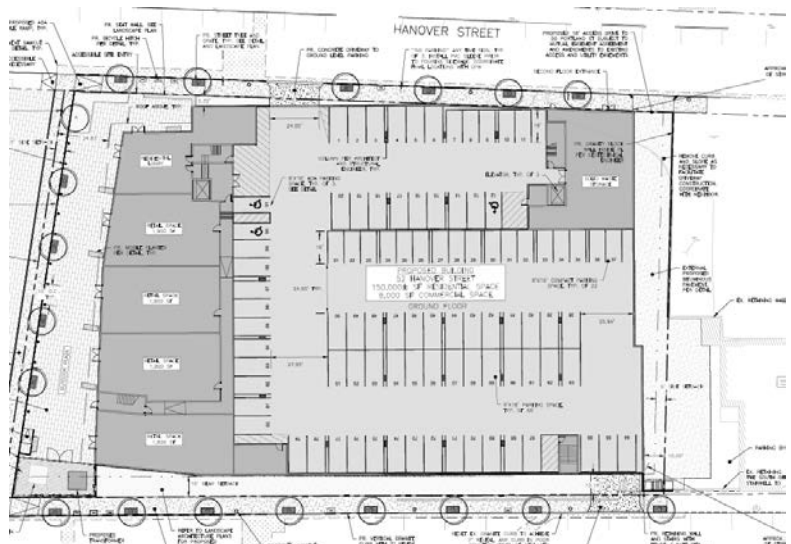


Figure 3: Screenshot of Proposed Site Plan (Ground Level)

of the building will include four ground level retail units (each 1,900 SF) totaling 7,600 SF, which will interface with the patio/plaza area being created. These retail spaces border a 10-foot wide public pedestrian easement in order to provide access from the street level. The public pedestrian way would separate the patio area at 52 Hanover St. from the adjacent patio and retail uses across the way at 82 Hanover Street.

The upper floors would include 171 residential apartments with a bedroom mix of 20 efficiencies, 114 one-bedroom units, and 37 two-bedroom units. Of those units 154 are expected to be market rate and 17 are expected to be provided as workforce housing. The building would contain eight stories and rise to a height of approximately 85 feet and the portion of the building at Lancaster Street would contain five stories. It also include an outdoor courtyard and pool on the third floor and outdoor amenity space on the sixth floor.

VI. ZONING ANALYSIS

The subject property is located within the B-2b Community Business Zone.

As defined in the land use code, the purpose of the B-2b Community Business Zone states:

“The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.”

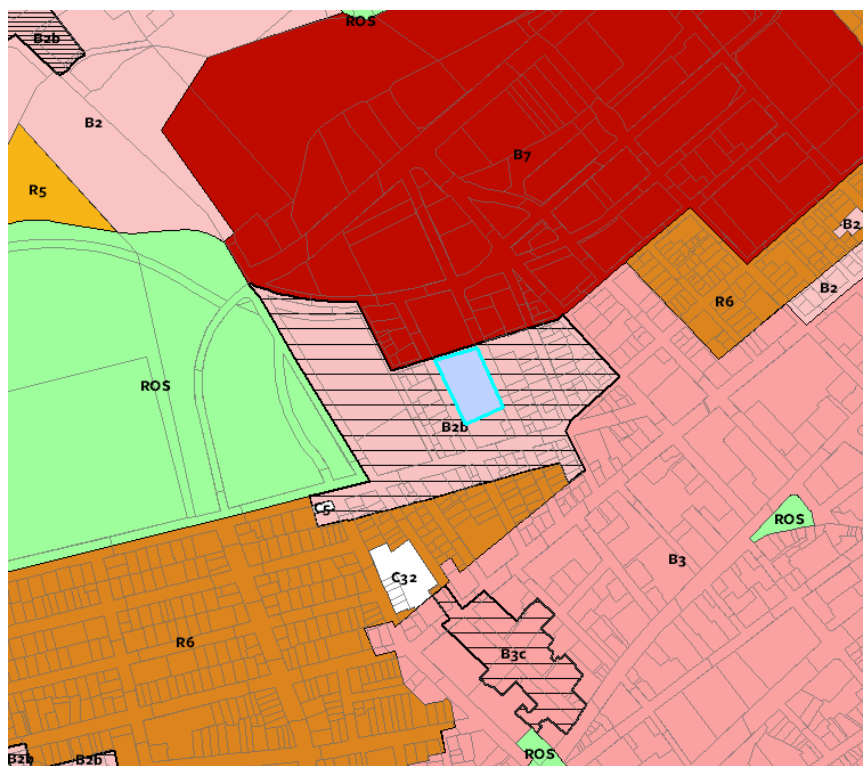


Figure 4: Zoning Context with Site Highlighted

The previous use of the maintenance facility was permitted in the B-2b zone as a municipal building. Multifamily housing, general retail establishments, and restaurants are permitted uses in this zone. The project falls in a section of the B-2b which borders the B-7 Mixed Development District Zone to the north, Recreational and Open Space (Deering Oaks Park) to the west, and R-6 Residential Zone to the south, and B-3 Downtown Business Zone to the east.

Planning staff are currently working with the Zoning Division to review the project for zoning compliance and further information on this topic is forthcoming.

VII. DESIGN REVIEW

The proposal is subject to all applicable design standards in the B-2b Community Business Zone as well as Multiple-Family outlined in the City's Design Manual (Sections (d) and (i)).

Following the pre-application meeting with the applicant, the City's Urban Designer provided preliminary feedback regarding the building orientation and active street frontage compliance to the applicant. The application has returned with updated materials since that time, and the Urban Designer has since conducted a preliminary review of the project and provided initial comments. **(Attachment 5)**. These comments are being shared with the Board for reference and for preliminary discussion/ feedback to further inform the design review process as applicable to the design standards.

Review of the proposed design is ongoing and will continue by staff, but at this time feedback is requested from the Planning Board on the project's relationship to the existing surrounding context.

The current building design proposes a main entrance facing Hanover Street. The project also utilizes the former section of Lancaster Street now known as 'Lancaster Court' as an active area with retail entrances facing towards a 10-foot right-of-way pedestrian access easement path, situated between the opposite building at 82 Hanover. The retail also includes an outdoor plaza/patio space as well as plantings along the access path. The site also includes the installation of a new sidewalk and tree well plantings in the City ROW along the



Figure 5: Proposed Building – East Elevation View



Figure 6: Proposed Building – West Elevation View



Figure 7: Proposed Building – North Elevation View

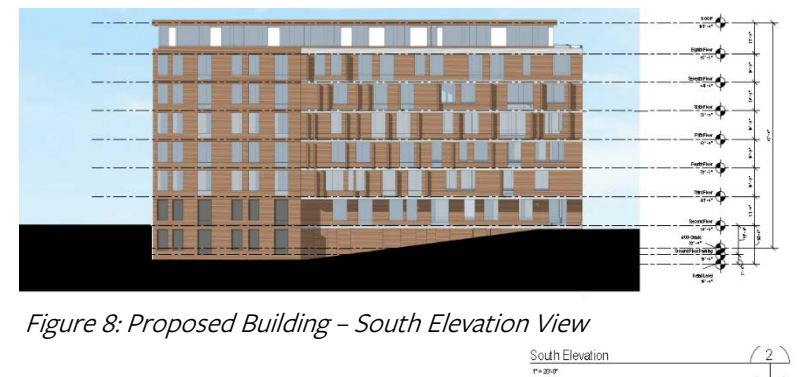


Figure 8: Proposed Building – South Elevation View

east and west sides of the building on Hanover and Parris Streets, respectively. On Parris Street, there is additional landscaped area proposed onsite along the sidewalk.

The building is stepped back on the eastern side of the building along Parris Street. The building massing follows the slope of the site. The sixth floor has an outdoor amenity space, and third floor opens to an outdoor courtyard. As stated earlier, the two covered parking levels are located on the ground and first floors, with upper stories designated for residential apartments.

Additional renderings have been requested by staff and should be available for the Board to reference at the October 27th workshop.

VIII. TRAFFIC MOVEMENT PERMIT (TMP) OVERVIEW

As defined under Maine state statute 704—A, a traffic movement permit is required of any project that generates 100 or more passenger car equivalents at peak hour. Any project surpassing this threshold is required to make adequate provision for traffic movement of all types into and out of the project area such that any traffic increase that is attributable to the project will not result in unreasonable congestion or unsafe conditions on a road in the vicinity of the development.



Figure 9: Aerial view of Development Site (screenshot taken using Google Earth) (South view facing North)

A preliminary step in this process is the ‘scoping meeting’, which is a formal review of the application material to determine the scope of impact evaluation required for the proposed project and the type of proceedings warranted.

Please note: The scoping meeting has not yet been scheduled but is expected to be scheduled in the near future, and the findings of that meeting will be communicated to the Planning Board at the next workshop. At the time of this report’s drafting, the applicant’s TMP application has been received (**Attachment V.**), along with a memo from the applicant’s traffic engineer (**Attachment T**).

IX. TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

A TDM plan (**Attachment U**) prepared by Cushman Transportation Consulting, LLC, was submitted as part of this application. The City’s Transportation Program Manager has reviewed the TDM draft and provided preliminary comments (**Attachment 2**) which express general support of the approach/information proposed. He will continue to review and forward the applicant detailed comments following the October 27th workshop. As that TDM is linked to the calculations set forth within the TMP application, the outcomes

and feedback on the TDM plan will ultimately depend on the resolution of the TMP application related to trip generation calculation requirements, as well as the parking supply and demand specifics.

The TDM outlines a number of strategies developed to “reduce parking demand and drive-alone vehicle trips to and from the site and benefit the local transportation system.” These strategic areas include:

Marketing the Housing to Downtown Employees

The TDM describes measures to attract tenants/people working downtown or in nearby neighborhoods to live at the site, so as to avoid the increased highway traffic coming into the City.

Providing Leases Exclusive of Parking

The TDM describes providing residential and retail leases at 52 Hanover that will be exclusive of parking. The document posits that parking that is unsubsidized, rented at competitive market rates, and unbundled from tenant leases will discourage single occupancy vehicle trips and encourage the use of alternate transportation.

Offering Onsite Amenities:

The TDM describes the minimization of the number of errands and activities needed at different locations through onsite amenities to reduce the dependence upon driving alone - through building facility and proximity to services close to the site. Site features to include:

- An indoor bicycle/stroller/carseat/handcart storage area
- Delivery location and storage for packages and other deliveries
- Free wireless internet throughout the building
- Communal space that can be used to do telework
- Fitness room
- Outdoor rooftop courtyard including congregating areas such as fire pits and a wading pool.

Supporting Transportation Alternatives Modes (Bicycle & Pedestrian Access, Public Transportation Access, Shared Mobility Access)

- Bicycle & Pedestrian Access: The TDM describes the site as being generally pedestrian and bicycle-friendly. It describes the presence of continued sidewalk, crossing and bike lane improvements being made in the area – including through new development projects. The TDM describes the area as generally having a strong sidewalk network and lower-speed street grid of the Portland peninsula. It goes on to say the development site also sits in close proximity to the trails, bike lanes, near-site amenities and recreational facilities also provide people with a full-service living and working environment

TDM Targets

The TDM Plan sets the following targets:

- **Trip & parking reduction target:** a 10% reduction in resident vehicle trips and parking demand within 3 years after full occupancy - resulting from TDM program. That is, 2.6 resident weekday morning peak trips, 3.1 resident weekday evening peak trips, 7.6 residential-use spaces
- **Multi-modal target:** 65% of resident and retail employee trips will be on foot, by bicycle, via transit, telecommuting, or carpooling within 3 years after full occupancy
- Will reassess targets after the first full year of 52 Hanover occupancy

Figure 11: TDM Plan Target Summary

- Public Transportation Access: As per the TDM, the site is within several blocks of the METRO Routes 2, 4 and 5 at the corner of Forest Avenue and Portland Street/Park Avenue. These serve the significant transportation corridors and residential neighborhoods. The building is also three blocks from Congress Street with access to the South Portland, Lakes Region, Shuttlebus/ZOOM and other METRO bus routes - and a six-minute walk to the METRO Pulse transit hub on Elm Street.
- Shared Mobility Access: The TDM describes exploring other carshare possibilities for 52 Hanover Street. If an option is found feasible, the applicant will offer a discount for resident carshare vehicle use for the first year of residency.

While staff review and comment on the TDM plan is still ongoing, staff request broad guidance from the Board on the above TDM strategies.

X. NEIGHBORHOOD MEETING & PUBLIC NOTICE/COMMENT

The required neighborhood meeting for the project has not yet occurred but will soon be scheduled by the applicant.

Notices have been sent to 164 property owners and a legal advertisement was published in the October 17th and October 18th editions of the Portland Press Herald. At the time of writing this report, no written public comments have yet been received.

XI. KEY FEEDBACK AREAS

Staff is seeking Planning Board feedback on the current iteration of the proposal as it relates to the three sections discussed above (listed again below).

- DESIGN REVIEW (see paragraph VII)
- TRAFFIC MOVEMENT PERMIT OVERVIEW (TMP) (see paragraph VIII)
- TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN (see paragraph IX)

XII. NEXT STEPS

- Continued staff review
- Applicant to hold neighborhood meeting
- TMP scoping meeting to be held
- Second workshop in the future with additional analysis completed by that time

XIII. ATTACHMENTS

Attachments to Memorandum

1. Preliminary Design Review Memo, dated, 10.21.2020
2. Traffic Engineer/Consultant Comments, dated 10.22.2020

3. City Transportation Program Manager Comments, dated 10.22.2020
4. City Housing Program Manager Comments, dated 10.21.2020
5. Pages from Design Manual - Section (d), B-2b Community Business Zone Standards
6. Pages from Design Manual - Section (i), Standards on all Multiple-Family

Applicant's Documents

- A. Application Cover
- B. Application Checklist
- C. Right, Title, and 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 & Sedimentation Control
- L. Fire Department Letter
- M. Wastewater Capacity
- N. Lighting
- O. Arch Design Narrative
- P. Utilities
- Q. Construction Management Plan
- R. Solid Waste Disposal
- S. Parking Study
- T. Traffic Memo
- U. Transportation Demand Management Plan
- V. Traffic Movement Permit Application
- W. Stormwater Management Law Application

Applicant's Plans

- P1 Cover Sheet & Legend
- P2 General Notes
- P3 Existing Conditions Plan
- P4 Demolition & Construction Management Plan
- P5 Site Plan – Ground Floor
- P6 Site Plan – Second Floor
- P7 Landscape Plan
- P8 Utility Plan
- P9 Grading & Drainage Plan – Ground Floor

P10 Grading & Drainage Plan – Second Floor
P11 Site Details - 1
P12 Site Details - 2
P13 Landscaping Details
P14 Utility Details - 1
P15 Utility Details – 2
P16 Utility Details - 3
P17 Drainage Details
P18 Erosion & Sedimentation Details & Control Notes
P19 Subdivision Plat
P20 First Floor Plan
P21 Second Floor Plan
P22 Third Floor Plan
P23 Fourth Floor Plan
P24 Fifth Floor Plan
P25 Sixth Floor Plan
P26 Seventh Floor Plan
P27 Eighth Floor Plan
P28 Exterior Elevations
P29 Exterior Elevations

Planning and Urban Development Department Planning Division



Subject: B-2b Design Review – 52 Hanover Street
Written by: Caitlin Cameron, Urban Designer
Date of Review: Wednesday, October 21 2020

The project at 52 Hanover Street was preliminarily reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, against the *B2b Commercial Business Zones Standards* (Section (d) of the Design Manual) and *Multiple-Family Standards*.

Design Review Comments: *(questions and unmet standards in red)*

- More information/depiction of the materials including labels on the elevations and renderings or product specification.
- The Board is asked to provide feedback on the project's relationship to the existing residential context.

(d) B-2b Commercial Business Zones

Standard (1) a. Urban Street Wall – Building placement is near the property line in keeping with the established street wall with little to no front yard setback or landscape. This pattern is interrupted on the Parris Street edge which has a continuous landscape buffer between the sidewalk and building. **Staff do not advocate for this landscape buffer between the sidewalk and retail space. In addition, this landscape area should be protected either with a curb or planter wall. The transformer location also disrupts this street wall edge and should be reconsidered.**

Standard (1) b. Mixed Uses – Not applicable

Standard (1) c. Building Entrances – Main building entrance faces and is directly accessible from Hanover Street. Multiple retail entrances are oriented to Lancaster Street which is a pedestrian street/passage. **The main residential entrance is not differentiated from the retail spaces and should be given more emphasis/prominence.**

Standard (1) d. Windows – Windows are provided along all street frontages as required – however, the amount of windows is limited along Hanover and Parris streets due to the structured parking use. **VT of .7 or greater is required.**

Standard (1) e. Façade Character – Building is oriented to Lancaster Street – the retail/active areas face the public sidewalk and turn the corner to also provide some transparency and activity on Parris and Hanover Streets. The majority of the facades on Parris and Hanover streets are occupied by structured parking which has limited interactive function. In this instance, the residential entrance has been oriented to Hanover Street and the remaining portions of the building use material changes, windows and doors, and planters to “provide visual interest along the street.”

Standard (1) f. Building Design – Compatibility - See multi-family comments below.

Standard (1) g. Building Materials – More information is needed to evaluate the project. The application indicates residential materials are being used. However, the specific materials and finishes are not indicated on the elevations, in renderings, or material cut sheets. The elevations imply the appearance of a natural wood finish for a majority of the building – this would not be considered to meet the standard for materials that are compatible with the residential and commercial neighbors which are predominantly brick and painted clapboard. Unfinished or natural wood is not considered compatible with the traditional, urban context.

Standard (1) h. Building Scale – Not applicable

Standard (1) i. Landscaping and Buffers – Parking is structured and screened from neighboring properties. The transformers are enclosed with screening but placed in a prominent location next to the retail frontage – this location should be reconsidered. More information about building lighting and mechanical systems will be needed to evaluate need for buffers.

(i) Two-Family, . . . Multiple-Family . . . :

Standard (1) . Exterior Design – Context currently includes few multi-family buildings of this scale (recent examples are 56 Parris Street and 178 Kennebec Street). One could argue this context is appropriate for more contemporary design and more flexibility of forms, scale, and patterns as a transitional site between small-scale, traditional vernacular residential buildings and larger, industrial buildings with flat roofs and expansive, blocked footprints. The project includes interesting forms and massing as well as articulation elements such as bays, massing variation, and material transitions to provide a visually interesting, contemporary design.

This design does not, however, refer to the existing residential patterns in form, scale, massing, material, or fenestration and façade composition. Staff observe that though building type, scale, and placement vary throughout the neighborhood, there is a consistent use of material, trim, roof overhangs, and other articulation elements to add texture, fine-grain scale, and visual interest to the buildings, even if in a vernacular way.

The Board is asked to provide feedback on whether such a contemporary departure with no reference points to the smaller scale, existing residential can be considered to “complement and enhance the nearest residential neighborhood” as relates to:

- **Architectural style**
- **Façade materials**
- **Roof pitch**
- **Building form and height**
- **Window pattern and spacing**
- **Porches and entryways**
- **Cornerboard and trim details**
- **Façade variation in projecting or recessed building elements**

Standard (2). Relationship to Street – Existing neighborhood is a mix of small-scale residential and industrial building types. There are many undeveloped lots. There is not, therefore, a consistent street wall or building relationship to the street. That being said, the building placement of the proposal is consistent with the residential buildings adjacent – set at the property line with little to no yard/landscape. Building is oriented to the interior street with

some active uses wrapping the corner to Parris/Hanover streets. These streets are treated as secondary and mostly inactive, however with structured parking at the pedestrian level.

Standard (3). Open Space – Open spaces provided through balconies, rooftop area. In addition, ground floor plaza/outdoor dining space at the retail level.

Standard (4). Light and Air – All units provided with ample windows; storage space is not indicated on these plans.

Standard (5). Parking – Parking is structured; driveways are minimal; limited to no paved areas requiring screening.

Standard (6). Not applicable



James Dealaman <jdealaman@portlandmaine.gov>

52 Hanover Street - Traffic Movement Permit Status

Tom Errico <thomas.errico@tylin.com>

Thu, Oct 22, 2020 at 9:44 AM

To: James Dealaman <jdealaman@portlandmaine.gov>

Cc: Mike Tremblay <mtremblay@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>

Hi Jimmy – the proposed project generates in excess of 100 peak hour trips and thus requires a Traffic Movement Permit. The applicant submitted a Traffic Movement Permit Application and a scoping meeting will be scheduled in the near future. Please note the following:

- The proposed project is expected to generate 101 trips during the weekday PM peak hour, 103 trips during the Saturday peak hour and 144 trips during the Sunday peak hour.
- Access and egress to and from the project will occur via a driveway located on Hanover Street and a driveway located on Parris Street.
- The safety evaluation identified one High Crash Location, Portland Street between Lancaster Street and Portland Street. Nine (9) crashes were reported between 2017 and 2019.
- The MaineDOT Traffic Movement Permit regulations do consider common scheme of development and whether projects should account for such scenarios. 82 Hanover Street may be considered part of a common scheme scenario and thus may need to be combined with 52 Hanover Street as part of the Traffic Movement Permit process. 82 Hanover Street did obtain a Traffic Movement Permit and one possible outcome could be modifying that Permit. I am communicating with the MaineDOT State Traffic Engineer to obtain direction on this matter. I would like feedback on this issue before scheduling the scoping meeting.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

TYLININTERNATIONAL

[12 Northbrook Drive](#)

Falmouth, ME 04105

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[Twitter](#) | [Facebook](#) | [LinkedIn](#) | [Instagram](#)



James Dealaman <jdealaman@portlandmaine.gov>

PL 1288-2020 - 52 Hanover Street: Preliminary Review of TDM Plan

Bruce Hyman <bhyman@portlandmaine.gov> Thu, Oct 22, 2020 at 11:17 AM

To: James Dealaman <jdealaman@portlandmaine.gov>

Cc: Tom Errico <thomas.errico@tylin.com>, Mike Tremblay <mtremblay@portlandmaine.gov>, James Rather <jrather@portlandmaine.gov>, Helen Donaldson <hcd@portlandmaine.gov>

Good morning, Jimmy,

I have had a chance to do a preliminary review of the 52 Hanover Street TDM Plan dated September 28, 2020.

In general, the Plan document is very well thought out and provides very good information related to many key elements of a TDM Plan including:

- the overall transportation context of the project and its
- ties between the pending Traffic Movement Permit/traffic and parking analysis and TDM efforts
- the proposed robust menu of TDM strategies to be employed
- the evaluation/monitoring and reporting provisions.

I will be providing detailed comments to the applicant and their TDM consultant in the next couple of weeks following the workshop. Some resolution of issues within the Traffic Movement Permit and parking demand-supply processes and guidance of the Board are needed before some details of the TDM plan can be finalized (such as trip reduction and parking reduction targets and the level of linkage to 82 Hanover Street as mentioned in Tom Errico's memo) although their proposed overall approach is sound.

Please don't hesitate to contact me if you have any questions.

Best regards,

Bruce

--

Bruce Hyman

Transportation Program Manager

Department of Planning & Urban Development

389 Congress Street

Portland, Maine 04101

(207) 874-8717 phone

bhyman@portlandmaine.gov

<http://www.portlandmaine.gov/1363/Transportation-Division>

<http://www.portlandmaine.gov>

Yes! Transportation's Good Here





James Dealaman <jdealaman@portlandmaine.gov>

52 Hanover Street

Victoria Volent <vvolent@portlandmaine.gov>

Wed, Oct 21, 2020 at 9:45 AM

To: James Dealaman <jdealaman@portlandmaine.gov>

Hi Jim,

52 Hanover Street proposes the creation of a multipurpose building including four (4) 2,000 sf commercial retail spaces and 171 apartment units.

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 developer of 52 Hanover Street has indicated that 17 of the apartment units will be Workforce Housing Units for rent. Subsequently, the proposed project would meet the minimum requirements set forth in Section 14-487 by creating 17 workforce units and paying a fractional fee-in-lieu of \$10,878 (.1 X \$108,786 fee-in-lieu).

Please further note, Section 14- 488 (g) allows projects that are subject to 14-487 that choose to provide the required workforce housing units on site to increase the total permitted units by 25%. The original density is 137 units. 137 units X 1.25 percent = 171.25 units or 171 units.

If you have any questions, please let me know.

Thank you,

Victoria

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

with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.

- b. Buildings and uses shall be located close to the street where practicable. Corner lots shall fill into the corner and shall provide an architectural presence and focus to mark the corner.
- c. Buildings shall be oriented toward the street and shall include prominent facades with windows and entrances oriented toward the street. Uses that include public access to a building or commercial/office uses in mixed-use developments shall be oriented toward major streets whenever possible.
- d. Parking lots shall be located to the maximum extent practicable toward the rear of the property and shall be located along property lines where joint use or combined parking areas with abutting properties are proposed or anticipated.

(d) B-1 AND B-1B NEIGHBORHOOD BUSINESS AND B-2 AND B-2B COMMERCIAL BUSINESS ZONES

(1) **STANDARDS.** Development located in the B-1, B-1b, B-2, and B-2b zones shall meet the following additional standards.

- a. Urban Street Wall: In the B-1, B-1b, and B-2b zone it shall be required that buildings shall be located to create and preserve an urban street wall.
- b. Mixed Uses: In B-1b zone buildings shall be multi-storied with mixed uses.
- c. Building Entrances: In the B-1 and B-2b zone building entrances shall be oriented toward, located adjacent to, and directly accessible from, a sidewalk in a public right-of-way.
- d. Windows: In the B-1, B-1b, B-2, and B-2b zones windows shall be required along the street frontage of a building. Windows shall be transparent (with a visible transmittance (VT) of .7 or greater) and installed at a height to allow views into the building by passersby.
- e. Facade Character: In the B-1, B-1b, B-2, B-2b zones, active and public portions of buildings (e.g. doors, windows, entries, retail displays) shall be oriented to and, where possible, be located adjacent to the public sidewalk to create an active presence along the sidewalk.
 - 1. Where building facades situated along a public way have no interactive use or function, such facades shall be designed to provide sufficient architectural and graphic amenities to provide visual interest along the street and relate the building, and its use, to passersby.
- f. Building Design: B-1, B-1b, B-2, and B-2b commercial buildings shall be designed to be compatible with their residential and commercial neighbors. In the B-1

and B-1b zones building scale, roof pitch, and fenestration shall be designed to complement surrounding residential structures.

- g. Building Materials: Facade materials of buildings located in the B-1, B-1b, B-2, and B-2b zones shall be compatible with those materials of surrounding residential and commercial uses.
- h. Building Scale: In the B-1 and B-1b zones building scale must relate and be compatible with surrounding residential structures.
- i. Landscaping and buffers: In the B-1, B-1b, B-2 and B-2b zones buildings and associated parking areas must be screened to buffer abutting properties. A densely planted landscape buffer and/or fencing will be required to protect neighboring properties from the impacts associated with the development, including lighting, parking, traffic, noise, odor, smoke, or other incompatible uses. Where buildings are setback from the street, a landscaped area must be planted along the front yard street line.

GUIDELINES.

Please refer to Appendix 2 of this manual, The B-1, B-1b, B-2, B-2b Design Guidelines, for applicable design guidelines for the B-1 and B-2 zones. In addition, the following design guidelines shall also apply:

- 1) Buildings located in the B-2 zone are specifically encouraged to adhere to the design guidelines contained in *the B-1, B-1b, B-2, B-2b Design Guidelines (Appendix 2)* of this section concerning the creation and preservation of an urban street wall.
- 2) In the B-1b and B-2 zones, buildings are specifically encouraged to adhere to the guidelines contained in *the B-1, B-1b, B-2, B-2b Design Guidelines (Appendix 2)* of this section concerning building entrances.

(e) UNIVERSITY OF SOUTHERN MAINE OVERLAY ZONE

- (1) **STANDARDS.** All major and minor development reviewed under the provisions of the University of Southern Maine Overlay zone shall be designed to create a quality and cohesive campus environment while integrating with and respecting the residential character of surrounding neighborhoods as demonstrated by compliance with the principles and standards of the University of Southern Maine Design Standards, included as Appendix 3 of this manual.

(f) B-7 BAYSIDE MIXED USE URBAN DISTRICT ZONE

- (1) **STANDARDS.** Bayside mixed use urban district zone (B-7 zone) design standards:
 - a. Transportation Demand Management: All major development in the B-7 shall submit and implement a Transportation Demand Management (TDM) Plan, subject to the review

greater than forty (40) feet in length shall provide variation in roof and facade character through changes in facade setback, roof configuration, and projecting or recessed building elements.

- c. Recreation and open space: All open spaces on the site shall be integrated into the development and designated on the site plan. Each development shall have the following features:
 - 1. External buffers: An effective and permanent screening from neighboring properties and roadways;
 - 2. Internal buffers: Areas planted, maintained and located in such a manner as to provide privacy between units and buildings and paved areas and screening of parking, utilities, roadways, waste collection facilities and storage facilities;
 - 3. Passive recreational open space: Open spaces, designated and improved with such features as gardens, picnic areas, walking trails; benches and lawn and seating areas;
 - 4. Active recreational open space: Open spaces designated and improved for active recreational use with facilities such as tennis courts, basketball courts, multipurpose game fields, swimming pools, and children's playgrounds; and
 - 5. Private open spaces: Open spaces designated for the individualized use of unit owners such as yards, decks and patios;

(i) TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS

(1) **STANDARDS.** Two-family, special needs independent living units, multiple-family, lodging houses, bed and breakfasts, and emergency shelters shall meet the following standards:

- a. Proposed structures and related site improvements shall meet the following standards:
 - 1. The exterior design of the proposed structures, including architectural style, facade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;
 - 2. The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;
 - 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;

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;

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;

6. Two-family or multiple-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.

(j) MULTIPLEX AND SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-5 ZONE

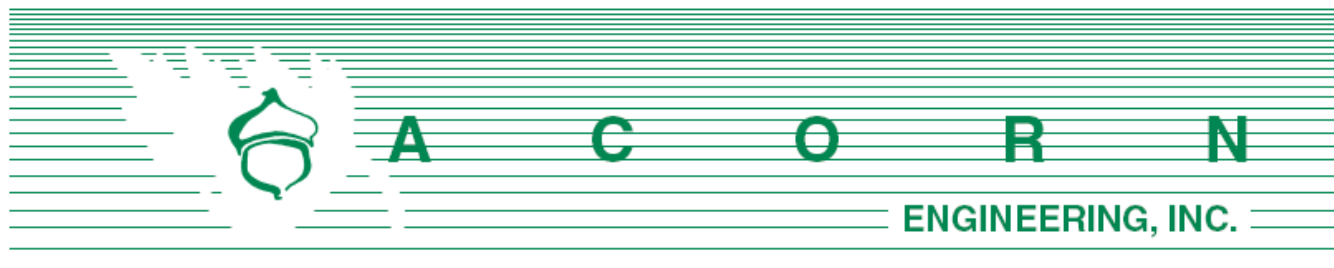
(1) **STANDARDS.** Multiplexes and small residential lot development in the R-5 zone shall be designed to be architecturally compatible with the residential buildings in the surrounding neighborhood, as demonstrated by compliance with the R-5 Small Residential Lot Development and Multiplex Design Standards contained in Appendix 6 of this manual.

(k) SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-6 ZONE

(1) **STANDARDS.** Small residential lot development located in the R-6 zone on lots of ten thousand (10,000) square feet or less shall provide a high degree of architectural quality and compatibility with the surrounding neighborhood as demonstrated by compliance with the principles and standards of the R-6 Infill Development Principles and Standards, promulgated by the Planning Board and contained in Appendix 7 of this manual. Any proposal required to obtain a certificate of appropriateness under Portland's historic preservation ordinance is exempt from the R-6 design review standard.

(l) INDIA STREET FORM-BASED CODE ZONE: BUILDING DESIGN STANDARDS

(1) **STANDARDS.** The IS-FBC Building Design Standards are contained in Appendix 8 of this manual and applicable to all types of development within the zone.



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

September 8, 2020

Subject: Level III Site Plan & Subdivision Application
Redevelopment of 52 Hanover Street

Dear Christine Grimando:

On behalf of Tom Watson & Co., LLC, we are pleased to submit the accompanying package of materials related to the redevelopment of 52 Hanover Street. The 1.37-acre parcel currently consists of a large garage formerly used for the storage and maintenance of Public Works vehicles. Since taking over ownership of the property, the Applicant has removed the fueling station including both 20,000-gallon underground storage tanks.

The original proposal for this property as part of the 2017 purchase and sale agreement included repurposing the existing building into “maker space” where artists and local crafters could utilize the garage bays to accommodate their spatial needs while having a place to showcase their work. While this option was studied and pursued, it is not currently feasible in today’s market. In an effort to redevelop the property in the near term, the proposal now includes demolition of the existing structure and redevelopment of the site with a six-story building. 171 residential units, including 17 workforce housing units onsite, with various amenities are planned with two levels of structured parking. Additionally, four retail units with patio space are proposed on the ground level adjacent to the existing 82 Hanover patio and Lancaster Court pedestrian/bicycle easement. The change in development program has been presented to the City Council and subsequently approved.

We are excited to submit this application to the Planning Department as it falls directly in line with the comprehensive plan by providing additional housing, including construction of the 17 workforce units on site, and an active retail frontage along the reinvigorated and pedestrian-orientated Lancaster Court.

Sincerely,

A handwritten signature in black ink, appearing to read 'Will Savage', is written over a horizontal line.

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

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

Documents:

- Section A: Cover Letter
- Section B: Level 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: Parking Study
- Section T: Traffic Report
- Section U: Transportation Demand Management Report
- Section V: Traffic Movement Permit Application
- Section W: Stormwater Management Law Application

Drawings:

- Civil Site Plan Set, dated 9/25/20
- Architectural Plan Set, dated 9/16/20



CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file
Please confirm by electronically checking the boxes to the left

**** PLEASE FILL OUT AND UPLOAD SEPARATELY THE ZONING TABLE
AND WAIVER TABLE AS NOTED BELOW ****

GENERAL APPLICATION DOCUMENTS

Yes ☒	NA ☐	Project Description Cover Letter with detailed project description
Yes ☒	NA ☐	Completed Checklist – Level I: Site Alteration (this document)
Yes ☒	NA ☐	Right, Title and Interest Deeds, leases, or purchase and sales agreements
Yes ☐	NA ☒	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
Yes ☒	NA ☐	Zoning Assessment Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☒	NA ☐	Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements
Yes ☒	NA ☐	Waiver Requests Written request for waiver describing request and reason Waiver Table
Yes ☒	NA ☐	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☒	NA ☐	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

Yes ☒	NA ☐	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 ☐	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 ☒	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 ☐	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 ☐	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 ☐	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 ☐	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 ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes ☒	NA ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES		
Yes ☐	NA ☒	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 ☐	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 ☐	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 ☒	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes ☒	NA ☐	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		
Yes ☒	NA ☐	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		
Yes ☒	NA ☐	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 ☐	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 ☐	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		
Yes ☒	NA ☐	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 ☒	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes ☒	NA ☐	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 ☐	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appen. 1)

Yes ☐	NA ☒	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 ☐	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 ☐	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 ☐	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 ☐	Zone Related Design Standards (14-526 (d) 5) • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan		
Yes ☒	NA ☐	Construction Management Plan • Construction Management Document and Plan

**LEVEL II AND LEVEL III SITE PLAN
DRAWINGS 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 AND RENDERINGS including:
☒ Exterior building elevations, color renderings, illustrations of all sides
☒ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☒ Provide context drawings, if applicable (Design Manual, page 1)
☒ Floor plans



If Subdivision, must be in compliance with requirements of Section 14-496 (b)

ARCHITECTURAL PLANS AND RENDERINGS including:
☒ Exterior building elevations, color renderings, illustrations of all sides
☒ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☒ Provide context drawings, if applicable (Design Manual, page 1)
☒ Floor plans



Exterior building elevations, color renderings, illustrations of all sides



Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening



Provide context drawings, if applicable (Design Manual, page 1)



Floor plans

C. Right, Title, and Interest

Please refer to the attached deed demonstrating the Applicant's Right, Title, Interest. Also included with this section is a summary from the Applicant's attorney regarding the amended easements that will be required along the south side of the site. The existing access and utilities benefitting 55 Portland Street will be maintained as part of the amendments.



QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation having a mailing address of 389 Congress Street, Portland, Maine 04101 ("Grantor"), FOR CONSIDERATION PAID, releases to **52 HANOVER, LLC**, a Maine limited liability company having a mailing address of 104 Grant Street, Portland, Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located on Hanover Street and Parris Street, in the City of Portland, County of Cumberland and State of Maine (the "Premises"), more particularly described on Exhibit A attached hereto and made part hereof.

Grantee covenants and agrees by acceptance of this Deed that the Premises herein conveyed is subject to the Declaration of Covenants set forth in Exhibit B attached hereto and hereby made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 12 day of December, 2018.

WITNESS:

CITY OF PORTLAND

Sonia Bean

Jon P. Jennings
Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

December 12, 2018

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

Sonia T. Bean
~~Attorney-at-Law~~/Notary Public

Commission Expires:

Print Name:

SONIA T. BEAN
NOTARY PUBLIC
State of Maine
My Commission Expires
April 8, 2024

Exhibit A

Hanover Street and Parris Street

A certain lot or parcel of land together with the buildings thereon located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, identified as Parcel B and as depicted on a plan entitled "Plan of Subdivision Plat 52 Hanover Street Portland, Maine" dated November 29, 2017 by Titcomb Associates, revised through July 24, 2018, approved by the City of Portland Planning Board on March 22, 2018, and recorded in Cumberland County Registry of Deeds in Plan Book 218, Page 342 (the "Plan"), such lot or parcel of land being more particularly bounded and described as follows:

Beginning at an iron pin set (capped 5/8" iron) at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" as delineated on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued Lancaster Street and said Parcel A a distance of Two Hundred 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street;
- 2) S 23°56'25" E by said Hanover Street a distance of Two Hundred Ninety-Seven and 02/100 (297.02) feet to an iron pin set (capped 5/8" iron) at the northerly corner of land designated as "Parcel C" as delineated on said Plan;
- 3) S 65°26'46" W by said Parcel C a distance of One Hundred Eighty-Six and 21/100 (186.21) feet to an aluminum disk set on the northeasterly side line of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Three Hundred Twenty-Two and 54/100 (322.54) feet to the point of beginning.

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

The above described parcel contains 59,625 square feet.

This conveyance is subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable to the Premises.

Reserving to the Grantor, its successors and assigns, for the benefit of the public, an approximately 5-foot-wide public pedestrian access easement (the "Public Pedestrian Easement") over a portion of a certain lot or parcel of land, located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a capped 5/8" iron pin set at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued portion of Lancaster Street and said Parcel A a distance of Two Hundred and 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street and the southeasterly corner of said Parcel A;
- 2) S 23°56'25" E by said Hanover Street a distance of Five and 03/100 (5.03) feet to a point;
- 3) S 72°42'45" W through land designated as "Parcel B" as delineated on said Plan a distance of Two Hundred and 51/100 (200.51) feet to a point on the northeasterly sideline of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Five and 06/100 (5.06) feet to the point of beginning.

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

The above described parcel (the "Public Pedestrian Easement Area") contains 1,003 square feet lying over a portion of "Parcel B" as delineated on the Plan. By acceptance of this deed, Grantee acknowledges and agrees that the purpose of the Public Pedestrian Easement is to grant public pedestrian access on and over the Public Pedestrian Easement Area, which Grantee shall maintain as an ADA compliant area for pedestrian, bicycle, and similar non-motorized pedestrian uses. The Public Pedestrian Easement Area shall be subject to such rules or ordinances that the City of Portland may adopt from time to time in the interests of public safety, which are generally applicable to similar pedestrian easements, provided that Grantee does not waive any rights, and expressly reserves the right, to argue that any such future rules or ordinances do not apply to it on the basis that the existing conditions of the Public Pedestrian Easement Area are grandfathered and/or that such rules or ordinances cannot be retroactively applied.

Notwithstanding the foregoing, wheelchair and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance and repair responsibilities within the Public Pedestrian Easement Area shall belong solely to the Grantee, its successors and

assigns. Grantee shall be responsible for removal of snow and ice from the Public Pedestrian Easement Area and to otherwise comply with all laws, rules, regulations, and ordinances governing the removal of snow and ice. Grantor shall have the right, but not the obligation, to repair or maintain the Public Pedestrian Easement Area, including, as reasonably necessary, any subsurface repairs or maintenance, or removal of snow or ice therefrom, when Grantor, in its sole discretion, deems such repairs, maintenance, or snow or ice removal necessary to ensure public safety and protect the public use and enjoyment of the Public Pedestrian Easement Area. No buildings or any kind of permanent structure will be erected in the Public Pedestrian Easement Area, and Grantee shall not use or authorize any use, condition or state of disrepair that would be contrary to or otherwise inhibit the public pedestrian uses of the Public Pedestrian Easement Area.

EXHIBIT B

Declaration of Covenants

1. Payment In Lieu Of Property Taxes. Grantee covenants and agrees that in the event that the Premises or any portion thereof shall become exempt from real or personal property taxes, by transfer, conversion, or otherwise, during the City's fiscal year that begins following the date of the deed to which this Declaration is attached, or in the fiscal years thereafter, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount of the lesser of (a) the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable, or (b) such other target percentage as may be approved as part of a City payment in lieu of taxes ("PILOT") policy that may be in effect at the time taxes are due on such property. Grantee shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

2. Environmental Indemnification. Grantee covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the Grantor's release, handling or storage of hazardous wastes or hazardous materials on the Premises.

3. The covenants and agreements set forth herein may be amended or modified in whole or in part only by written agreement of Grantee and Grantor.

4. The Covenants set forth herein are intended to be and shall be considered covenants that run with the Premises and shall bind all subsequent owners of the Premises.

5. Except as specifically set forth herein, the Covenants set forth herein shall survive a sale, transfer, foreclosure or transfer of title in lieu of foreclosure, or other disposition of the Premises.

6. The Covenants set forth herein are enforceable by Grantor as a contract and shall inure to the benefit of and be enforceable by Grantor, its successors, and assigns.

7. The validity of any clause, part or provision of the covenants, restrictions herein shall not affect the validity of the remaining portions of thereof.



**Bernstein, Shur,
Sawyer & Nelson, P.A.**
100 Middle Street
PO Box 9729
Portland, ME 04104-5029

T (207) 774 - 1200
F (207) 774 - 1127

Hawley Strait
Shareholder
207-228-7118 direct
hstrait@bernsteinshur.com

September 24, 2020

City of Portland, Maine
Department of Planning and Urban Development
Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

Re: 52 Hanover Street Easement Relocation

Dear Ladies and Gentlemen:

Our firm represents Tom Watson & Co., LLC and its affiliated entity 52 Hanover, LLC ("52 Hanover"), a Maine limited liability company and the owner of real property at 52 Hanover Street and a party to that certain Easement Deed from 52 Hanover, LLC to City of Portland and Agreement dated as of December 13, 2018 and recorded in the Cumberland County Registry of Deeds in Book 35353, Page 239 (the "Easement Deed"). The Easement Deed has since been assigned from the City of Portland to the current owner of the real property at 55 Portland Street, 55 Portland Preble Street, LLC ("Preble Street").

The Easement Deed provides for certain access and sewer and stormwater drainage easements (the "Easements") which burden 52 Hanover's property and benefit Preble Street's property and the current location of such Easements are described in detail in the Easement Deed. Based on the extensive language included in the Easement Deed, 52 Hanover has the right to relocate these Easements and under the terms of the Easement Deed, Preble Street cannot withhold its consent nor object to the relocation so long as it provides reasonably equivalent access to parking at the rear of Preble Street's property and certain other requirements are satisfied with the relocated easement plan.

52 Hanover has prepared a proposed relocation plan (the "Relocation Plan") for the Easements and this Relocation Plan has been presented to Preble Street for its review. The Relocation Plan relocates the Easements in order to allow 52 Hanover to re-develop its property as contemplated by the site plan application recently submitted to this Department by Tom Watson & Co., LLC and 52 Hanover. We believe that the Relocation Plan complies with the terms and conditions for relocation as provided in the Easement Deed and therefore Preble Street cannot unreasonably withhold, condition or delay its consent to this proposal. Pursuant to the Easement Deed, we will

prepare an amendment of the Easement Deed to memorialize the relocation of the Easements and we intend to work with Preble Street to finalize the terms of this amendment for execution by both 52 Hanover and Preble Street as soon as possible.

If you have any questions or need more information about the Easement Deed and the discussions with Preble Street regarding the relocation, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "H. Strait", is positioned above the printed name.

Hawley R. Strait



ZONING ANALYSIS Relevant Zone(s) B-2b

All Projects:

	Required	Proposed
Lot Size	None	59,625 SF
Area Per Dwelling Unit	435 SF *	349 SF*
Minimum Street Frontage	20'	250'
Front Yard Minimum	None	0.25'
Front Yard Maximum	10'	5.3'
Rear Yard	10'	10.2'
Yard Right	None	24.8'
Yard Left	None	10.0'
Side Street Setback	None	N/A
Step Back	None	None
Maximum Lot Coverage	100%	95%
Minimum Lot Coverage	NA	NA
Maximum Height	85' **	85'
Open Space	0%	5%
Maximum Impervious Area	100%	95%
Pavement Setback	None	N/A
Floor Area Ratio	None	N/A
Off Street Parking Spaces	194***	194
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

* See 14-488(g) and Affordable Housing Density Bonus Chart below

**See Bayside Height Overlay Map

***See Section S, Parking Study

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	2.5 x base	171	171
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):			

E. Summary of Written Easements

Existing easements on site as identified by Titcomb Associates include:

1. The former location of Lancaster Street is subject to a utility easement retained by the city as recorded in Cumberland County Registry of Deeds Book 35151, Page 132.
2. An approximately 5-foot wide pedestrian and bicycle easement retained by the City of Portland as recorded in Cumberland County Registry of Deeds Book 38689, Page 133.
3. Use restrictions as set forth in Cumberland County Registry of Deeds Book 16707, Page 206 and modified in Book 29610, Page 223.
4. Easement Deed from 52 Hanover, LLC to City of Portland and Agreement dated as of December 13, 2018 and recorded in the Cumberland County Registry of Deeds in Book 35353, page 239.

There are no proposed easements as part of the project.





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September 24, 2020

City of Portland, Maine
Department of Planning and Urban Development
Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

Re: 52 Hanover Street Easement Relocation

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If you have any questions or need more information about the Easement Deed and the discussions with Preble Street regarding the relocation, please do not hesitate to contact me.

Sincerely,



Hawley R. Strait

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 1.14	10% Compact Space allowance	We are requesting that 24% of the proposed 194 parking spaces be compact.	Due to the urban environment and tendency to drive smaller, compact cars, the parking layout has been tailored to the site to provide two functional levels of covered parking with approximately a quarter of the parking count being compact.

G. Financial Capacity

Please find attached the status of good standing from the Secretary of State and letter from the Applicant's bank.





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: Tue Sep 15 2020 12:50:32. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
TOM WATSON & CO., LLC	20062993DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/11/2006	N/A	MAINE

Other Names (A=Assumed ; F=Former)

NONE

Clerk/Registered Agent

WILLIAM H LEETE
MITTEL ASEN, LLC
85 EXCHANGE STREET
PORTLAND, ME 04101

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September 17, 2020

City of Portland Planning Division

389 Congress Street, 4th Floor

Portland, ME 04101

RE: 52 Hanover Project

To whom it may concern,

Tom Watson and his affiliates are well known to TD Bank, NA. Tom has been a client of TD Bank since the 1990s and we have helped finance many successful projects for him. The Bank is interested in entertaining financing for Tom Watson and, who has significant financial resources for a project of this nature. We are looking forward to more substantive conversations as this project materializes.

Please feel free to contact me should you need any additional information. I can be reached at (207) 756-6804 or colin.march@td.com.

Sincerely,

Colin March

Senior Relationship Manager

TD Bank



H. Technical Capacity

Acorn Engineering, Inc. has successfully permitted and provided civil/site engineering for over 20 Level II/III projects in Portland over the past 5 years. Some examples include:

- Eldredge Lumber
- 127 York Street – Harborside Townhomes
- Munjoy Heights
- 70 Anderson St.
- 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.

OVERVIEW

The proposed mixed-use building 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 along Hanover and Parris Streets. Both streets are classified as local streets according to the City of Portland Federal Street Classification map. A moderate traffic increase is expected for this project due to the change in use of the existing building. However, the increase will be caused by standard vehicles as opposed to the current condition where large vehicles such as plow trucks and maintenance trucks utilize the property. Congestion of the intersections is not anticipated. Please refer to Section T. Traffic Memo for more information. A Traffic Movement Permit (TMP) will be filed with the City in the coming weeks due to the net increase of over 100 trips in the peak hour for the weekend condition.

2. Access and Circulation:

a. Site Access and Circulation:

This project conforms with the design standards of Section 14-526 as demonstrated in the following standards:

- (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan. Given the building's orientation and proximity to the public ROW, the site is ideal for pedestrian use.
- (ii) The existing parking areas can be accessed from both Hanover and Parris Streets. There are two proposed driveways to the two levels of covered parking: one from Hanover St and one from Parris St, as shown on sheet C-10, Site Plan – Ground Floor, and C-11, Site Plan – Second Floor. The functionality of all internal vehicle movements has been verified with AutoTurn, a computer program that models the turning templates and radii of various types of vehicles.



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

b. Loading and Servicing:

- (i) Loading and unloading areas for the retail stores will be accommodated within the existing street parking along the project's Hanover and Parris Street frontages during off hours.

c. Sidewalks:

- (i) Concrete sidewalks exist along Parris and Hanover Street. Extension of both sidewalks is proposed, as seen on the Site Plan, to connect the sidewalk network to the site.
- (ii) The existing sidewalks proposed to be rebuilt will be rebuilt in conformance with City standards.
- (iii) A brick patio (courtyard) proposed along the north entrance of the building (Lancaster Court) which will connect the public sidewalks along Parris and Hanover Street to the south of the 10' midblock pedestrian and bicycle easement. The existing sidewalks along Hanover and Parris Street provide access to the east and west sides of the building. 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 194 parking spaces which is anticipated to meet the requirements of the proposed uses within the new building while also providing parking for the adjacent 82 Hanover development. Please refer to Section S for more information regarding the parking analysis. Consistent with the Land Use ordinance, the parking requirement will be determined by the Planning Board based upon the Applicant's analysis and the City's Transportation Engineer's review.
- (ii) Although not specifically required within this zone or land use, Transportation Demand Management (TDM) strategies will be implemented as identified in Section U.



- (iii) Please refer to Section S, Parking Assessment, for information on how the proposed parking meets anticipated demand.
 - (iv) The parking space and aisle dimensions are in conformance with the Technical Standards. Please refer to the Site Plan for more information.
 - (v) The driveway and parking areas will be constructed of bituminous pavement which will drain water without eroding.
- b. Location and Required Number of Bicycle Parking Spaces:
 - (i) Approximately 80 bicycle spaces are proposed for the 171 residential units along with a bicycle repair area and extra space for strollers and other bicycle accessories. The site plan also includes a plethora of public exterior bicycle hitches along both public frontages as well as the courtyard. Please refer to the Site Plan and TDM Plan for more information.
- c. Motorcycles and Scooter Parking:
 - (i) There are no areas specifically designated for motorcycles or scooters at this time; however, parking is available through the on-site parking stalls, flex space within the parking decks, and on-street parking.
- d. Snow Storage:
 - (i) Due to the limited amount of space not occupied by a building within the parcel, a formal snow storage area is not proposed or necessary. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.
 - (ii) Not applicable.

5. Transportation Demand Management (TDM):

- a. A Transportation Demand Management plan has been included with this application in Section U as a courtesy and best practice.
- b. The TDM plan includes trip reduction strategies such as those identified in this section.
- c. The proposed development complies with the standards identified in this section.

(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) There are no existing trees or vegetation within the project parcel.
- (ii) There are no trees 10 inches DBH or greater within the property.
- (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 solid waste locations will be located inside the building. Furthermore, the proposed transformer and existing transformer are anticipated to be screened by a decorative fencing or screening.
- b. The project has a total frontage of 619 linear feet along Hanover and Parris Streets. It is required that a minimum of six shrubs or shrub alternatives per 45 feet of frontage are planted, therefore 83 shrubs are required. Landscaping has been incorporated into the design through a combination of landscaping within the setbacks and Lancaster Court. Additionally, planter boxes will be installed along the courtyard in addition to a generous tree program. Furthermore, “green roof” plantings are proposed within the areas designed for accessible roof deck area. These measures collectively are anticipated to meet the requirement.
- c. Not applicable.
- d. Not applicable.

(ii) Parking Lot Landscaping:

- a. Not applicable.
- b. Not applicable.
- c. Not applicable.
- d. Not applicable.



(iii) Street Trees:

- a. One street tree is to be provided per unit within the public right of way. This ratio equates to 171 trees. Given the limited frontage relative to the requirement, 19 street trees are proposed including the trees along the public pedestrian easement. As a substitute for further trees, the development team is exploring public art, green walls, and other vertical vegetative measures to enhance the streetscape in lieu of trees.
- b. The Applicant is requesting that the money spend on the public art and green wall systems that will enhance Parris Street be put towards the \$400 fee-in-lieu that is traditionally assigned to – in this case – the missing 152 trees as allowed in the ordinance.

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 largely be maintained as they currently exist. Furthermore, impervious area on the site will be decreased, reducing runoff from the site.
- (ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development flows.
- (iii) The runoff from the site into the public way will not increase from the pre-development condition.
- (iv) The runoff to the separate storm drains is anticipated to be similar or slightly less.
- 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 Erosion & Sedimentation Control and Stormwater Management 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. Fire trucks and ambulance will be able to access a minimum of three sides of the building.
 - c. Two existing hydrants are located along Portland Street (at the intersections of Parris and Hanover), approximately 170' and 140' from the east and south corners of the proposed structure, respectively.
3. Availability and Adequate Capacity of Public Utilities:
 - a. Ability to Serve letters have been sent to the respective companies. Responses are forthcoming.
 - b. The electrical service will be wired underground via a new pad-mounted transformer as shown on the Utility Plan.
 - 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 Parris 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. A space allocated for solid waste storage can be seen on the Site Plan – Ground Floor (C-10). The solid waste containers will be fully enclosed and screened from the public view.

(d) Site Design Standards



1. Massing, Ventilation and Wind Impact:
 - a. Please refer to Section O, Architectural Design Narrative.
 - b. Please refer to Section O, Architectural Design Narrative.
 - c. Please refer to Section O, Architectural Design Narrative.
2. Shadows:
 - a. Not applicable.
3. Snow and Ice Loading:
 - a. The structure will not distribute snow and ice onto adjacent properties.
4. View Corridors:
 - a. Please refer to Section O, Architectural Design Narrative.
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.
 - (ii) The project parcel does not abut any residential properties.
 - 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.

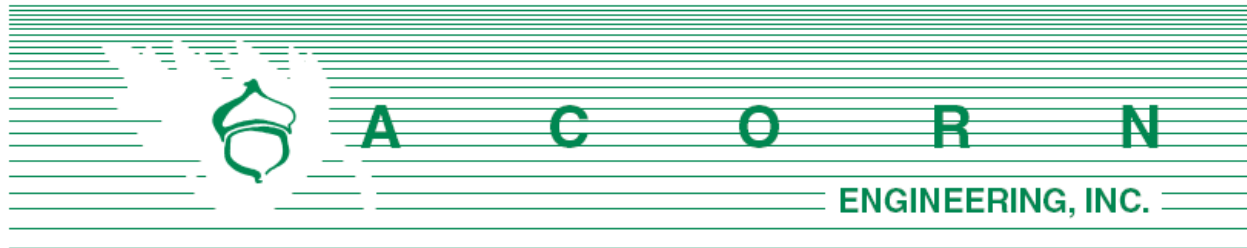
8. Signage and Wayfinding:

- 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) Signage will complement the subject building and its immediate context.
 - (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 B-2b zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.





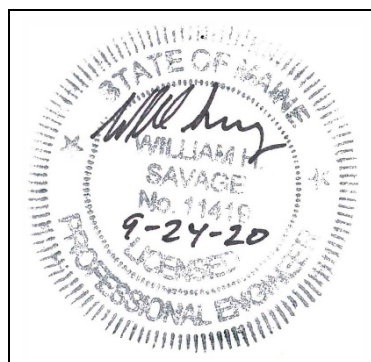
J. STORMWATER MANAGEMENT **REPORT**

Prepared For:

**Tom Watson & Co., LLC
82 Hanover Street
Portland, Maine 04101**

Prepared By:

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



September 2020



INTRODUCTION

Acorn Engineering, Inc. has been retained by Tom Watson & Co., LLC to provide civil engineering services for the proposed redevelopment of 52 Hanover Street. The proposed project includes demolition of the existing structure and redevelopment of the site with a six-story building consisting of residential units, a two-level parking structure, and ground level retail lots. The property consists of approximately 1.37 acres of land in Portland's Bayside neighborhood. The site is currently comprised of entirely impervious area. The proposed project will decrease the impervious area and improve the overall pollutant ranking. Lastly, the development will seek to redirect all surface water runoff to the separated storm drain system vs the current condition where almost all runoff enters the combined sewer system.

A stormwater analysis was prepared to demonstrate that the project will meet the requirements set forth by Maine DEP Chapter 500 General Standards and the following requirements from 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.

EXISTING CONDITIONS

The proposed project site is located at 52 Hanover Street in Portland at the former Public Works vehicle maintenance garage. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine Dated January 25, 2018, revised August 14, 2018.

The property is in the B-2b Community Business Zone. Abutting Uses include:

- | | |
|---------|------------------------|
| ➤ North | Commercial Space |
| ➤ West | Residential & Business |
| ➤ South | Office Space |
| ➤ East | Residential & Office |

A large portion of the site is occupied by the existing structure. The rest of the site contains parking for the existing structure on all sides. The site is currently graded so the driveways slope away from the building and towards the abutting streets. The grades range from approximately 5 to 10% near the building. On the southeast corner of the lot there is an embankment reinforced with stone blocks that separates the lot from the southerly abutter.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting and existing impervious surfaces, a field inventory of significant natural features was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.



PROPOSED DEVELOPMENT

The proposed development includes demolition of the existing structure and redevelopment of the site with a six-story building. Approximately 171 residential units with various amenities are planned with two levels of structured parking. Additionally, multiple retail units are proposed on the ground level adjacent to the existing 82 Hanover patio and Lancaster Court pedestrian/bicycle easement. Pedestrian access to the site shall be provided off both adjacent streets.

The proposed drainage improvements include collecting runoff using field inlets on the northside of the proposed building. The field inlets would tie into a proposed manhole near the northwest corner of the building and drain to the Parris Street storm main from there. On the south side of the building, it is proposed to use the existing drainage system with a proposed catch basin to connect into the system with 8" piping. On the east side of the lot it is proposed to replace the existing drainage lines with new 8" piping.

The development will be served by the Portland Water District, CMP, Spectrum, Consolidated Communications, Unitil, and municipal sewer and storm systems. Utility mains and services have been coordinated with each respective utility company.

Water quantity has not specifically been analyzed as part of this project as one can assume the peak rates will decrease due to the same watershed area and composition containing less impervious area. Additionally, the entirety of the runoff is anticipated to be redirected from the existing combined sewer to the separated storm drain.

For an analysis on water quality, please refer to the following section.

GENERAL STANDARDS – WATER QUALITY

Given the site's existing impervious area, the redevelopment standards were applied to this project. The existing land uses and pollutant rankings are as follows:

Table 1 – Land Use and Pollutant Summary Table:			
Existing Conditions			
Land use	Pollutant Ranking	Existing Area	Weighted Ave. Ranking
Roads where idling may occur; high use parking lots	5	0	0
Other roads; medium use parking lots	4	0.929 ac.	2.71
Other parking lots and driveways;	3	0	0



flat roof asphalt rooftops roofs on an industrial facility			
Other rooftops; grassed areas mowed > twice per year; walkways / foot-traffic-only pavement	2	0.440 ac.	0.64
Non-grass landscaped areas; Stormwater treatment / storage systems	1	0	0
TOTAL		1.369 ac.	3.35

Furthermore, the proposed land use rankings are as follows:

Table 2 – Land Use and Pollutant Summary Table: Proposed Conditions			
Land use	Pollutant Ranking	Proposed Area	Weighted Ave. Ranking
Roads where idling may occur; high use parking lots	5	0.007 ac.	0.03
Other roads; medium use parking lots	4	0	0
Other parking lots and driveways; flat roof asphalt rooftops roofs on an industrial facility	3	0	0
Other rooftops; grassed areas mowed > twice per year; walkways / foot-traffic-only pavement	2	1.289 ac.	1.88
Non-grass landscaped areas; Stormwater treatment / storage systems	1	0.072 ac.	0.05



TOTAL		1.369 ac.	1.96
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Corresponding pre- and post-development redevelopment maps can be viewed in Attachments 1 and 2 of this report.

From Tables 1 & 2 above, the resulting pollutant ranking for the proposed redevelopment is -1.39 (Chapter 500, Table 2). The corresponding treatment level for this ranking is 0% (Chapter 500, Table 3). However, given the proposed vegetative plantings and potential green roofs, the site will inherently provide some level of treatment greater than typical runoff from impervious areas.

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
- Phase II Environmental Site Assessment

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 3 - “K” Value		
Soils Type	Subsurface	Substratum
Au Gres Loamy Sand	0.15	0.15
Deerfield Loamy Fine Sand	0.20	0.20

The soil “K” value for the soil, listed above, shows 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 the soil “K” value shows 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.



CONCLUSION

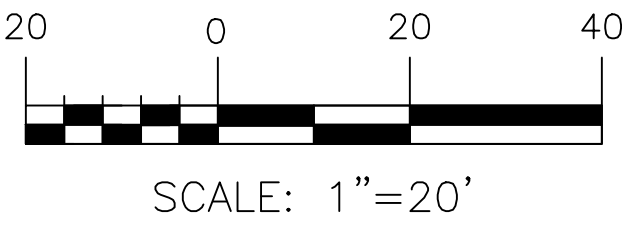
The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way. Overall, the project will provide an improvement to stormwater runoff and overall management from several perspective as outlined above.

ATTACHMENTS

Attachment 1: Pre-Development Redevelopment Exhibit
Attachment 2: Post-Development Redevelopment Exhibit
Attachment 3: Soils Map



LAND USE AND POLLUTANT SUMMARY TABLE				
LAND USE	COLOR	POLLUTANT RANKING	EXISTING AREA	WEIGHTED AVE. RANKING
ROADS WHERE IDLING MAY OCCUR PERIODICALLY DUE TO TRAFFIC AND INTERSECTIONS; HIGH USE PARKING LOTS		5	0.007 AC.	0.03
OTHER ROADS; MEDIUM USE PARKING LOTS		4	0	
OTHER PARKING LOTS AND DRIVEWAYS; FLAT ASPHALT ROOFTOPS; ROOFS ON AN INDUSTRIAL FACILITY		3	0	
OTHER ROOFTOPS; BIKEWAYS; GRASSED AREAS MOWED MORE THAN TWICE PER YEAR; WALKWAYS / FOOT TRAFFIC-ONLY PAVEMENT		2	1.289 AC.	1.88
NON-GRASS LANDSCAPED AREAS; STORMWATER TREATMENT / STORAGE SYSTEMS (EXCEPT BUFFERS)		1	0.072 AC.	0.05
TOTAL			1.369 AC	1.96



PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR
PRE APP

BY
DATE
WHS
7/16/20

DRAWING NAME
PROJECT NAME
CLIENT

STORMWATER MANAGEMENT –
PROPOSED SURFACE SUMMARY
52 HANOVER REDEVELOPMENT
TOM WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

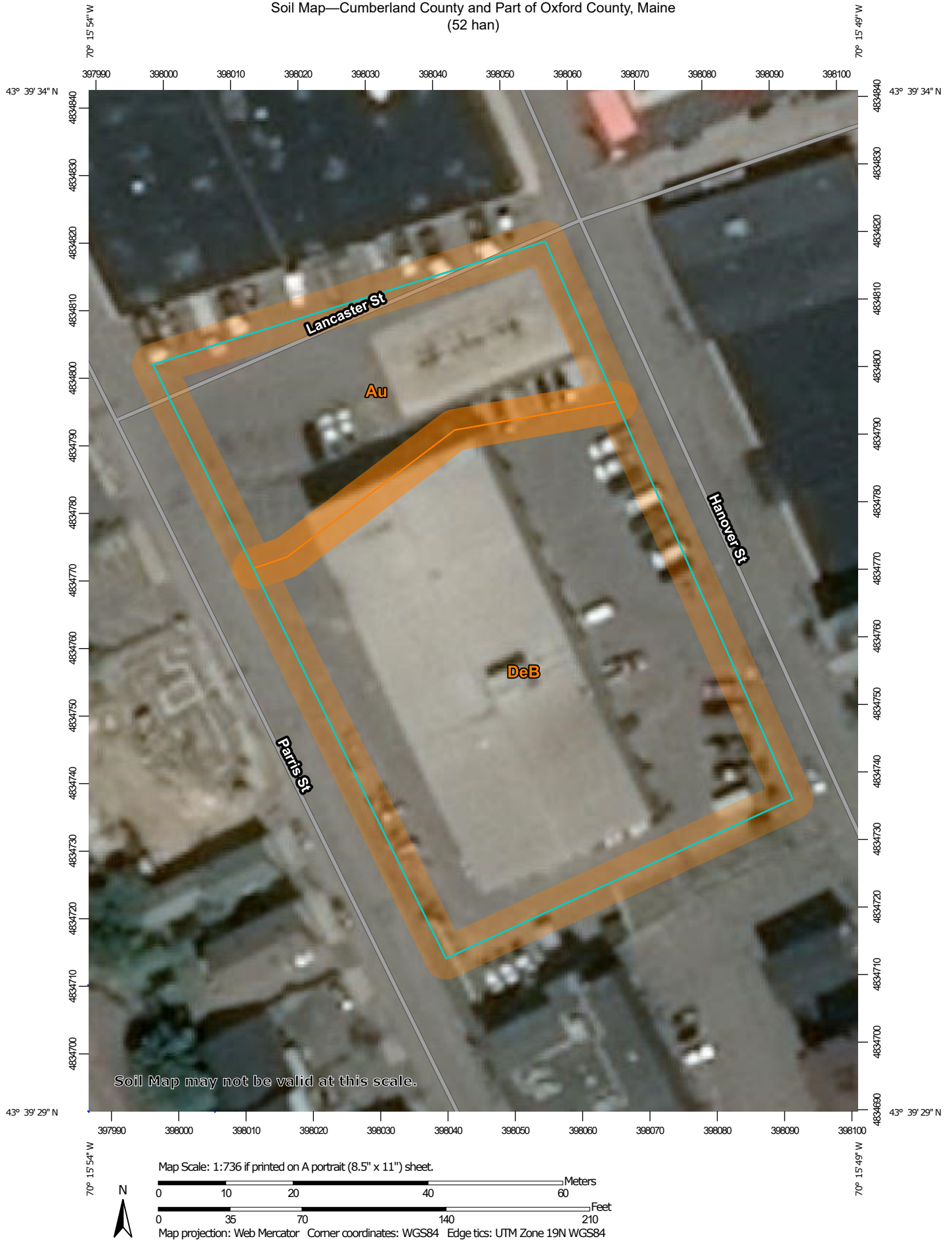
ACO ENGINEERING, INC.
P.O. BOX 3372, PORTLAND, MAINE 04104
(207) 775-2655

ENGINEERING, INC.
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THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACOB ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL BE THE RESPONSIBILITY OF THE USER AND WITHOUT LIABILITY TO ACOB ENGINEERING, INC.

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SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: KRB
CHECKED BY: WHS

DRAWING NO.
POST

Soil Map—Cumberland County and Part of Oxford County, Maine
(52 han)



Soil Map—Cumberland County and Part of Oxford County, Maine
(52 han)

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 17, Jun 5, 2020

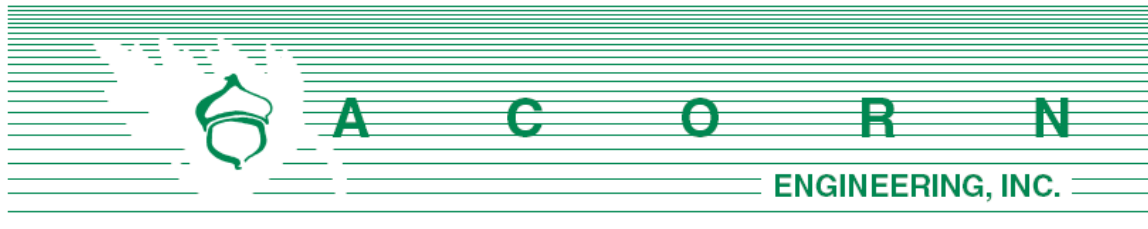
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

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
Au	Au Gres loamy sand	0.4	29.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	1.0	70.5%
Totals for Area of Interest		1.4	100.0%



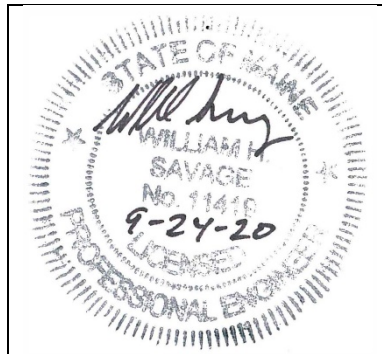
K. EROSION & SEDIMENTATION **CONTROL REPORT**

Prepared For:

**Tom Watson & Co., LLC
82 Hanover Street
Portland, Maine 04101**

Prepared By:

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



September 2020

INTRODUCTION

Acorn Engineering, Inc. has been retained by Tom Watson & Co., LLC to provide civil engineering services for the proposed mixed-use residential and retail building at 52 Hanover Street. The proposed project includes demolition of the existing structure and redevelopment of the site with a six-story building consisting of residential units, a two-level parking structure, and ground level retail lots.

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 bordered by Hanover and Parris Street. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine Dated January 25, 2018, revised August 14, 2018.

The property is in the B-2b Community Business Zone. Abutting Uses include:

- North Commercial Space
- West Residential & Business
- South Office Space
- East Residential & Office

A large portion of the site is occupied by the existing structure. The rest of the site contains parking for the existing structure on all sides. The site is currently graded so the driveways slope away from the building and towards the abutting streets. The grades range from approximately 5 to 10% near the building. On the southeast corner of the lot there is an embankment reinforced with stone blocks that separates the lot from the south abutter.

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
Au Gres Loamy Sand	.15	.15
Deerfield Loamy Fine Sand	0.20	0.20

The soil “K” value for the soil, listed above, shows 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 the soil “K” value shows 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

There are no critical areas that require special attention during 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 Parris and Hanover streets 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 $\frac{1}{2}$ 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 Construction Management & Erosion Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion & Sedimentation 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. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Prioritize the downhill side to contain runoff within the site while providing an engineered outlet to the municipal storm drain system within Parris Street.
6. Commence earthwork operations, associated with the parking lot construction.
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 and 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.

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



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

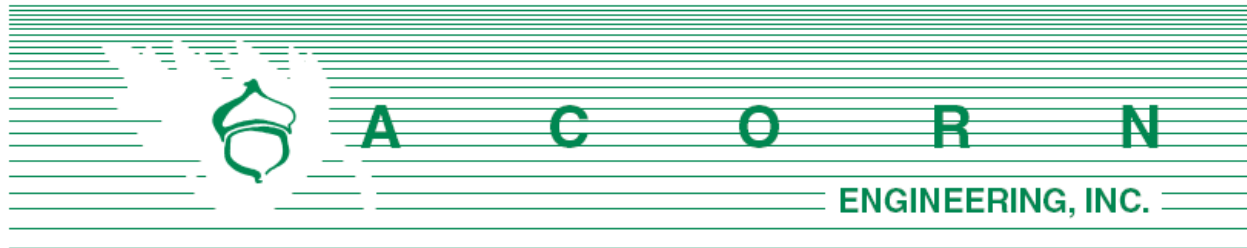
Mulching

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.





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

September 15, 2020

Subject: 52 Hanover Street – Fire Department Checklist
 Section L of Application

On behalf of Tom Watson & Co., LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

Tom Watson & Co., LLC
 188 State Street, 3rd Floor
 Portland, Maine 04101
 (207) 252-0358

2. Name, address, telephone number of architect

CUBE 3 Architects
 370 Merrimack St Suite 337
 Lawrence, Massachusetts 01843
 (978) 989-9900

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

NFPA: Business / Apartment Building IBC: B / R-2

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

Existing Building		
1 st Floor	18,000	sf
Total	18,000	sf

Proposed Building		
Ground	46,000	sf
2 nd Floor	46,860	sf
3 rd Floor	30,700	sf
4 th Floor	30,700	sf

5 th Floor	30,700	sf
6 th Floor	21,400	sf
7 th Floor	21,400	sf
8 th Floor	11,250	sf
Total	239,010	sf

5. Elevation of all structures

The proposed building height is 85' which is consistent with the Bayside Height Overlay allowance.

6. Proposed fire protection of all structures

The building will be serviced by an 8" sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior the request for a building permit.

7. Hydrant locations

Two existing hydrants are located along Hanover and Parris Streets, approximately 170' and 140' from the southeast and south corners of the proposed structure. 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 the existing water main within Parris Street. An 8" fire line, 4" domestic line, and 2" domestic line will serve the proposed development. The building is expected to have internal sprinkler risers and a Fire Department pump connection on the Hanover and Parris sides of the building.

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

Access to the structure is provided directly on Hanover Street and Parris Street.

10. A code summary, proved by the Architect, is included in this section.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project site is located in a densely developed area and is surrounded by two public streets. The following pavement street width is currently available:

- Hanover Street: 32 feet



- Parris Street: 30 feet
 - Kennebec Street: 36 feet
- Proposed changes to Kennebec Street by others have been approved by the city. The proposed width of Kennebec Street is 38 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: one from Parris Street and one from Hanover 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.

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.

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

Response: The proposed elevator will meet this requirement.

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.



BUILDING CODE SUMMARY

USE / OCCUPANCY

OCCUPANCY:

USE GROUP A-3 - ASSEMBLY (LOBBY/AMENITY/BIKESHOP)
 USE GROUP B - BUSINESS (RETAIL/LEASING OFFICE)
 USE GROUP S-2 - STORAGE (PARKING, MAINTENANCE, STORAGE & MEP AREAS)
 USE GROUP R2 - RESIDENTIAL (DWELLING UNITS)

BUILDING CODE: 1. Maine Uniform Building and Energy Code (MUBEC)
 MUBEC IS AN AMENDED VERSION OF 2015 IBC.

OTHER APPLICABLE CODES:

MRS 25 PORTLAND CITY FIRE PREVENTION REGULATIONS
 (ADOPTS AND AMENDS NFPA 1-2012)
 MRS 32 PORTLAND CITY FUEL GAS CODE
 MRS 32 PORTLAND CITY PLUMBING CODE
 MRS 32 PORTLAND CITY ELEVATOR STANDARDS

NATIONAL ELEC. CODE 2017 AS ADOPTED PURSUANT TO 32 M.R.S.
 AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, 2010 EDITION
 MAINE HUMAN RIGHTS ACT ADOPTED PURSUANT TO 5 M.R.S. CH. 4 FAIR HOUSING AND CH.5 PUBLIC ACCOMMODATIONS

CONSTRUCTION TYPE / GENERAL BUILDING LIMITATIONS

CONSTRUCTION TYPE (503): IA - NON-COMBUSTIBLE

1. ALLOWABLE BUILDING HEIGHT (IA) (TABLE 503, 504.1) UNLIMITED
 PROPOSED BUILDING HEIGHT (IA) 8 STORIES / 85' - 0"

NOTE 1: BUILDING HEIGHT IN FEET IS MEASURED FROM THE AVERAGE GRADE AROUND BUILDING TO THE AVERAGE HEIGHT OF THE HIGHEST ROOF SURFACE.

2. ALLOWABLE BUILDING AREA (IA) (TABLE 503, 506, 507) UNLIMITED
 PROPOSED BUILDING AREA (IA) 239,010 TOTAL GSF

GROUND FLOOR	46,000 GSF
SECOND FLOOR	46,860 GSF
THIRD FLOOR	30,700 GSF
FOURTH FLOOR	30,700 GSF
FIFTH FLOOR	30,700 GSF
SIXTH FLOOR	21,400 GSF
SEVENTH FLOOR	21,400 GSF
EIGHTH FLOOR	11,250 GSF

FIRE RESISTANCE RATINGS OF STRUCTURAL ELEMENTS

FIRE RESISTANCE RATING ELEMENT (IA):	MIN. HOURS REQUIRED
PRIMARY STRUCTURAL FRAME	3 HOURS
LOADBEARING WALL (INTERIOR OR EXTERIOR)	3 HOURS
NON-LOADBEARING WALL	0 HOURS
FLOOR CONSTRUCTION	2 HOURS
ROOF CONSTRUCTION	1 1/2 HOURS
CORRIDOR WALLS	1 HOUR
DWELLING UNIT SEPARATION WALLS	1 HOUR

FIRE EXTINGUISHER PROVIDED FOR MAXIMUM TRAVEL DISTANCE OF 75 FEET; PROVIDED AT CORRIDORS AND COMMON SPACES.

EMERGENCY RESPONDER RADIO COVERAGE

TWO-WAY ELEVATOR LOBBY COMMUNICATION

MONITORED FIRE ALARM REQUIRED

SMOKE AND CO DETECTORS REQUIRED

MEANS OF EGRESS

FLOOR		GROSS SF	SF/OCC.	OCCUPANT LOAD
1ST FLOOR	Parking Garage	36,400	/ 200 =	182
	Retail	7,600	/50	152
	Assembly	2000	/15=	133
2nd FLOOR	Parking Garage	37,660	/ 200 =	188
	Assembly	1,900	/15=	126
	Residential	7300	/ 200 =	37
3rd FLOOR	Residential	27,400	/ 200 =	137
	Assembly	3,300	/15=	220
4th FLOOR	Residential	30,700	/ 200 =	154
5th FLOOR	Residential	30,700	/ 200 =	154
6th FLOOR	Residential	20,700	/ 200 =	104
	Assembly	700	/15=	46
7th FLOOR	Residential	21,400	/ 200 =	107
8th FLOOR	Residential	11,250	/ 200 =	56
TOTAL BUILDING OCCUPANT LOAD:				1796

M. Calculation of Wastewater Flowrate for 52 Hanover Redevelopment

The proposed project will include the redevelopment of a site that currently is occupied by a former garage used for the maintenance and storage of Public Works vehicles. The existing garage will be demolished and replaced with a six-story building consisting of 171 residential units, two levels of structured parking, and ground level retail units. Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Design Flows			
Classification of Water Demand	Number of Units	Gallons per Day per Unit	Total Gallons per Day
<i>Existing</i>			
Warehouse (12 GPD per employee)	20 employees	240	240
<i>Proposed</i>			
Employees at place of employment with no showers (12 GPD per employee)	4 retail units (5 employees per unit)	60	240
Multiple family dwelling unit (1-bedroom)	135	120	16,200
Multiple family dwelling unit (2-bedroom)	36	180	6,480
Total Existing			240
Total Proposed			22,680
Net Change			+22,440 GPD
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

Although the domestic sewer increase is notable, we are pleased to be able to separate the stormwater from the combined sewer system. Given the existing 60,000 sf site is entirely impervious and sheds the entirety of its runoff to the combined sewer, the redirection of the site's runoff to the proper channels along with a net reduction in impervious area will provide a notable improvement to combined sewer overflow events once the downstream system is completed.



CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works
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: September 25, 2020

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

Site Address: 52 Hanover Street Portland, Maine 04101

Chart Block Lot Number: 33-B-008

Proposed Use: Mixed Use: Residential / Retail

Previous Use: Single-Family Residential

Existing Sanitary Flows: 240 GPD

Existing Process Flows: GPD

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

Proposed connection to the combined system
within Hanover Street

Site Category	Commercial (see part 4 below)	☒
	Industrial (complete part 5 below)	☐
	Governmental	☐
	Residential	☒
	Other (specify)	☐

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

2. Please, Submit Contact Information.

City Planner's Name: TBD

Phone: TBD

Owner/Developer Name: Tom Watson; Tom Watson & Co., LLC

Owner/Developer Address: 82 Hanover St., Portland, ME 04101

Phone: (207) 699-2219

Fax: E-mail: tom@portpropmgt.com

Engineering Consultant Name: William Savage, P.E. - Acorn Engineering, Inc.

Engineering Consultant Address: 65 Hanover Street Portland, Maine 04101

Phone: (207) 775-2655

Fax: E-mail: wsavage@acorn-engineering.com

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 22,680 GPD

Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern

Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine,"
"Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)
State of Maine Subsurface Wastewater Disposal Rules, Effective 8/3/15

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values:

N/A

Size of External Grease Interceptor:

Retention Time:

Peaking Factor/ Peak Times:

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated:

N/A

GPD

Do you currently hold Federal or State discharge permits?

Yes

No

Is the process wastewater termed categorical under CFR 40?

Yes

No

OSHA Standard Industrial Code (SIC):

(<http://www.osha.gov/oshstats/sicser.html>)

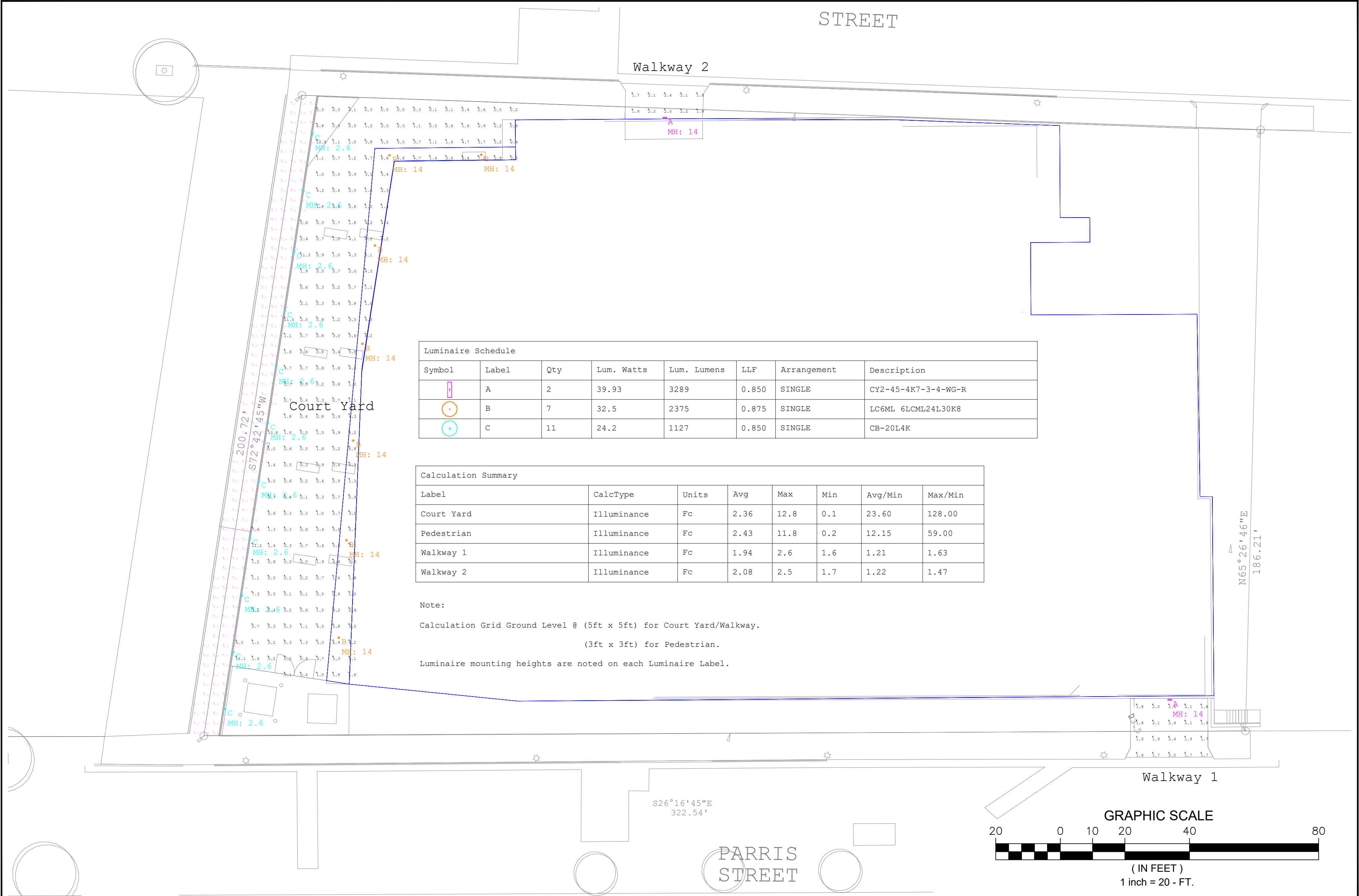
Peaking Factor/Peak Process Times:

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

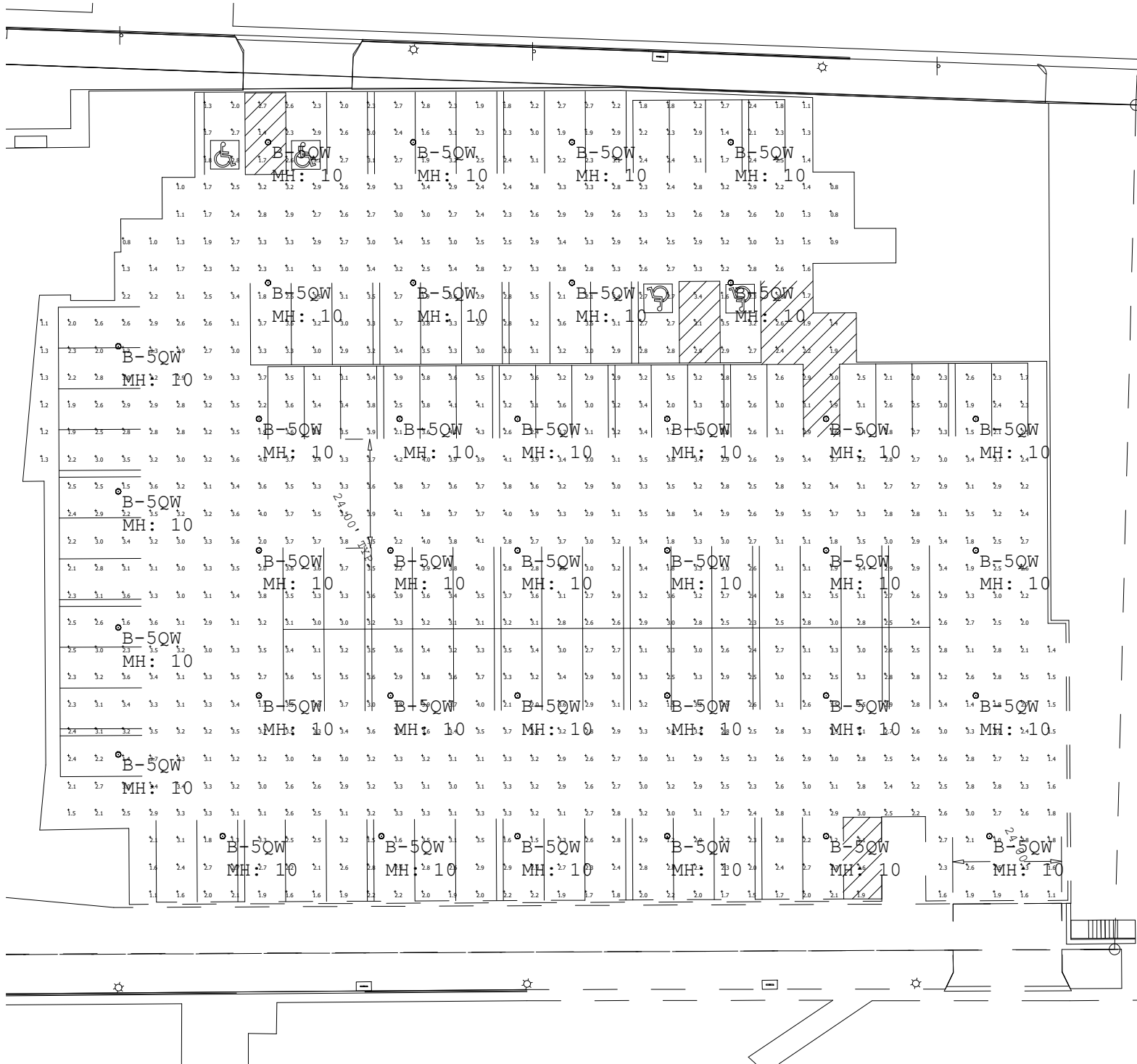
Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

N. Lighting

Please find attached the cut sheets and photometric plans for the proposed site lighting. Note that the courtyard lighting may appear dimmer than in reality due to the inability to model the City-required Bayside light poles. Furthermore, it is anticipated that each tenant will have additional, unique accessory lighting.



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: PHOTOMETRIC PLAN 52 Hanover Redevelopment					REVISED FROM DRAWING NUMBER(S):		 Hubbell Lighting, Inc. 701 MILLENNIUM BLVD. GREENVILLE, SC 29607	DN BY:	DATE:	CHK BY:
								Kalyan	09-29-2020	Heath
								REV. BY:	DATE:	SCALE:
										AS NOTED
								QUOTE:	DRAWING / DESIGN NO.:	
		N/A		20-27002C						



Luminaire Schedule							
Symbol	Label	Qty	Lum. Watts	Lum. Lumens	LLF	Arrangement	Description
	B-5QW	36	30	3685	0.850	SINGLE	SRT2-30-5K7-5QW

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking 2	Illuminance	Fc	2.81	4.3	0.8	3.51	5.38

Note:

Calculation Grid (6ft x 6ft) @ Ground Level.

Luminaire mounting heights are noted on each Luminaire Label.

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.

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3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

PHOTOMETRIC PLAN

52 Hanover Redevelopment

REVISED FROM DRAWING NUMBER(S):

20-27002B



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

DN BY:
Kalyan

REV. BY:

QUOTE:
N/A

DATE:
10-06-2020

DATE:

DRAWING / DESIGN NO.:
20-27002B(R2)

CHK BY:
Heath

SCALE:
AS NOTED

Page 97



Date: Oct 1, 2020

Swaney Lighting
PO Box 1597
Scarborough ME 04070
Phone: (207) 883-7100
Fax: (207) 885-9606

Job Name
52 HANOVER ST. REDEVELOPMENT
SLA20-46484
PORTLAND ME

Bid Date
Sep 22, 2020

Submittal Date
Oct 1, 2020

Engineer:
Acorn Engineering, Inc
Portland ME 04102



Transmittal

Swaney Lighting

PO Box 1597

Scarborough ME 04070

Phone: (207) 883-7100

From: Therese "TC" Freeman X-103

Project 52 HANOVER ST. REDEVELOPMENT**Quote#** SLA20-46484**Location** PORTLAND ME

Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| ☐ Drawings | ☐ Specifications | Other: |
| ☐ Prints | ☐ Information | |
| ☐ Plans | ☒ Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| ☐ Prior Approval | ☐ Resubmittal for Approval | ☐ Record |
| ☒ Approval | ☐ Corrections | Bids due on: |
| ☐ Approval as Submitted | ☐ Your Use | Other: |
| ☐ Approval as Noted | ☐ Review and Comment | |

Type	MFG	Part
A5QW	BEACON PRODUCTS	SRT2-50-4K7-5QW-UNV-***
	Item Note: SPECIFY FINISH	
A	Architectural Area Lighting	CY2-45-4K7-3-4-WG-UNV-**-R-FPP
	Item Note: SPECIFY FINISH	
B	PRESCOLITE	LC6ML / 6LCML24L30K8
C	KIM	CB32/20L4KUV/**
	Item Note: SPECIFY FINISH	



SRT2 EDGE-LIT

CEILING/SURFACE/GARAGE

FEATURES

- Edge-lit optical assembly delivers exceptional uniformity over the entire lens with indirect illumination that reduces glare and improves visual comfort
- Low profile housing intended for 8' - 20' mounting heights for surface, trunnion/yoke or pendant mounting
- Applications include parking garage, walkway or building canopies, corridors, tunnels, large stairwells and other interior applications
- Multiple optical distributions are available making the Beacon Edge-Lit luminaire both versatile and functional
- UL/cUL listed for wet locations, IP65 and 3G vibration rated
- Ambient temperatures of up to 40°C

CONTROL TECHNOLOGY



DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____



RELATED PRODUCTS

- [Drive Edge-Lit SRT1](#)
[Arceos™ ARS Surface](#)
[Endura](#)

SPECIFICATIONS

HOUSING

- Die-cast aluminum housing ensures long electrical component life and luminaire performance
- Corrosion resistant powder coat finish both protects and provides architectural appearance
- One piece molded silicone gasket ensures weather proof seal
- Thermally isolated driver mounted to dedicated bracket reduces operating temperatures and increases driver life and reliability

OPTICS

- Edge-lit acrylic light guide provides blended non-pixelated light for unprecedented visual comfort
- Choice of multiple light outputs with lumen range of 4,000–16,000
- Five distribution types: Type V Square, Type V Rectangular, Type V Concentrated, Type V Wide or Asymmetric (Type 3/4)
- Wide variety of CCT's and CRI's offered: 3000K (70CRI), 3000K (80CRI), 3500K (80CRI), 4000K (70CRI), 4000K (80CRI) or 5000K (70 CRI) CCT

ELECTRICAL

- 120V–277V 50/60Hz with 347V and 480V available
- 0-10V dimming drivers are RoHS compliant and IP66
- Surge protection – Standard 10kA with optional end of life LED indicator

INSTALLATION

- Standard quick mount plate over standard 4" square junction box or octagonal box and allows for simplified fixture installation.
- Standard luminaire accepts a rigid or free-swinging 3/4" NPT stem for pendant mount via wet location j-box (by others)
- Optional bird deterrent shroud available for field installation
- Optional trunnion/yoke mount available for field installation

OPTIONS/CONTROLS

- Standalone occupancy sensor available for on/off or dimming operation
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor
- UL924 device available for standalone and wireless control override during power interruptions
- Uplight option provides approximately 800 lumens and consumes only 8 additional watts
- Integral battery backup option available with and without heater. Rated for 0°C (without heater) and -30°C (with heater)
- Emergency lighting relay available for generator or central inverter supplied lighting
- Vandal resistant wire guard available as an option for factory installation or as an accessory for field installation

CERTIFICATIONS

- Listed to UL1598 for use in wet location, listed for -40°C to 40°C applications
- IDA approved with zero uplight for 3000K and warmer CCTs
- IP65

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	4000–16000
Wattage Range	30–140
Efficacy Range (LPW)	110–135
Reported Life (Hours)	L70>50K
Weight lbs. (kg)	15 (5.8)

Submitted by Swaney Lighting	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	Catalog Number: SRT2-50-4K7-5QW-UNV-*** Notes: SPECIFY FINISH	Type: A5QW SLA20-46484
------------------------------	---	---	--



SRT2 EDGE-LIT

CEILING/SURFACE/GARAGE

ORDERING GUIDE

Example: SRT2 30 3K7 5QW UNV GT WG

CATALOG #

Series	Engine	CCT	Distribution	Voltage	Specify Std. finish	Options
SRT2 Edge-Lit Parking Garage Size 2	30 30W Nominal 4000 lm 50 50W Nominal 6000 lm 65 65W Nominal 8000 lm 85 85W Nominal 10000 lm 100 100W Nominal 12000 lm 120 120W Nominal 14000 lm 140 140W Nominal 16000 lm	3K7 3000K, 70 CRI 3K8 3000K, 80 CRI 35K8 3500K, 80 CRI 4K7 4000K, 70 CRI 4K8 4000K, 80 CRI 5K7 5000K, 70 CRI	5QW Type Square Wide ¹ 5RW Type 5 Rect. Wide ¹ 5C Type 5 Concentrated 5W Type 5 Wide ⁴ ASY Asymmetric (Type 4) ¹	UNV 120V- 277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	BL Textured Black DB Textured Dark Bronze GT Graphite Textured GYS Smooth Gray PS Smooth Plat. Silver WH Textured White CC Custom Color	CD Continuous Dimming ⁶ WG Wire Guard UD Uplight Module ³ F Single Fuse (120, 277, 347V) ² F Double Fuse (208, 240, 480V) ² E EM Battery Pack (0°C) ² EH EM Battery w/Heater (-30°C) ² ELR Emergency Lighting Relay ² LD3 36" Lead Length ⁵ LD6 72" Lead Length ⁵ LD9 108" Lead Length ⁵ SP10K 10kA Surge Protection with End of Life LED Indicator LMB Less Mounting Bracket

Control Options	
NX Standalone	
NXOS-12F	NX Distributed Intelligence™, PIR Occ. Sensor, Dimming Daylight Harvesting, up to 12' MH
NXSP-30F	NX Distributed Intelligence™, PIR Occ. Sensor, Dimming Daylight Harvesting, up to 30' MH
NXOS924-12F	NX Distributed Intelligence™, PIR Occ. Sensor with UL924 dimming bypass module for controls override, up to 12' MH ³
NXSP924-30F	NX Distributed Intelligence™, PIR Occ. Sensor, with UL924 dimming bypass module for controls override, up to 30' MH ³
NX Networked – Wireless¹	
NXWE	NX Distributed Intelligence™ Wireless Enabled (module + radio)
NXOSW-12F	NX Distributed Intelligence™ Wireless, PIR Occ. Sensor, Dimming Daylight Harvesting, up to 12' MH
NXSPW-30F	NX Distributed Intelligence™ Wireless, PIR Occ. Sensor, Dimming Daylight Harvesting, up to 30' MH
NXWE924	NX Distributed Intelligence™ Wireless Enabled with UL924 dimming bypass module for controls override ³
NXOSW924-12F	NX Distributed Intelligence™ Wireless, PIR Occ. Sensor with UL924 dimming bypass module for controls override, up to 12' MH ³
NXSPW924-30F	NX Distributed Intelligence™ Wireless, PIR Occ. Sensor with UL924 dimming bypass module for controls override, up to 30' MH ³
wiSCAPE® – Wireless¹	
WIR	Wireless Controls, wiSCAPE®
WIRSC	wiSCAPE® + occupancy sensor
WIR924	Wireless Controls, wiSCAPE® with UL924 dimming bypass module for controls override ³
WIRSC924	wiSCAPE® + occupancy sensor with UL924 dimming bypass module for controls override ³
Sensor Controls	
SCP-8F	Remote control programmable line voltage sensor (8-12' recommended MH)
SCP-20F	Remote control programmable line voltage sensor (12-20' recommended MH)
SCP924-8F	Programmable sensor with UL924 dimming bypass module for controls override (8-12' recommended MH) ³
SCP924-20F	Programmable sensor with UL924 dimming bypass module for controls override (12-20' recommended MH) ³

Accessories (Order Separately)	
☐ SRT2-WG	Wire Guard for SRT2 version
☐ SRT-MB	Mounting bracket for pre-installation
☐ SRT2-BRD	Bird deterrent shroud for SRT2 version, not available with uplight or trunnion mount
☐ SRT2-TM	Trunnion/Yoke accessory for SRT2 version
☐ SCP-REMOTE	Remote control for SCP option; order at least on per project to program and control

Notes:

- Up to 85W light engines only
- Must specify voltage, 120V or 277V for E and EH
- Universal voltage only
- 100–140W light engines only
- Standard wire lead length 24"
- Specify when using external 0-10V dimming system

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

SRT2-50-4K7-5QW-UNV-***

Type:**A5QW**

Notes: SPECIFY FINISH

SLA20-46484

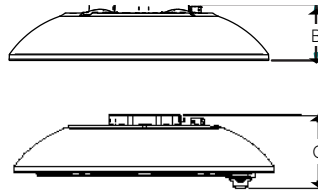
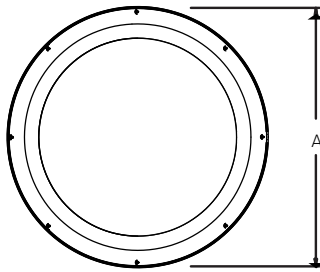
**SRT2 EDGE-LIT**

CEILING/SURFACE/GARAGE

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS**SRT2**

A	B	C	Weight
18.5" (469mm)	4.0" (1mm)	5.2" (132mm)	15bs (6.8kg)

ADDITIONAL INFORMATION**MOUNTING****Surface Mount**

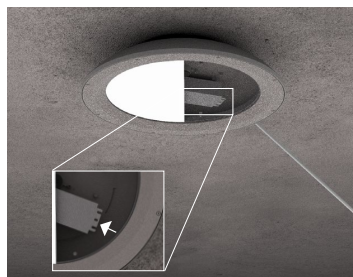
Mounting plate with "quick mount" hanger for one person simple installation.

**Pendant Mount**

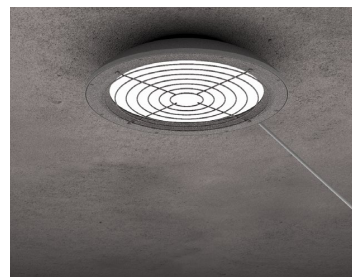
Standard 3/4" threaded entry for pendant applications.

**Trunnion/Yoke Mount**

Multiple position trunnion mount adjusts 9" up and down for positioning in 1" increments.

ACCESSORIES AND SERVICES**Battery Backup**

Integral battery backup option available on SRT2 version.

**Wire Guard**

An optional wire guard can be specified at the factory or as an accessory for field installation.

**Bird Deterrent**

An optional bird shroud deterrent can be specified at the factory or as an accessory for field installation.

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

SRT2-50-4K7-5QW-UNV-***

Type:**A5QW**

Notes: SPECIFY FINISH

SLA20-46484

**SRT2 EDGE-LIT**

CEILING/SURFACE/GARAGE

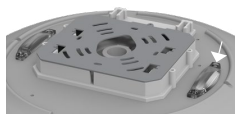
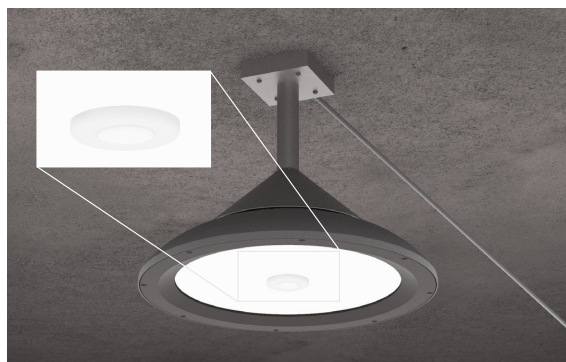
DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

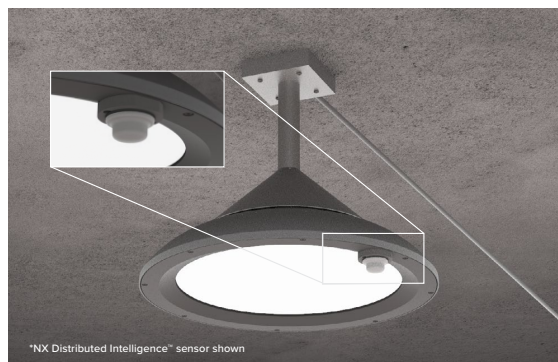
CATALOG #: _____

ADDITIONAL INFORMATION (CONT'D)**UPLIGHT**

Optional uplight module provides 800 lumens of indirect illumination for improved visual quality while eliminating cave effect.

**CONTROLS**

Standalone Controls

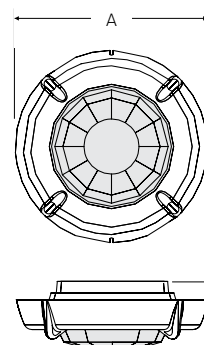
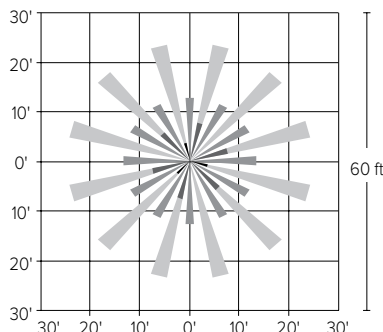
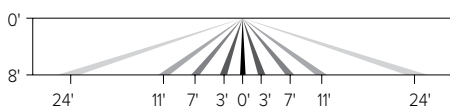


Wireless Controls

Optional passive infrared sensors are available for basic occupancy and daylight sensing. Programmable via remote or Bluetooth® phone app.

NX DISTRIBUTED INTELLIGENCE**wiSCAPE™**
WIRELESS OUTDOOR LIGHTING SYSTEM

Optional NX Distributed Intelligence™ and wiSCAPE® wireless controls are available for SRT2 versions (with or without occupancy sensing).

SCP-8F

A	B
2.3" (59mm)	.8" (20mm)

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

SRT2-50-4K7-5QW-UNV-***

Type:**A5QW**

Notes: SPECIFY FINISH

SLA20-46484

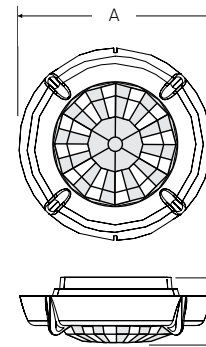
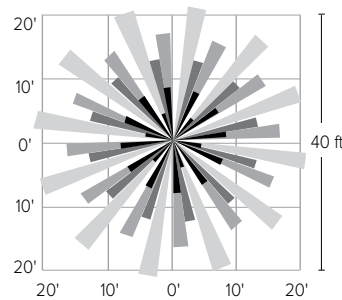
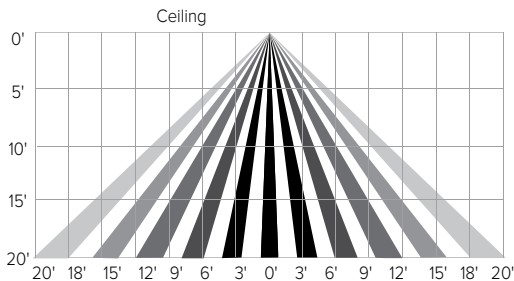
**SRT2 EDGE-LIT**

CEILING/SURFACE/GARAGE

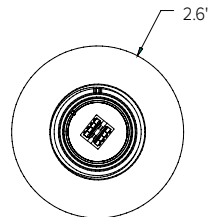
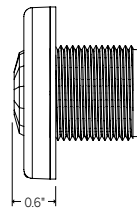
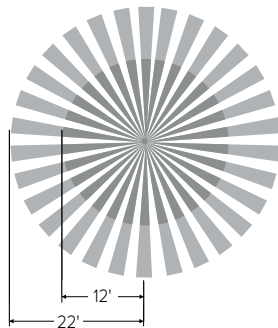
DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ADDITIONAL INFORMATION (CONT'D)**CONTROLS (CONT'D)****SCP-20F**

A	B
2.3" (59mm)	.8" (20mm)

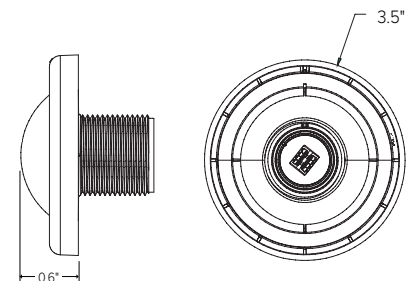
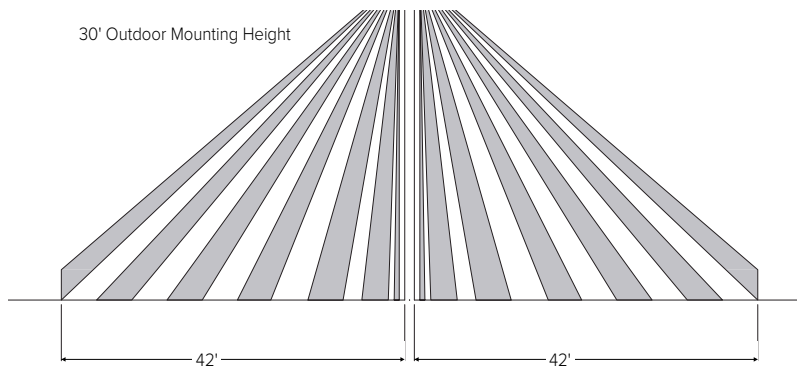
NXOS12F

Minor Motion
Major Motion

NXSMP-OMNI Range

NXSP30F

30' Outdoor Mounting Height

**USE OF TRADEMARKS AND TRADE NAMES**

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Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	SRT2-50-4K7-5QW-UNV-*** Notes: SPECIFY FINISH	A5QW SLA20-46484

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**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CY2-45-4K7-3-4-WG-UNV-**-R-FPP

Type:**A**

SLA20-46484

Notes: SPECIFY FINISH

Cypher™ – CY2 Pedestrian Scale

TYPE

FEATURES

- Integral Battery Backup Option
- 360° Light Distribution
- RGBW or Static White Luminous Front Option
- IES Type I, II, III & IV Distributions
- Wall Graze, Spot and Pencil Distributions
- Multiple Fascia Options and Finishes
- 0-10V dimming
- IP-66 Housing & Optical System
- 120-277, 347 and 480V
- 3000K, 4000K & 5000K CCT
- 10kA Surge Protection
- Fascia Forms F and E are ADA compliant for use in low mounting height applications (80 inches or less)
- IDA approved, downlight only, 3000K and warmer CCTs
- Occupancy Sensor & Wireless Control Options



Downlight only, 3000K and warmer CCTs

**ORDERING CODE**

1	2	3	4	5	6	7	8	9	10	11	12
Series-Output	CCT/CRI	Model	Main Distribution	Secondary Distribution	Voltage	Housing Finish	Fascia Form	Luminous Front	Fascia Panel	Control Options	Options

SERIES-OUTPUT (Base)

CY2-25	25w, 2500 nominal lumens
CY2-35	40w, 3500 nominal lumens
CY2-45	50w, 4500 nominal lumens

CCT-CRI

27K8	2700K, 80CRI
3K7	3000K, 70CRI
3K8	3000K, 80CRI
4K7	4000K, 70CRI
4K8	4000K, 80CRI
5K7	5000K, 70CRI

MODEL (Light Engine)

1	DownLight Only
2	50/50 Down/Up, Down/Up distributions must match
3	90/10 Down/Up
4	25/25/25/25 Split, Down/Up/Side distributions must match
5	70/10/10/10 Split, Top/Side distributions must match

Contact factory for custom distributions,
See Distribution Matrix on page 2 for restrictions.**MAIN DISTRIBUTION (Down)**

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
1D	Type 1 Diffused
2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

SECONDARY DISTRIBUTION (Up, Sides)

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
PB*	Pencil Beam
1D	Type 1 Diffused

* PB distribution is available for 90/10 and 70/10/10/10 models only. Not all combinations are recommended.
See Distribution Matrix on page 2 for restrictions.**SECONDARY DISTRIBUTION (Up, Sides)**

2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

* PB distribution is available for 90/10 and 70/10/10/10 models only. Not all combinations are recommended.
See Distribution Matrix on page 2 for restrictions.**VOLTAGE**

UNV	120-277V
347	347V
480	480V

BASE HOUSING FINISH**Specify Std. finish**

AGN	Antique Green
BL	Black
BLT	Matte Black
CRT	Corten
DB	Dark Bronze
DGN	Dark Green
GT	Graphite
LG	Light Grey
MAL	Matte Aluminum
MDB	Metallic Bronze
MG	Medium Grey
TT	Titanium
VBU	Verde Blue
WDB	Weathered Bronze
WH	Arctic White

Premium Colors

SFM	Seafoam
SHK	Shamrock
SPP	Salt and Pepper
WCP	Weathered Copper
RAL	Provide a RAL 4 digit color number
CUSTOM	Please provide color chip for matching
COLOR	

FASCIA FORM

F	Flat
R	Radius/Curved
T	Triangle/Wedge
E	Rounded Edge
C	Circle/Curved
CB	Cylinder Balanced
CT	Cylinder Tall
CBM	Custom Building Material Mount
	Ghost Fascia

LUMINOUS FRONT

BLANK	Standard None
RGBW	RGBW Luminous Front
LFSW	Static White Luminous Front

RGBW and LFSW luminous fronts are only available with open, four square and perforated fascia panels

FASCIA PANEL**FPP Full Panel Painted**

FPS	Full Panel Stainless Steel
FPC	Full Panel Copper
OPP	Open Panel Painted
OPS	Open Panel Stainless Steel
OPC	Open Panel Copper
4PP	4-Square Panel Painted
4PS	4-Square Panel Stainless Steel
4PC	4-Square Panel Copper
PPP	Perforated Panel Painted
PPS	Perforated Panel Stainless Steel
PPC	Perforated Panel Copper

Flat and Radius Fascia forms only. Painted panels by default match base housing finish/color. Consult factory for custom panel finishes.

CONTROL OPTIONS

PCU	Universal Button Photocell (120-277V)
SCP	Programmable Occupancy Sensor
SWP	SiteSync Wireless
SWPM	SiteSync Wireless w/Occupancy Sensor
WIR	wiSCAPE
WIRSC	wiSCAPE w/Occupancy Sensor

Occupancy sensors not available with CB, T, E or C fascia forms

OPTIONS

EM	Battery Backup Unit -20°C
SF	Single Fuse (120, 277, 347)
DF	Double Fuse (208, 240, 480)
SCB	Surface Conduit Box

Battery Backup not available with Triangle and Rounded Edge Fascia Forms.

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JOB

TYPE

NOTES

| 1 |

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CY2-45-4K7-3-4-WG-UNV-**-R-FPP

Notes: SPECIFY FINISH

Type:**A**

SLA20-46484

Cypher™ – CY2 Pedestrian Scale

TYPE

Distribution Matrix

FASCIA	DISTRIBUTION				
	1 Down Only	2 50 Down/50 Up	3 90 Down/10 Up	4 25/25/25/25 Split	5 70 Down 10/10/10 Split
Window/Options Flat* F	I, II, III, IV, SP, WG	I, II, III, IV, SP, WG	I, II, III, IV, SP, WG	SP/WG SP/WG	SP/WG/PB SP/WG/PB
Window/Options Radius Curve R	SP/WG	SP/WG SP/WG	SP/WG/PB SP/WG	SP/WG SP/WG	SP/WG/PB SP/WG/PB
Cylinder Balanced CB	SP/WG	SP/WG SP/WG	SP/WG/PB SP/WG	SP/WG SP/WG	SP/WG/PB SP/WG/PB
Cylinder Tall CT	I, II, III, IV, SP, WG	SP/WG SP/WG	SP/WG/PB I, II, III, IV, SP, WG	SP/WG SP/WG	SP/WG/PB I, II, III, IV, SP, WG
Triangle Wedge T	I, II, III, IV, SP, WG	I, II, III, IV, SP, WG I, II, III, IV, SP, WG	SP/WG/PB I, II, III, IV, SP, WG		
Rounded Edge* E	I, II, III, IV, SP, WG	I, II, III, IV, SP, WG I, II, III, IV, SP, WG	SP/WG/PB I, II, III, IV, SP, WG		
Circle/ Curved C	SP/WG	SP/WG SP/WG	SP/WG/PB SP/WG		
Ghost	I, II, III, IV, SP, WG	I, II, III, IV, SP, WG I, II, III, IV, SP, WG	SP/WG/PB I, II, III, IV, SP, WG	SP/WG SP/WG	SP/WG/PB SP/WG/PB

* ADA compliant for use in low mounting height applications (80 inches or less)
 2 Down/Up distributions must match
 4 Down/Up/Side distributions must match
 5 Top/Side distributions must match
 Contact factory for custom distributions



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JOB _____
 TYPE _____
 NOTES _____

| 2 |

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CY2-45-4K7-3-4-WG-UNV-**-R-FPP

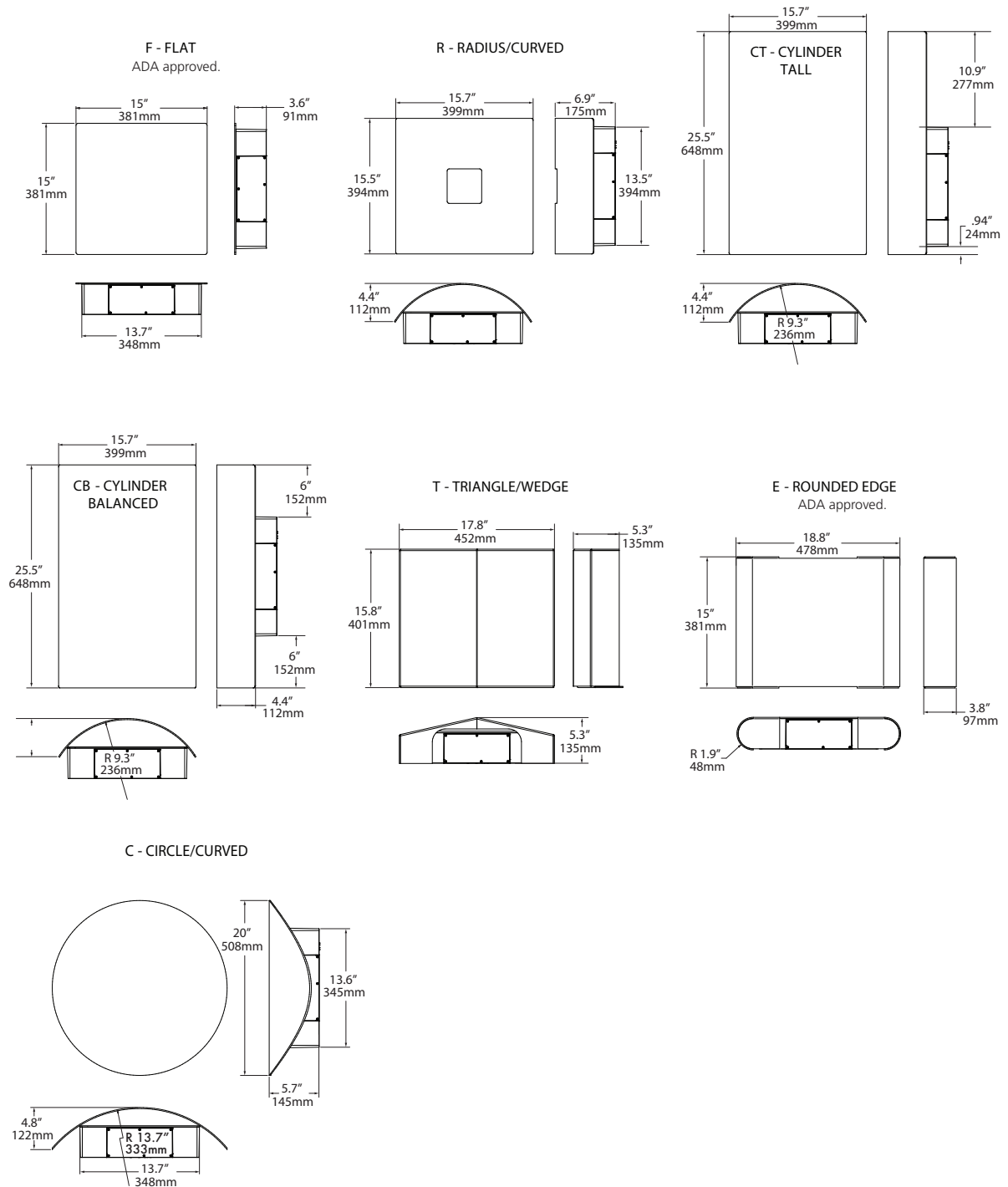
Type:**A**

Notes: SPECIFY FINISH

SLA20-46484

Cypher™ – CY2 Pedestrian Scale

TYPE

Drawings

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JOB _____
TYPE _____
NOTES _____

| 3 |

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CY2-45-4K7-3-4-WG-UNV-**-R-FPP

Type:**A**

Notes: SPECIFY FINISH

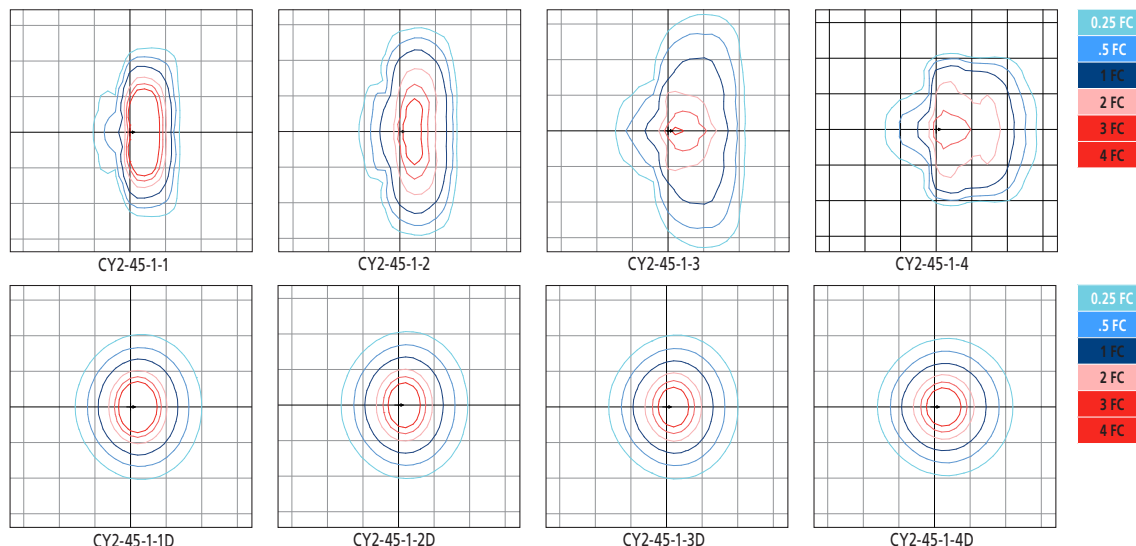
SLA20-46484

Cypher™ – CY2 Pedestrian Scale

TYPE

LUMINAIRE PERFORMANCE

Downlight only			Configuration														
Nominal Output (Lm)	Average System Wattage	Distribution	Bright White (5000K)					Neutral White (4000K)					Warm White (3000K)				
			Delivered Lumens	Efficacy (Lm/W)	BUG Rating	Delivered Lumens	Efficacy (Lm/W)	BUG Rating	Delivered Lumens	Efficacy (Lm/W)	BUG Rating						
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
2,500	26	Type 1	2836	109	0	0	0	2596	100	0	0	0	2499	96	0	0	0
		Type 2	2570	99	1	0	1	2353	90	1	0	1	2265	87	1	0	1
		Type 3	2739	107	1	0	1	2507	96	1	0	1	2413	93	1	0	1
		Type 4	2512	97	0	0	1	2299	88	0	0	1	2213	85	0	0	0
		Wall Graze	2795	107	2	0	0	2558	98	2	0	0	2462	95	2	0	0
		Spot/Column	2371	91	2	0	0	2171	83	2	0	0	2089	80	2	0	0
		Type 1 Diffused	2488	96	1	0	1	2278	88	1	0	1	2193	84	1	0	1
		Type 2 Diffused	2274	87	1	0	1	2082	80	1	0	1	2004	77	1	0	1
		Type 3 Diffused	2163	83	1	0	1	1980	76	1	0	1	1906	73	1	0	1
		Type 4 Diffused	2197	84	1	0	1	2011	77	1	0	1	1936	74	1	0	1
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
3,500	40	Type 1	4011	100	1	0	0	3672	92	1	0	0	3534	88	1	0	0
		Type 2	3635	91	1	0	1	3328	83	1	0	1	3203	80	1	0	0
		Type 3	3874	97	1	0	1	3546	89	1	0	1	3413	85	1	0	1
		Type 4	3553	89	1	0	1	3252	81	1	0	1	3131	78	1	0	1
		Wall Graze	3953	99	2	0	0	3618	90	2	0	0	3483	87	2	0	0
		Spot/Column	3354	84	3	0	0	3070	77	3	0	0	2955	74	3	0	0
		Type 1 Diffused	3519	88	1	0	1	3222	81	1	0	1	3101	78	1	0	1
		Type 2 Diffused	3217	80	1	0	1	2945	74	1	0	1	2835	71	1	0	1
		Type 3 Diffused	3059	76	1	0	1	2800	70	1	0	1	2695	67	1	0	1
		Type 4 Diffused	3107	78	1	0	1	2844	71	1	0	1	2738	68	1	0	1
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
4,500	52	Type 1	4982	97	1	0	1	4561	88	1	0	0	4390	84	1	0	0
		Type 2	4675	90	1	0	1	4280	82	1	0	1	4119	79	1	0	1
		Type 3	4812	95	1	0	1	4405	86	1	0	1	4240	82	1	0	1
		Type 4	4569	88	1	0	1	4183	80	1	0	1	4026	77	1	0	1
		Wall Graze	5083	99	3	0	0	4653	89	3	0	0	4479	86	3	0	0
		Spot/Column	4313	84	3	0	0	3948	76	3	0	0	3800	73	3	0	0
		Type 1 Diffused	4526	88	2	0	1	4143	80	1	0	1	3988	77	1	0	1
		Type 2 Diffused	4137	80	1	0	1	3787	73	1	0	1	3645	70	1	0	1
		Type 3 Diffused	3934	76	1	0	1	3601	69	1	0	1	3466	67	1	0	1
		Type 4 Diffused	3996	77	1	0	1	3658	70	1	0	1	3521	68	1	0	1

ISOLINE TEMPLATES 15' Mounting Height, 15' Grid Spacing

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JOB

TYPE

NOTES

| 4 |

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CY2-45-4K7-3-4-WG-UNV-**-R-FPP

Type:**A**

Notes: SPECIFY FINISH

SLA20-46484

Cypher™ – CY2 Pedestrian Scale

TYPE

ELECTRICAL CHARACTERISTICS

Lumen Package	System Wattage (W)	Line Voltage		Input				Min. Power Factor	Max THD (%)	Dimming Range	Source/Sink Current (mA)		Absolute voltage range on 0-10v (+) Purple	
		VAC	Hz	120	277	347	480				Min.	Max.	Min.	Max.
2,500	26	120	50/60	0.2	0.1	0.1	0.1	>0.9	20	10% to 100%	0 mA	1 mA	0V	10V
3,500	40			0.3	0.1	0.1	0.1							
4,500	52			0.4	0.2	0.1	0.1							

TM-21 LIFETIME CALCULATION (500mA)

Lumen Package	Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
		15	25	50	60 (TM-21)	100	
4,500	25	95%	94%	90%	89%	83%	>60Khrs.
	40	93%	91%	84%	82%	73%	



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JOB _____
TYPE _____
NOTES _____

| 5 |

Submitted by Swaney Lighting 	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	Catalog Number: CY2-45-4K7-3-4-WG-UNV-**-R-FPP Notes: SPECIFY FINISH	Type: A SLA20-46484
---	---	--	----------------------------------

Cypher™ – CY2 Pedestrian Scale

TYPE

HOUSING

- Main housing shroud shall be of fabricated 5052-H32 aluminum alloy
- Housing mounting interface shall have a stamped silicone gasket.
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry and hardware shall be stainless steel.

OPTICAL ARRAY

- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features.
- Optical lenses shall be clear injection molded PMMA acrylic.
- Optical array shall be recessed in order to shield each LED optic across the length of the aperture.
- Optical array shall be sealed for IP66 rating.
- Secondary lens is impact resistant 5/32" tempered glass.

ELECTRICAL

- Drivers shall be in direct contact with the die-cast aluminum housing across the entire surface area of the widest face for maximum thermal transfer.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of LED module and electronic components.
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series.
- Drivers shall be U.L. recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NDTV and NTFTV.
- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for -20°C ambient environments.

SPECIFICATIONS

- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Luminaires not configured with a control system shall be provided with 0-10 purple and gray dimming leads.



CONTROLS

- Optional universal voltage (120-277V) button photocontrol for dusk to dawn energy savings. Photocontrol is factory installed inside the housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others.
- Wireless enabled fixtures shall support bi-directional radio frequency (RF) communications utilizing IEEE 802.15.4 operating in the 2.4GHz ISM band.
- Up to 1000' wireless range may be reduced by physical obstructions between lighting fixtures.
- Occupancy Sensor shall programmable and use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
 - High mode: 10V
 - Low mode: 1V
 - Ramp-up rate: disabled
 - Fade-down rate: disabled
 - Photocell: Off
 - Sensitivity: Full
 - Time Delay: Fade to low: 5 minutes
 - Time Delay: Fade to off: 1 hour
- The SCP enables any wall mounted luminaire, in excess of 30 watts, to meet California Title 24 requirements with integral 10KA surge protection for added reliability and serviceability.
For more detail: http://www.aal.net/products/sensor_control_programmable
- Hubbell Control Solution's wiSCAPE™ In-Fixture Module is a bi-directional wireless RF device that allows an individual fixture to be managed, monitored and metered. The wiSCAPE In-Fixture Module communicates wirelessly over a robust 2.4GHz ISM (Industrial, Scientific and Medical) certified meshed radio signal. The wiSCAPE Fixture Module drastically simplifies control and automation of projects, especially in retrofit environments, and challenges the legacy world of wired-systems. wiSCAPE wireless control technology easily adapts to complex automation situations for quick, simple and economical commissioning. The On-Fixture Module is compatible with A-25-7H option.

- SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbellighting.com/products/sitesync for more details.

BLUETOOTH®

- RGBW option includes integral Bluetooth module, built into driver, that permits the adjustment of luminous front color when paired with Hubbell Remote App via cellular/tablet device.
- Bluetooth Low Energy (BLE) or Bluetooth Smart compatible for both iOS (iOS8 and forward) and Android (Gingerbread and forward) handheld software applications. Compatible with phones and tablets.
- Free Bluetooth Apps are available for Apple iOS and Google Android mobile devices and are downloadable via the internet at Apple App Store or Google Play.

MOUNTING AND INSTALLATION

- JUNCTION BOX: Standard with zinc-plated, quick-mount junction box plate that mounts directly to 4" J-Box
- Mounting plate features a one-piece EPDM gasket on back side of plate to firmly seal fixture to wall surface, forbidding entry of moisture and particulates.
- Fixture attaches by two Allen-head hidden fasteners for tamper resistance.
- Optional mounting arrangements utilize a die-cast mounting adaptor to allow for surface conduit and through branch wiring.

SERVICING

- Housing shall be able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the housing shall be able to be removed for service by lifting the assembly up off the rear mounting plate and disconnecting the wiring plugs.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FUSING

SF for 120, 277, and 347 Line volts
DF for 208, 240, and 480 Line volts

High temperature fuse holders factory installed inside the fixture housing.
Fuse is included.



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JOB	_____
TYPE	_____
NOTES	_____

| 6 |

Submitted by Swaney Lighting 	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	Catalog Number: CY2-45-4K7-3-4-WG-UNV-**-R-FPP Notes: SPECIFY FINISH	Type: A SLA20-46484
--	---	--	---

Cypher™ – CY2 Pedestrian Scale

TYPE

FINISH

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- IP66 rated assembly
- IDA approved, 3000K and warmer CCTs only.
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.
- ANSI C136.31-2010 4G Vibration tested and compliant.
- Complies with "Americans with Disabilities Act" or "ADA" on select versions for low mounting height applications (fixtures extend maximum of 4 inches from wall for mounting heights of 80 inches or less).

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:

Five year limited warranty (for more information visit: [http:// www.hubbellighting.com/resources/warranty/](http://www.hubbellighting.com/resources/warranty/)

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JOB _____
TYPE _____
NOTES _____

| 7 |

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	CY2-45-4K7-3-4-WG-UNV-**-R-FPP Notes: SPECIFY FINISH	A SLA20-46484

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**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

LC6ML / 6LCML24L30K8

Type:**B**

Notes:

SLA20-46484

**6" LED Downlight****LC6ML**2400 & 3000 Lumens
120V-277V, 347V
0-10V Dimming**APPLICATIONS:**

LiteFrame Commercial LC6ML is a 6" commercial grade LED downlight with available outputs between 2400-3000 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 25°C. Free Air Flow around fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:

One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:

The LC6ML uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC6MLDM1-6LCML30L35K9WH

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
☐ LC6ML Medium Lumen 0-10V Dimming to 10% 120V-277V	☐ Standard 0-10V 10% Dimming ☐ DM1 0-10V 1% Dimming	☐ Standard 120V-277V ☐ 347V	☐ EM^{2,9} Integral Battery Pack ☐ EMR² Remote Battery Pack ☐ CP^{4,5} Chicago Plenum ☐ WWCP⁶ Wall Wash Chicago Plenum Housing	☐ 6LCML Medium Lumen Clear Alzak Reflector	☐ 24L 2400 Lumen ☐ 30L 3000 Lumen	☐ 27K 2700 Kelvin ☐ 30K 3000 Kelvin ☐ 35K 3500 Kelvin ☐ 40K 4000 Kelvin ☐ 50K 5000 Kelvin	☐ 8 80+ CRI ☐ 93 90+ CRI	☐ Standard Semi-Diffuse Clear Alzak ☐ WH Painted Matte White Reflector and Flange	☐ WT Painted White Flange only ☐ WF Wide Flange ☐ WW^{2,7} Wall Wash ☐ CP^{4,5} Chicago Plenum ☐ EM^{2,9} Pre-punched reflector to accept integral test switch	☐ B24 Set of two(2) 24" bar hangers for T-bar ceilings ☐ B6 Set of two (2) bar hangers for ceiling joist up to 24" centers ☐ SCA6D Sloped ceiling adapter (see note on page 4) ☐ LiteGear¹ Inverter, single phase central lighting, 125VA-250VA ☐ LPS Series¹ LitePower micro-inverter, 20VA-55VA

¹ See Central Inverter compatibility note and web links on page 4.
² Damp location only
³ Not available in 40K or 50K
⁴ CP must be selected on both housing and trim
⁵ Not compatible with WW option
⁶ WW must be selected on trim
⁷ Not compatible with CP
⁸ Not compatible with WWCP
⁹ EM must be selected on both the housing and the trim, not compatible with WW trim



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LFR-LED-043

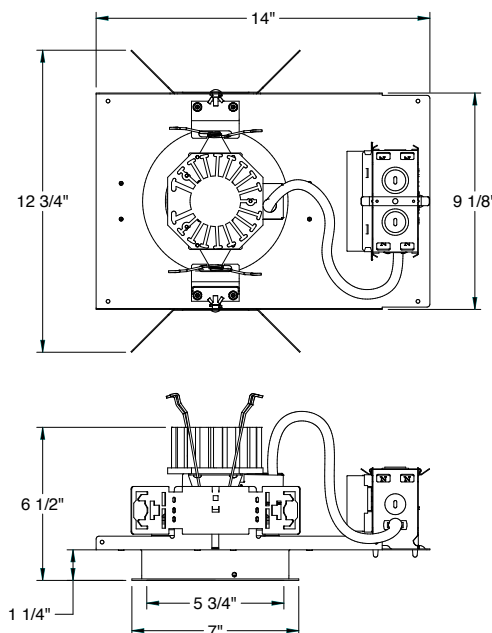
DATE: _____ TYPE: _____

FIRM NAME: _____

PROJECT: _____

LiteFrame

Ceiling Cutout: 6 1/4"
 Maximum Ceiling Thickness 1 1/4"
 For conversion to millimeters,
 multiply inches by 25.4
 Not to Scale



*See page 4 for LC6ML WWCP
 and EM line art

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

LC6ML / 6LCML24L30K8

Type:**B****Notes:**

SLA20-46484

PHOTOMETRIC DATA

LiteFrame - 6" LC6ML Downlight

DRIVER DATA	6LCML24Lxxx	6LCML30Lxxx
Input Voltage	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz
Input Current	0.271 (120v) 0.117 (277v)	0.346 (120v) 0.150 (277v)
Input Power	32.5W	41.5W
Constant Current Output	675mA	675mA
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +25°C
Dimming	0-10V to 10%	0-10V to 10%
Over-voltage, over-current, short-circuit protected		

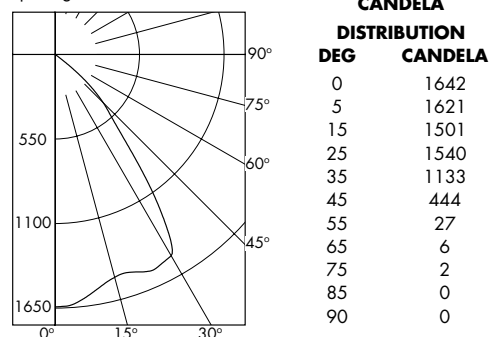
Lumen Multiplier Table

Photometrics for the LC6ML are published below at a nominal 3000 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

LC6ML 6LCML24L30K8

LED Light Engine: 3000K, 80+ CRI
System Wattage: 32.5W
Fixture Delivered Lumens: 2375
Fixture Efficacy: 73.1
Spacing Criteria: 1.1



Test No. 9495

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1286	54.2
0-40	1976	83.2
0-60	2367	99.6
0-90	2375	100.0
90-180	0	0.0
0-180	2375	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	37467
55°	2809
65°	847
75°	461
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

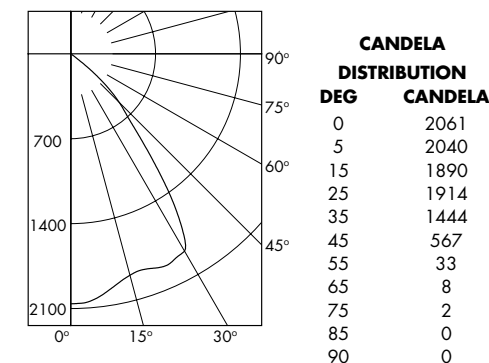
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	100	50	30	10	100	50	30	10	100	50	30	10	100	50	30	10	100	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	98	96	95	94	93	92	91	90	89
2	106	101	97	93	104	99	95	92	96	93	90	87	84	83	82	81	80	79	78	77
3	100	93	87	83	98	92	86	82	89	84	81	78	75	73	72	71	70	69	68	67
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	75	72	78	75	72
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	72	68	65
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	63	60	67	63	60
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	62	58	55
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	58	54	51
9	69	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	54	50	47
10	66	55	48	44	65	54	48	44	53	48	44	52	47	43	52	47	43	51	46	43

LC6ML 6LCML24L30K8

Test No. 9495

LC6ML 6LCML30L30K8

LED Light Engine: 3000K, 80+ CRI
System Wattage: 41.5W
Fixture Delivered Lumens: 2993
Fixture Efficacy: 72.1
Spacing Criteria: 1.1



Test No. 9430

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1609	53.7
0-40	2484	83.0
0-60	2983	99.7
0-90	2993	100.0
90-180	0	0.0
0-180	2993	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	47846
55°	3433
65°	1130
75°	461
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10				
1	113	110	107	105	110	108	105	103	104	102	100	98	98	97	96	95	94			
2	106	101	96	93	104	99	95	92	96	93	90	88	93	90	88	85	84			
3	100	93	87	83	98	91	86	82	89	84	81	78	83	80	78	75	74			
4	94	86	79	75	92	84	79	74	82	77	73	70	76	72	70	67	66			
5	88	79	72	68	87	78	72	67	76	71	67	64	70	66	73	69	65			
6	83	73	66	62	82	72	66	61	71	65	61	59	64	60	68	63	60			
7	78	68	61	56	77	67	61	56	66	60	56	54	59	55	63	59	55			
8	74	63	56	52	72	62	56	51	61	55	51	50	55	51	59	54	51			
9	69	59	52	47	68	58	52	47	57	51	47	46	51	47	55	50	47			
10	66	55	48	44	64	54	48	44	53	48	44	42	47	43	52	47	43			

LC6ML 6LCML30L30K8

Test No. 9430



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**HUBBELL**
Lighting, Inc.

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

LC6ML / 6LCML24L30K8

Type:**B**

Notes:

SLA20-46484

PHOTOMETRIC DATA

LiteFrame - 6" LC6ML Downlight

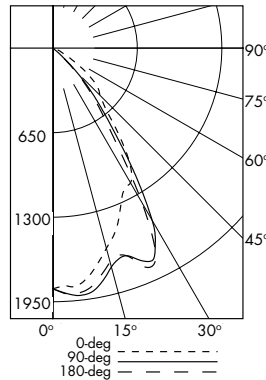
LC6ML 6LCML24L30K8 WW

LED Light Engine: 3000K, 80+ CRI

System Wattage: 32.4W

Fixture Delivered Lumens: 2331

Fixture Efficacy: 71.9

**CANDELA DISTRIBUTION**

DEG	0	90	180
0	1850	1850	1850
5	1842	1907	1894
15	1594	1742	1702
25	1261	1804	1837
35	994	936	771
45	514	261	223
55	290	9	8
65	72	3	3
75	12	2	2
85	1	0	0
90	0	0	0

Test No. 9496

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	43374	22024	18818
55°	30169	936	832
65°	10166	424	424
75°	2767	461	461
85°	685	0	0

MULTIPLE UNITS				
1'	2'	3'	4'	
UNITS ON 3' CENTER	UNITS ON 4' CENTER			

2.5' DISTANCE FIXTURE MOUNTED OUT FROM WALLS
FOOTCANDLE DISTRIBUTION ON WALL SURFACE (Direct Only)

1	2	3	4	5	6	7	8	9
7	4	1	0	0	7	4	7	7
30	20	5	1	0	32	21	32	31
29	21	11	2	0	33	33	33	30
27	24	13	5	1	38	39	38	30
18	17	14	7	3	31	37	31	24
12	12	11	8	4	29	28	29	20
9	8	8	7	4	26	23	26	18
7	6	6	6	4	21	20	21	16
5	5	4	4	4	17	17	17	14

LC6ML 6LCML24L30K8 WW

Test No. 9496

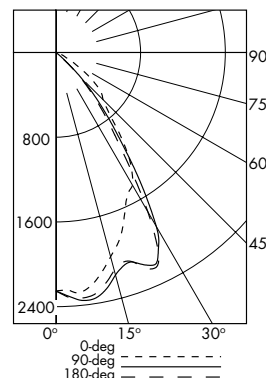
LC6ML 6LCML30L30K8 WW

LED Light Engine: 3000K, 80+ CRI

System Wattage: 41.4W

Fixture Delivered Lumens: 2905

Fixture Efficacy: 70.2

**CANDELA DISTRIBUTION**

DEG	0	90	180
0	2251	2251	2251
5	2278	2341	2329
15	1997	2175	2129
25	1565	2211	2239
35	1197	1194	1007
45	630	332	293
55	354	13	11
65	92	5	4
75	15	3	3
85	1	0	0
90	0	0	0

Test No. 9432

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	53162	28016	24725
55°	36827	1352	1144
65°	12989	706	565
75°	3458	692	692
85°	685	0	0

MULTIPLE UNITS				
1'	2'	3'	4'	
UNITS ON 3' CENTER	UNITS ON 4' CENTER			

2.5' DISTANCE FIXTURE MOUNTED OUT FROM WALLS
FOOTCANDLE DISTRIBUTION ON WALL SURFACE (Direct Only)

1	2	3	4	5	6	7	8	9
9	5	1	0	0	9	5	9	9
37	24	6	1	0	39	26	39	37
36	27	14	3	1	42	41	42	37
32	29	16	7	2	47	48	47	36
22	21	17	9	4	39	46	39	29
15	14	14	10	5	36	35	36	25
11	11	10	9	5	32	29	32	22
8	8	7	7	5	26	25	26	20
6	6	6	5	5	21	22	21	17

LC6ML 6LCML30L30K8 WW

Test No. 9432

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**HUBBELL**
Lighting, Inc.

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

LC6ML / 6LCML24L30K8

Type:**B****Notes:**

SLA20-46484

PHOTOMETRIC DATA

LiteFrame - 6" LC6ML Downlight

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1Bjn2R9

Central Inverters

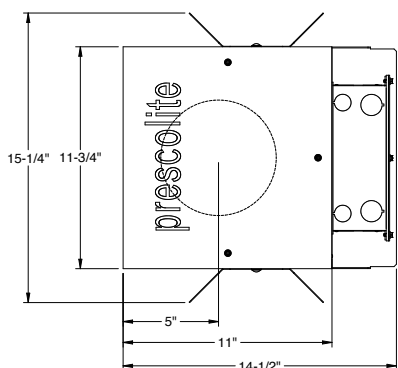
For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

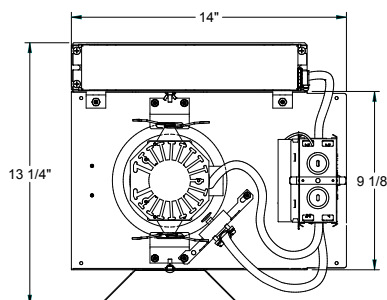
LPS Series: www.dual-lite.com/products/lps

SCA6D

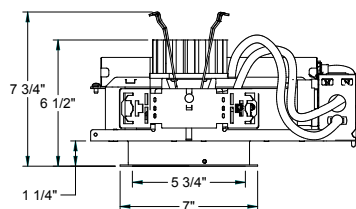
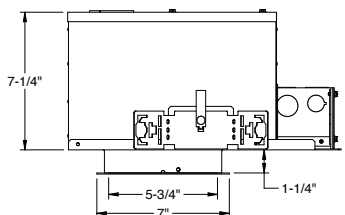
When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.



LC6ML WWCP



LC6ML EM



Web: www.prescolite.com • Tech Support: (888) 777-4832
701 Millennium Boulevard • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000
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Specifications subject to change without notice. • Printed in U.S.A. • IFR LED-043 • 6/13/18



HUBBELL
Lighting, Inc.

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CB32/20L4KUV/**

Type:**C**

Notes: SPECIFY FINISH

SLA20-46484

KIM LIGHTING**CB LED**

Compact Bollard

revision 5/31/18 • kl_cbled_spec.pdf

Type:**Job:****Catalog number:**

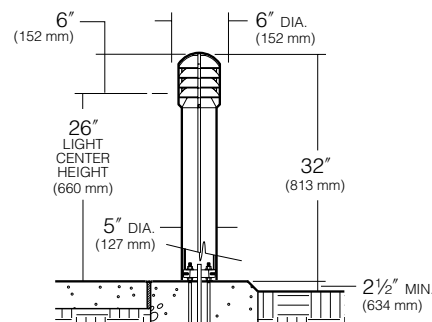
Fixture	/	Electrical Module	/	Luminaire Finish	/	Option
See page 2						

Approvals:**Date:****Page: 1 of 3****Specifications****CB Models**

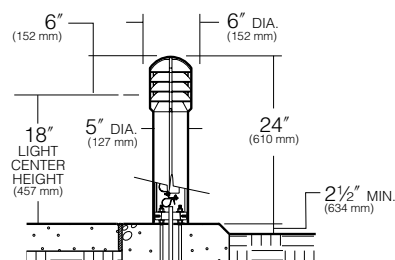
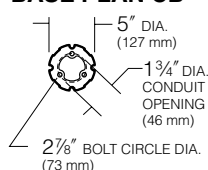
10 to 20 Diodes

CB32

Maximum weight: 20 lb

**CB24**

Maximum weight: 17 lb

**BASE PLAN CB**

HUBBELL LIGHTING, INC.

Top, Louvers: Interlocking die-cast, low-copper (<0.6% Cu) aluminum sections fasten together with concealed stainless steel screws. Louver base assembly fastens internally to riser with 4 concealed screws.

Riser: Extruded aluminum, 5" diameter, .125" typical wall thickness, external vertical grooves align with vertical members on louver assembly. Attaches to anchor base with 4 countersunk stainless steel flat socket head screws finished to match fixture.

Anchor Base: Heavy cast aluminum, fully concealed within riser shaft. Three 3/8" x 10" + 2" zinc plated anchor bolts, each with two nuts and washers, and a rigid pressboard template.

Globe: Internally fluted, clear tempered glass, fully gasketed.

Optical Module: Each LED equipped with a directional optic for maximum beam angle projecting through louver stack spacings. LED boards to be mounted to an anodized inter-locking heat sink extrusion. (Type I) two 5-LED boards for a total of 10-LED. (Type III) three 5-LED boards for a total of 15-LED. (Type V) four 5-LED boards for a total of 20-LED. Available in 580nm Amber, 3000K, 4000K and 5000K color temperatures.

Electronic Module: All electrical components are either UL or ETL recognized, mounted on a single plate and factory prewired with quick disconnect plugs. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

Finish: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).

Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

Warranty: Kim Lighting warrants Bollard LED products sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of five (5) years for exterior housing paint finish(s), (iii) a period of five (5) years for LED Light Engines and, (iv) a period of five (5) years for LED power components (driver, surge protector and LifeShield® device), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE

**Job Name:**52 HANOVER ST. REDEVELOPMENT
Engineer: Acorn Engineering, Inc (Portland)**Catalog Number:**

CB32/20L4KUV/**

Notes: SPECIFY FINISH

Type:**C**

SLA20-46484

KIM LIGHTING**CB LED**

Compact Bollard

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Page: 2 of 3

**Standard and Optional Features****Fixture**

Cat. No. designates fixture.

Cat. No. ☐ **CB24** Compact Bollard 24" overall height☒ **CB32** Compact Bollard 32" overall height**Electrical Module****LED** = Light Emitting Diode

Cat. Nos. for LED Electrical Modules available:

xL**Source:**

- ☐ **10L** = 10 LED
(IES Type I)
- ☐ **15L** = 15 LED
(IES Type III)
- ☒ **20L** = 20 LED
(IES Type V)

xK**Color Temperature:**

- ☐ **2K** = 580nm - Amber
- ☐ **3K** = 3000K
- ☒ **4K** = 4000K
- ☐ **5K** = 5000K

UV**Voltage:**

☒ **UV** Universal Voltage
shall range from
120V-277V

FinishTGIC thermoset polyester
powder coat paint on
fixture and shaft

Specify Stnd. finish

Color: Black Dark Bronze Light Gray Stealth Gray Platinum Silver White Custom Color¹

Cat. No.: ☐ **BL** ☐ **DB** ☐ **LG** ☐ **SG** ☐ **PS** ☐ **WH** ☐ **CC**

NOTE: Black and Dark Bronze colors will produce slightly less louver brightness than Light Gray or White.¹Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____**Battery Back-up**Cat. No. ☐ **EM**
☐ **No Option**

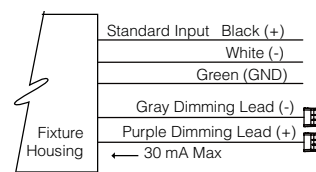
Internal battery pack provides 90 minutes of supplemental light at 50% of initial lamp lumens.

NOTE: For CB32 only.**Optional Duplex Receptacle**Cat. No. ☐ **DR**
☐ **DR-GFI**
☐ **No Option**

(CB32 only) Mounted 18" from bottom of shaft, in a cast aluminum box that is internally welded and sealed with a gasketed While-In-Use cover with locking tab. Painted to match bollard.

DR weather proof duplex receptacle rated 20A, 125V.**DR-GFI** weather proof duplex receptacle with ground fault circuit interrupter rated 20A, 125V.**0-10V Dimming Interface**

Driver has a 0-10V dimming interface with a dimming range of 10-100%. Is compatible with most control systems including Hubbell Building Automation wiHUBB™. Approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV. Note: Not compatible with current sourcing dimmers. Controls compatible via Gray and Purple dimming lead.



Submitted by Swaney Lighting 	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	Catalog Number: CB32/20L4KUV/** Notes: SPECIFY FINISH	Type: C SLA20-46484
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CB LED
Compact Bollard
revision 5/31/18 • kl_cbled_spec.pdf

Page: 3 of 3



Lumen Data

Electrical Drive Current - @350mA						
Volts - AC	Type 1		Type 3		Type 5	
	Amps - AC	System Watts	Amps - AC	System Watts	Amps - AC	System Watts
120	0.11	13	0.16	19	0.21	25
208	0.06	13	0.09	19	0.12	25
240	0.05	13	0.08	19	0.10	25
277	0.05	13	0.07	19	0.09	25

B.U.G. Rating (TM15) in Lumens where B = Backlight, U = Uplight, G = Glare			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	B0 U2 G1	B0 U2 G1	B1 U3 G1
4000K	B0 U2 G1	B0 U2 G1	B1 U3 G1
5000K	B0 U2 G1	B0 U2 G1	B1 U3 G1

Absolute Lumens			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	557	785	1099
4000K	571	805	1127
5000K	578	814	1140

LED performance and lumen output continues to improve at a rapid pace. Log onto www.kimlighting.com to download the most current photometric files from Kim Lighting's IES File Library. For custom optics and color temperature configurations, contact factory.

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: 52 HANOVER ST. REDEVELOPMENT Engineer: Acorn Engineering, Inc (Portland)	CB32/20L4KUV/** Notes: SPECIFY FINISH	C SLA20-46484

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O. Architectural Design Narrative

Please find attached the design narrative completed by CUBE 3.



52 Hanover St – Portland, ME Design Narrative

The 52 Hanover Street project is comprised of a single 8-story building encompassing most of the parcel. The majority of the program is residential units and also includes enclosed parking and retail spaces. While activated along Hanover Street with the residential lobby and bike shop, the building also frames Lancaster St. with mixed retail space to engage community and residents. This mirrors the program at 82 Hanover Street and helps to create and active pedestrian plaza between the buildings.

The residential portion contains 171 total units and is made-up of a mix of studio, one, and two-bedroom apartments. The upper floors of the building are oriented in a U-shaped configuration around a central courtyard, opening to the southwest and helping to maximize solar exposure. The building is also tiered to respond to the context and enhance the views to the bay. Ample amenity space is planned and distributed throughout the building to engage residents. There is a lobby at the ground floor that acts as the main entry and engages the street. The majority of the amenity space is located at the third floor which opens-up to the larger central courtyard. Amenity is also provided at sixth floor with complimenting outdoor deck that provides great views. Amenity program includes leasing and management offices, package storage, tenant mailboxes, fitness space, business center, games room and various lounges. Bike shop and storage will be located on the second floor for tenant use, equipped with bike fix-it station.

Overall exterior design of the building uses residential elements and materials to break down the scale and give texture to the façades. Along Hanover Street we used varying materials and angled bay windows while careful to not affect Hanover view corridor. The angled bays and randomized inset balconies create a rhythm and sense of movement along the façade which enhance visual interests and frame views to surroundings. The amenity and retail of the building consists of large glazed openings to activate street frontage. Southern façade uses different materials and feature lighting on top floor to react to the city view and advance future views.

P. Utilities

The proposed project will include installation of multiple utility services to the renovated building.

Water:

The existing service lines to the site will be retired in accordance with Portland Water District standards. It is proposed to tap an 8" fire line as well as a 4" domestic line off of the existing 8" ductile iron water main within Parris Street. Lastly, it's also proposed to provide the commercial uses with a dedicated 2" water service off of the main within Parris Street. Ability to serve confirmation has been received from PWD.

Sewer:

The existing sewer lateral to the site will be retired in accordance with the Department of Public Works. A new 10" PVC lateral will be installed within Hanover Street in conjunction with a doghouse manhole to accept the wastewater from each unit, the elevator sumps, and the garage floor drains/oil-water separator. Additionally, the existing sewer lateral that benefits 55 Portland Street and is subject to an existing sewer easement will be rerouted on site, but will maintain its existing connection into the Parris Street sewer main.

Stormwater:

There is currently a plethora of drainage structures and lines on site. As part of the redevelopment, the majority of the existing drainage infrastructure will be removed. Similarly to the sewer, an existing easement exists which benefits 55 Portland Street. This line will be rerouted along with the roof drains and courtyard drainage and piped to the separated storm drain system in Parris Street. Overall, the impervious area will decrease, effectively lowering the peak runoff. Furthermore, the relatively large amount of roof area and additional green space will result in a more favorable pollutant ranking as compared to the existing condition. Lastly, the redirection of runoff from the combined sewer to the separated storm drain will ultimately benefit the downstream treatment plant. Please refer to the Grading & Drainage plans as well as the Stormwater Management Report for more information.

Electric/Communications:

The existing building currently contains underground services off the utility poles on Hanover Street as well as an existing transformer on site. It is proposed to remove the existing lines and transformer and add a new transformer adjacent to the existing one transformer that was installed as part of the 82 Hanover Street project. The new padmount transformer is expected to be able to supply the new building with adequate power. See the Sheet C-20, Utility Plan, for more information.

The existing underground and overhead communications lines that currently service the building will be removed. New conduits are proposed for telephone, fiber, and cable



that will run down from the existing utility Pole near the former Lancaster Street as seen on C-20.

Lastly, as part of this project, a slight reconfiguration of the primary overhead utilities on Hanover Street is proposed. This reconfiguration would allow the new building to maintain adequate separation from the primary overhead utilities while maintaining service to existing customers. This proposal has been agreed to by the applicable utility companies.

Gas:

An existing abandoned gas line previously serviced the existing building from the gas main within Parris Street. It is proposed to retire this service and include a new service on the west side of the building. The new gas line will connect to the main within Parris Street and is proposed to serve the development. See Sheet C-20, Utility Plan, for more information.

Ability to serve letters have been sent out to the respective utility companies in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies are forthcoming.



Q. Construction Management Plan

Project Address:

52 Hanover Street

Project Description:

The proposed project includes the demolition of a large garage used for Public Works storage and redevelopment of the site with a 6-8 story mixed-use building with two levels of structured parking. Additionally, multiple retail units are proposed on the ground level adjacent to the existing 82 Hanover patio and Lancaster Court pedestrian/bicycle easement.

Project Team Summary:

Owner:	Tom Watson & Co., LLC
Owner's Representative:	The Congress Group
General Contractor:	TBD
Civil & Environmental Engineer:	Acorn Engineering, Inc.
Architect:	CUBE 3 Architecture
Structural Engineer:	Thornton Tomasetti
Geotechnical Engineer:	Summit Geoengineering Services

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 and Subcontractor contact information shall be posted somewhere along the project's street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work



if needed. These requests will be subject to approval by the Public Works Authority. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

<u>Project Start Date:</u>	Summer 2021
<u>Project End Date:</u>	Spring 2023

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.

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 Hanover and Parris 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 Hanover or Parris 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 or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately, and 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 on site 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 – 1,500 CY. Earthwork subcontractor(s) pit to project site.
 - Hot Mix Asphalt – 75 Tons. Paving subcontractor pit to project site.



L. Dewatering Plans

1. A basic dewatering plan for any construction work is required and shall be submitted by the Contractor. The plan must cover construction sites where groundwater is not expected but the impact of rainwater may require dewatering. The plan must include operating procedures, equipment to be used, including filters, erosion and sediment control measures, or other methods of removing sediment from approved discharges.
2. For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared by the Contractor and approved by the Department of Public Works. Groundwater and/or soil testing may be required to determine course of action if treatment is necessary. Approval for all discharges to City infrastructure is required. The proposed plan must address the following:
 - Project duration, discharge location, storage equipment on-site, dewatering schematic, and emergency contact.
 - General requirements include trained staff on-site for all approve discharges and required site log for documentation of all discharges.
 - Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required.
 - Contingency/maintenance plan for all dewatering equipment devices and filtration mediums.

Any water that is removed from an excavation must be pumped from a perforated device buried in crush stone prior discharge and/or prior to storage and treatment. There will be no discharge allowed during precipitation events.

M. 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 – Ground Floor (C-10). The export of the solid waste to their hauler will be provided on a routine basis by rolling containers to Hanover Street for unloading.

The solid waste containers will be fully enclosed and screened from the public view.





Traffic Solutions
William J. Bray, P.E.
17 Mountview Drive
Gorham, ME 04038
(207) 400-6890
trafficsolutions@maine.rr.com

September 24, 2020

Parking Assessment

Proposed

“52 Hanover Street”

INTRODUCTION

Tom Watson & Co., Inc. are proposing to construct an 8-story mixed-use building on the former City's Public Works Vehicle Maintenance site located at 52 Hanover Street. The project site is bordered by Hanover Street, Parris Street, and the discontinued portion of Lancaster Street.

The present development plan proposes four 1,900sf commercial retail units on the ground floor of the building and 171 residential apartments on floors three through eight. The residential apartment unit mix includes 154 market rate and 17 affordable workforce units; 23 of the apartment units are studios, 112 of the apartment units are one-bedroom and the remaining units (36) are two-bedroom units.

The ground floor of the proposed building provides; in addition to the proposed commercial space, a total of 91 covered parking spaces including: 66 full-size spaces, 22 compact spaces and 3 handicapped spaces. Access to the ground floor is provided through a driveway entrance from Hanover Street. The first floor of the proposed building, which is accessed from Parris Street, provides an additional 103 parking spaces with 75 full size spaces, 25 compact car spaces and 3 handicap spaces. In total, the proposed site design provides a total of 194 on-site parking spaces.

The proposed retail units are anticipated to include one or more of the following projected tenants:

- Neighborhood Coffee Shop
- Neighborhood Grocery
- Bar/Eatery
- Bar/Eatery

The City Zoning Ordinance in Section 14-332.2. (c) states: “Site plans over 50,000 square feet and projects in the B-6, B-7, and USM Overlay Zones: Where construction is proposed of new structures having a total floor area in excess of fifty thousand (50,000) square feet, the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.

This document provides a determination of the “average” peak parking demand for the proposed “52 Hanover Street” building appropriately based upon national parking trends and local parking data. The analytical determination of “average” peak parking demand for a mixed-use development must also account for the time-of-day distribution of the actual parking demand. For example, the peak parking demand requirements of one proposed use could likely occur at 7:00 p.m.; whereas the peak parking demand of a second building use may occur at 1:00 p.m. The net result is that the parking demand of multiple land-uses may be able to use the same parking space at different times of the day; thereby, reducing the actual peak parking demand of the site. Further, the analytical process followed in forecasting the peak parking demand of the proposed site also accounts for internally captured trips; oftentimes referred to as “shared-use” trips. It is reasonable to expect a resident of the proposed building purchasing coffee or perhaps groceries in either the proposed neighborhood coffee and/or grocery store retail units located on the ground floor of the building. As a result, unless these internal trips are accounted for the projection of trips and ultimately parking demand requirements of the proposed project are overstated.

The parking demand requirements of the proposed 52 Hanover Street building are fully met with construction of the proposed 194 on-site parking spaces. In fact, the parking assessment report documents a balance of spaces are provided, which will be used to off-set the parking requirements of the adjoining 82 Hanover Street mixed-use building.

PARKING DEMAND

National parking demand data presented in the 5th Edition of the Institute of Transportation Engineers (ITE) “PARKING GENERATION” publication is typically the instrument used in estimating the actual parking demand of a development site. The 5th edition, which was published in January 2019, represents the most current copy of the noted ITE document. The ITE manual provides “average” peak parking demand rates for more than 100 land-use categories including: residential, lodging, recreational, institutional, medical, retail, office, services, etc. Occasionally proposed development uses are more locally specific and/or are not presently accounted for in the national parking publication. In those instances, the average peak parking demand is typically determined based upon local studies conducted at similar development uses. Parking rates are provided for both a weekday and Saturday condition.

The “average” peak parking demand requirements of the proposed 52 Hanover Street mixed-use building is estimated based upon the following projected site uses:

Market Rate Units

- (21) studio units
- (101) one-bedroom units
- (32) two-bedroom units

Affordable Workforce Units

- (2) studio units
- (11) one-bedroom units
- (4) two-bedroom units

Commercial Retail Units

- Neighborhood Grocery Store – 1,900sf
- Neighborhood Coffee Shop – 1,900sf
- Bar/Eatery – 1,900sf

- Bar/Eatery – 1,900sf

The peak parking demand requirements of the proposed market rate apartment units is based upon Land-Use #221- Multi-Family Housing (Mid-Rise) presented in the noted ITE parking generation publication. This land-use category is generally used for buildings between three and 10 floors in height. A peak parking rate of 0.48 spaces per bedroom was applied in calculating the peaking demand requirements of the proposed market rate units. The ITE document only provides valid parking rates for a weekday condition; therefore, a similar parking demand rate was applied for Saturday.

Similarly, the peak parking demand requirements of the proposed affordable workforce apartment units is based upon Land-Use #223 - Affordable Housing – Income Limits in the national parking document. The parking rate used in determining the peak parking demand of the 17 workforce apartment units for a weekday is 0.30 spaces per bedroom and a parking demand rate of 0.33 spaces was used for Saturday.

Parking demand requirements for the proposed neighborhood grocery store is based upon a trip generation study of a neighborhood grocery store located at the intersection of Brackett and Pine Streets. The study results, as presented below in Table A, shows less than 8% of the total combined peak hour trips generated by the Pine Street/Brackett Street grocery store are, in fact, automobile trips. Accordingly, this report assumes off-street parking is only provided for a total of five employees.

Table A
Trip Generation Summary
Neighborhood Grocery
(Brackett Street @ Pine Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
7:30 to 7:45 AM	0	0	0	0	0	0
7:45 to 8:00 AM	0	0	0	0	0	0
8:00 to 8:15 AM	15	0	11	0	26	0
8:15 to 8:30 AM	4	1	8	1	12	2
8:30 to 8:45 AM	6	2	1	3	7	5
8:45 to 9:00 AM	11	2	9	3	20	5
AM Peak Hour Total	36	5	29	7	65	12
3:30 to 3:45 PM	5	0	7	0	12	0
3:45 to 4:00 PM	7	1	7	2	14	3
4:00 to 4:15 PM	5	0	9	0	14	0
4:15 to 4:30 PM	6	1	7	0	13	1
4:30 to 4:45 PM	12	1	10	1	22	2
4:45 to 5:00 PM	21	0	18	0	39	0
5:00 to 5:15 PM	15	1	18	1	33	2
5:15 to 5:30 PM	15	0	14	0	29	0
PM Peak Hour Total	63	2	60	2	123	4

A similar process was followed in projecting the parking requirements of the proposed neighborhood coffee shop. A traffic study was conducted at a neighborhood coffee shop located on Munjoy Hill at Congress and Atlantic Streets. Again, the results of the field survey as presented below in Table B clearly demonstrates the majority of the customers (approximately 92%) of the total recorded trips are pedestrian trips generated within the local neighborhood. It is expected that any customer arriving via automobile to the proposed 52 Hanover

site will park on-street and, as a result, off-street parking is not required. To conservatively project the parking demand of the proposed project a total of five parking spaces are reserved within the proposed building site for employees of the neighborhood coffee shop.

Table B
Trip Generation Summary
Neighborhood Coffee Shop
(Congress Street @ Atlantic Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
8:00 to 8:15 AM	7	1	7	1	14	2
8:15 to 8:30 AM	5	2	3	2	8	4
8:30 to 8:45 AM	9	2	7	2	16	4
8:45 to 9:00 AM	12	3	8	2	20	5
9:00 to 9:15 AM	8	1	10	2	18	3
9:15 to 9:30 AM	4	1	6	1	10	2
Total Trips	45	10	41	10	86	20

Parking demand requirements of the proposed two bar/eatery commercial units are based upon parking rates presented in the ITE Parking Generation publication under Land-Use #932 – High Turnover (Sit-Down) Restaurant with Lounge/Bar. A weekday parking rate of 9.31 spaces per 1,000 GFA and a rate of 13.98 spaces per 1000 GFA for Saturday were used to calculate the peak parking demand requirements of both proposed bar/eatery tenant spaces.

Tables 1a and 1b, as follows, provides the “average” peak parking demand requirements for both a typical weekday and Saturday condition:

Table 1a
“Peak” Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

Proposed Use	Unit Size	Land-Use Code	Peak Parking Demand Rate	Parking Space Requirements
Residential Apartment (Market Rate)	186 bedrooms	LUC 221	0.48 spaces/bedroom	89 spaces
Affordable Workforce Apartment	21 bedrooms	LUC 223	0.30 spaces/bedroom	6 spaces
Neighborhood Coffee Shop	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Neighborhood Grocery	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Bar/Eatery	1,900 sf	LUC 932	9.31 spaces/1,000 GFA	18 spaces
Bar Eatery	1,900 sf	LUC 932	9.31 spaces/1,000 GFA	18 spaces
			TOTAL =	141 spaces

NOTE: Parking demand based upon estimated number of employees

Table 1b
“Peak” Parking Demand Summary
For
“52 Hanover Street”
(Saturday Conditions)

Proposed Use	Unit Size	Land-Use Code	Peak Parking Demand Rate	Parking Space Requirements
Residential Apartment (Market Rate)	186 bedrooms	LUC 221	0.48 spaces/bedroom ⁽²⁾	89 spaces
Affordable Workforce Apartment	21 bedrooms	LUC 223	0.33 spaces/bedroom	7 spaces
Neighborhood Coffee Shop	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Neighborhood Grocery	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Bar/Eatery	1,900 sf	LUC 932	13.98 spaces/1,000 GFA	27 spaces
Bar Eatery	1,900 sf	LUC 932	13.98 spaces/1,000 GFA	27 spaces
			TOTAL =	160 spaces

NOTES:

⁽¹⁾ Parking demand based upon estimated number of employees.

⁽²⁾ Parking demand rate for Saturday is the same as weekday rate. ITE publication has no valid study data for Saturday condition.

The “average” unadjusted peak parking demand of the proposed 52 Hanover Street building is estimated at 141 spaces for a typical weekday condition and a slightly greater total of 160 spaces for a Saturday condition.

Parking Demand Adjustments: Due to the diversity of proposed uses within the “52 Hanover Street” building, an adjustment is applied to refine the actual parking demand of the proposed building. The adjustment accounts for multi-purpose trips that occur between one or more tenant spaces within the building; often referred to as “shared or internally captured” trips. These trips must be accounted for or the projection of peak parking demand overstates the actual peak parking demand of a specific development site. The National Cooperative Highway Research Program’s (NCHRP) 684 Internal Trip Capture Estimation Tool was utilized in calculating the number of shared or captured trips generated by the proposed site. Separate analyses were conducted for both the weekday morning and peak hour time periods and the trip rates calculated for each time period (10% AM Peak Hour and 19% PM Peak Hour) were then averaged to provide a conservative estimate of 14.5% percent. The NCHRP estimation tool is limited in calculating internal captured trips for only a weekday condition. This report has assumed the percentage of internally captured trips generated by the site on Saturday is equal to the weekday average rate of 14.5%. Copies of the NCHRP worksheets for both the weekday AM and PM peak hours are attached for reference.

Tables 2a and 2b below summarize the adjusted “average” peak parking demand for the proposed site for both a typical weekday and Saturday condition:

Table 2a
Adjusted Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

Proposed Use	Peak Parking Demand (Spaces)	Shared Trip Adjustment ⁽¹⁾	Adjusted Parking Demand
Residential Apartment (Market Rate)	89	-13	76
Affordable Workforce Apartment	6	-1	5
Neighborhood Coffee Shop	5	0	5
Neighborhood Grocery	5	0	5
Bar/Eatery	18	-3	15
Bar/Eatery	18	-3	15
TOTAL	141	-20	121

NOTE:

⁽¹⁾ Shared trip adjustment percentage calculated using (NCHRP) 684 program. Percent value an average of AM & PM peak shared trip percentages.

Table 2b
Adjusted Parking Demand Summary
For
“52 Hanover Street”
(Saturday Condition)

Proposed Use	Peak Parking Demand (Spaces)	Shared Trip Adjustment ⁽¹⁾	Adjusted Parking Demand
Residential Apartment (Market Rate)	89 spaces	-13	76
Affordable Workforce Apartment	7 spaces	-1	6
Neighborhood Coffee Shop	5 spaces	-1	4
Neighborhood Grocery	5 spaces	-1	4
Bar/Eatery	27 spaces	-4	23
Bar/Eatery	27 spaces	-4	23
TOTAL	160 spaces	-24	136

NOTE:

⁽¹⁾ Shared trip adjustment percentage calculated using (NCHRP) 684 program. Percent value is an average of weekday AM & PM peak shared trip percentages.

Hourly Parking Demand: The noted ITE Parking Generation publication provides further guidance in estimating the actual parking demand of a mixed-use or multi-use project. They state the following: *“the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.”*

The ITE Parking Generation manual provides time-of-day percent peak parking demand values for each land-use category for completing this determination. The actual percent values applied in completing these calculations are presented in Table 3a and 3b as follows:

Table 3a
Hourly Peak Parking Demand (percent value) Summary
For
“52 Hanover Street”
(Weekday Condition)

<u>Time of Day</u>	<u>Residential Apartment (Market Rate)</u>	<u>Affordable Workforce Apartment ⁽¹⁾</u>	<u>Neighborhood Grocery ⁽²⁾</u>	<u>Neighborhood Coffee Shop ⁽²⁾</u>	<u>Bar/Eatery ⁽³⁾</u>	<u>Bar/Eatery ⁽³⁾</u>
7:00 AM	71%	71%	100%	100%	0	0
8:00 AM	61%	61%	100%	100%	0	0
9:00 AM	55%	55%	100%	100%	5%	5%
10:00 AM	54%	54%	100%	100%	7%	7%
11:00 AM	53%	53%	100%	100%	16%	16%
12:00 PM	50%	50%	100%	100%	49%	49%
1:00 PM	49%	49%	100%	100%	39%	39%
2:00 PM	49%	49%	100%	100%	27%	27%
3:00 PM	50%	50%	50%	0	19%	19%
4:00 PM	58%	58%	50%	0	22%	22%
5:00 PM	64%	64%	50%	0	60%	60%
6:00 PM	67%	67%	50%	0	94%	94%
7:00 PM	70%	70%	50%	0	100%	100%
8:00 PM	76%	76%	50%	0	81%	81%

NOTES:

⁽¹⁾ Percent values for affordable workforce apartments applies same percent values presented for market rate apartments. ITE data not available for affordable units.

⁽²⁾ Percent values estimated.

⁽³⁾ Bar/eatery rates based on ITE 4th edition; 5th edition does not include percent values.

Table 3b
Hourly Peak Parking Demand (percent values) Summary
For
“52 Hanover Street”
(Saturday Condition)

<u>Time of Day</u>	<u>Residential Apartment (Market Rate)</u>	<u>Affordable Workforce Apartment ⁽¹⁾</u>	<u>Neighborhood Grocery ⁽²⁾</u>	<u>Neighborhood Coffee Shop ⁽²⁾</u>	<u>Bar/Eatery ⁽³⁾</u>	<u>Bar/Eatery ⁽³⁾</u>
7:00 AM	95%	95%	100%	100%	0	0
8:00 AM	88%	88%	100%	100%	0	0
9:00 AM	83%	83%	100%	100%	5%	5%
10:00 AM	75%	75%	100%	100%	7%	7%
11:00 AM	71%	71%	100%	100%	20%	20%
12:00 PM	68%	68%	100%	100%	41%	41%
1:00 PM	66%	66%	100%	100%	53%	53%
2:00 PM	70%	70%	100%	100%	46%	46%
3:00 PM	69%	69%	50%	0	38%	38%
4:00 PM	72%	72%	50%	0	63%	63%
5:00 PM	74%	74%	50%	0	80%	80%
6:00 PM	74%	74%	50%	0	100%	100%
7:00 PM	73%	73%	50%	0	93%	93%
8:00 PM	75%	75%	50%	0	70%	70%

NOTES:

⁽¹⁾ Percent values for affordable workforce apartments applies same percent values presented for market rate apartments. ITE data not available for affordable units.

⁽²⁾ Percent values estimated.

⁽³⁾ Bar/eatery rates based on ITE 4th edition; 5th edition does not include percent values.

Finally, the following Tables 4a and 4b estimate the “average” adjusted hourly peak parking demand requirements of the proposed project based upon the procedures described in the ITE Parking Generation publication:

Table 4a
Hourly Peak Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

	Residential Apartment (Market Rate)	Affordable Workforce Apartment	Neighborhood Grocery	Neighborhood Coffee Shop	Bar/Eatery	Bar/Eatery	Total
Adjusted Peak Parking Demand	76 spaces	5 spaces	5 spaces	5 spaces	15 spaces	15 spaces	121

Time of Day

7:00 AM	54 spaces	4 spaces	5 spaces	5 spaces	0	0	68
8:00 AM	46 spaces	3 spaces	5 spaces	5 spaces	0	0	59
9:00 AM	42 spaces	3 spaces	5 spaces	5 spaces	1 space	1 space	57
10:00 AM	41 spaces	3 spaces	5 spaces	5 spaces	1 space	1 space	56
11:00 AM	40 spaces	3 spaces	5 spaces	5 spaces	2 spaces	2 spaces	57
12:00 PM	38 spaces	3 spaces	5 spaces	5 spaces	7 spaces	7 spaces	65
1:00 PM	37 spaces	2 spaces	5 spaces	5 spaces	6 spaces	6 spaces	61
2:00 PM	37 spaces	2 spaces	5 spaces	5 spaces	4 spaces	4 spaces	57
3:00 PM	38 spaces	3 spaces	3 spaces	0	3 spaces	3 spaces	50
4:00 PM	44 spaces	3 spaces	3 spaces	0	3 spaces	3 spaces	56
5:00 PM	49 spaces	3 spaces	3 spaces	0	9 spaces	9 spaces	73
6:00 PM	51 spaces	3 spaces	3 spaces	0	14 spaces	14 spaces	85
7:00 PM	53 spaces	4 spaces	3 spaces	0	15 spaces	15 spaces	90
8:00 PM	58 spaces	4 spaces	3 spaces	0	12 spaces	12 spaces	89

Table 4b
Hourly Peak Parking Demand Summary
For
"52 Hanover Street"
(Saturday Condition)

	Residential Apartment (Market Rate)	Affordable Workforce Apartment	Neighborhood Grocery	Neighborhood Coffee Shop	Bar/Eatery	Bar/Eatery	Total
Adjusted Peak Parking Demand	76 spaces	6 spaces	4 spaces	4 spaces	23 spaces	23 spaces	136

Time of Day

7:00 AM	72 spaces	6 spaces	4 spaces	4 spaces	0	0	86
8:00 AM	67 spaces	5 spaces	4 spaces	4 spaces	0	0	80
9:00 AM	63 spaces	5 spaces	4 spaces	4 spaces	1 space	1 space	78
10:00 AM	57 spaces	5 spaces	4 spaces	4 spaces	2 spaces	2 spaces	74
11:00 AM	54 spaces	4 spaces	4 spaces	4 spaces	5 spaces	5 spaces	76
12:00 PM	52 spaces	4 spaces	4 spaces	4 spaces	9 spaces	9 spaces	82
1:00 PM	50 spaces	4 spaces	4 spaces	4 spaces	12 spaces	12 spaces	86
2:00 PM	53 spaces	4 spaces	4 spaces	4 spaces	11 spaces	11 spaces	87
3:00 PM	52 spaces	4 spaces	2 spaces	0	9 spaces	9 spaces	76
4:00 PM	55 spaces	4 spaces	2 spaces	0	14 spaces	14 spaces	89
5:00 PM	56 spaces	4 spaces	2 spaces	0	18 spaces	18 spaces	98
6:00 PM	56 spaces	4 spaces	2 spaces	0	23 spaces	23 spaces	108
7:00 PM	55 spaces	4 spaces	2 spaces	0	21 spaces	21 spaces	103
8:00 PM	57 spaces	5 spaces	2 spaces	0	16 spaces	16 spaces	96

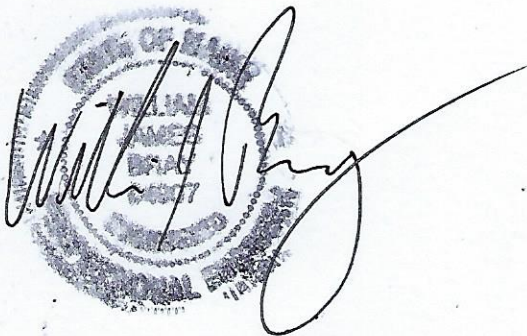
Accordingly, the average adjusted peak hourly parking demand of the site (90 spaces) for a typical weekday condition occurs at 7:00 PM. The adjusted parking demand (108 spaces) on a typical Saturday occurs at 6:00 PM.

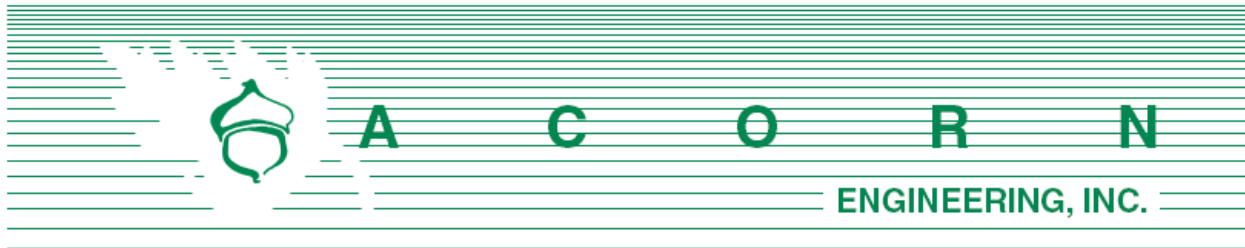
PARKING SUPPLY

The proposed 52 Hanover Street building design provides 194 covered parking spaces located on the ground and first floors of the proposed development site. The Applicant will assign a total of 90 parking spaces for all weekdays and 108 spaces on Saturday to accommodate the calculated peak parking demand requirements of the proposed mixed-use building. The remaining 104 weekday parking spaces and 86 available spaces on Saturday will be allocated to meet a portion of the parking requirements of the adjacent mixed-use building located at 82 Hanover Street.

SUMMARY

- The proposed 52 Hanover Street mixed-use building includes a total of 171 residential apartment units and four (4) 1,900sf commercial retail units is projected to generate an “average” peak parking demand of approximately **141** spaces on a typical weekday and **160** spaces on Saturday. The estimates of peak parking demand were developed based upon national parking demand rates presented in the 5th edition of the Institute of Transportation’s **Parking Generation** publication and parking data collected locally within the City of Portland.
- The determination of “average” peak parking demand for the proposed project includes an adjustment for “shared-use” trips, which account for the occurrence of multi-purpose trips between one or more tenant spaces. The noted parking adjustments reduce the “average” peak parking demand of the site to **121** weekday spaces and **136** spaces on a typical Saturday.
- The final step in forecasting the “average” peak parking demand requirements of the proposed 52 Hanover Street building considers the “shared parking space” benefits of a mixed-use or multi-use project. The previously referenced **Parking Generation** publication provides the following guidance: *“the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.”* The parking manual provides time-of-day percent of peak parking demand values for each land-use category; whereby, the actual hourly parking demand of the project site can be calculated. The results of this final process show the “average” peak parking demand of the 52 Hanover Street site occurs at 7:00 p.m. on a typical weekday and at 6:00 PM on Saturday. The peak hourly parking demand for the weekday is estimated at **90** spaces and the Saturday parking space projection is **108** spaces.
- Traffic Solutions recommends a maximum number of 90 weekday spaces and 108 spaces on Saturday be reserved for building tenants to meet the estimated average “peak” parking demand of the proposed mixed-use building project. The balance of spaces (approximately 94 weekday and 86 Saturday) within the proposed 52 Hanover Street site will be used to satisfy a portion of the peak parking demand of the adjoining 82 Hanover Street mixed-use building.





T. Traffic Memo

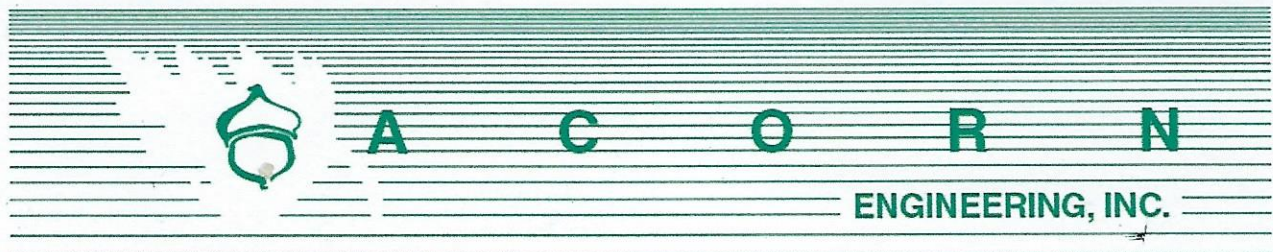
The proposed 6-8 story mixed-use building at 52 Hanover Street includes 171 residential units with associated covered parking and 4 retail units along Lancaster Court. Access to the two covered parking decks will be available from Hanover and Parris Streets, with additional pedestrian access from Lancaster St. The access points for the parking areas have been selected to minimize impact on the surrounding streets and also take advantage of existing slopes on Hanover and Parris Streets to provide the necessary grade separation for two levels of structured parking. Furthermore, trip distribution to the surrounding street network will effectively be split by routing approximately half of the vehicles to each street/entrance.

The preliminary trip generation for the proposed project has been estimated using the Institute of Transportation Engineers (ITE) "Trip Generation" 10th Edition publication. The land uses utilized in the calculations include: Residential mid-rise apartments, Neighborhood Grocery Store, Neighborhood Coffee Shop, and two pubs/eateries. The proposed retail uses are the current targeted end users for the proposed four retailers along Lancaster Court. Additionally, the existing trips previously generated at the Site were counted as a credit, consistent with best practice. To evaluate the credited trips, studies were conducted at the new Public Works facility on Canco Road. The peak credits, although relatively insignificant, were then factored into the net increase for the site.

Accordingly, the preliminary trip analysis yields a PM peak hour increase of approximately 100 trips and an AM peak hour increase of approximately 50 trips. Further, the peak hour on the weekend is anticipated to generate approximately 150 trip ends.

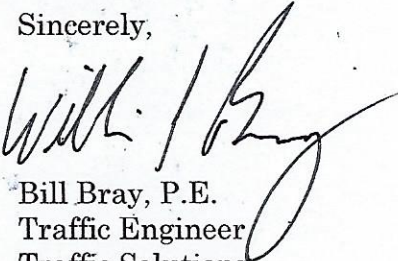
Overall, a moderate traffic increase is expected for this project due to the change in use of the site. However, the increase will be caused by standard passenger vehicles as opposed to the current (historical) condition where large municipal vehicles utilized the site. Upon initial analysis, the surrounding street system is equipped to handle the increases and does not currently suffer from congestion. It should also be noted that the City continues to carry out the Kennebec Street realignment project which will eventually improve the overall street network.

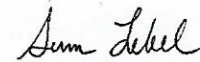
Due to the increase of over 100 peak trips, the project team anticipates submitting a Traffic Movement Permit (TMP) under Maine DOT regulations. The submission is anticipated to take place during the last week of September 2020 and will be based on the above analysis. Due to the City's Delegated Review status, it's expected that the City and/or their 3rd party consultant will review the application on behalf of the State. Furthermore, as discussed at the pre-application meeting on July 17, 2020, this project is anticipated to hold two workshops with the Planning Board prior to a final hearing where the second workshop would be focused on the transportation aspect of the project.



Should there be any questions regarding this initial traffic analysis, please don't hesitate to contact us. We look forward to providing the City with the draft TMP material in the coming days and further presenting the traffic overview to the Board.

Sincerely,


Bill Bray, P.E.
Traffic Engineer
Traffic Solutions



Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.



52 Hanover Street

Transportation Demand Management (TDM) Plan

September 24, 2020

Summary

52 Hanover, LLC provides this Transportation Demand Management (TDM) Plan for 52 Hanover Street, bordered by Hanover, Lancaster and Parris Streets in the B2b zone of Portland's Bayside neighborhood. The proposal is for a 6-8 story mixed-use building with 171 residential apartments and courtyard space, four small retail spaces on the public-access Lancaster Court, ground and second floor interior parking levels accessed from Hanover and Parris Streets, and four new on-street parking spaces.

This is a key opportunity for urban infill redevelopment, new housing for Peninsula employees, and alternate transportation and reverse commuting options for residents. The 52 Hanover Street TDM Plan intends to reduce parking demand and drive-alone vehicle trips to and from the site and benefit the local transportation system. This includes marketing the housing to downtown employees; providing leases exclusive of parking; offering on-site amenities; and supporting transportation alternatives such as walking, bicycling and using public transportation.

The plan sets the following TDM targets for 3 years after 52 Hanover Street is fully occupied. These targets should be reassessed after the first full year of occupancy of all tenant spaces:

- 10% reduction in resident peak hour vehicle trips and resident parking demand for the site
- 65% resident and retail employee multimodal rate

COVID-19 NOTE: Site occupancy is forecast for April 2023 and with an anticipated vaccine for the COVID-19 virus available within approximately the next 18 months, transportation alternatives that are currently less viable - such as transit and carpooling - are anticipated to make significant recoveries by that time. COVID-related parking demand increases to enable drive alone options are also expected to decline. In addition, TDM efforts will likely be supported by a long-term increase in telework and walkable access to the largest number of jobs in the state.

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52 Hanover Site

- 1.37-acre 6-8 story mixed-use urban infill site in the B2b Business Community district of Bayside
- Residential: 171 dwelling units, 10% at Workforce Housing rate; includes common areas, co-working space, and fitness room: 149,000 sf; approximately 250 residents
- Retail: 4 spaces on ground floor, Lancaster Street access: 8,000 sf
- Ground and second floor covered parking for residents, with access from Hanover and Parris Streets: 171 spaces, including 6 ADA accessible spaces
- 4 new on-street parking spaces

TDM Targets

- **Trip & parking reduction target:** a 10% reduction in resident vehicle trips and parking demand within 3 years after full occupancy - resulting from TDM program. That is, 2.6 resident weekday morning peak trips, 3.1 resident weekday evening peak trips, 7.6 residential-use spaces
- **Multi-modal target:** 65% of resident and retail employee trips will be on foot, by bicycle, via transit, telecommuting, or carpooling within 3 years after full occupancy
- Will reassess targets after the first full year of 52 Hanover occupancy

TDM Coordinator

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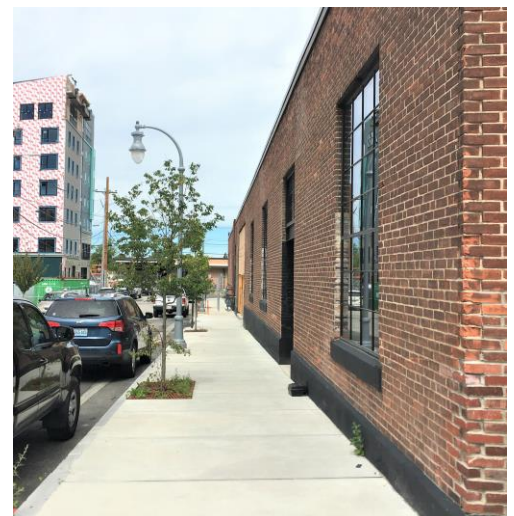
A. Property Description & Transportation Context

52 Hanover Street is a 1.37-acre parcel encompassing the north half of the block bordered by Hanover, Portland, Parris and Lancaster Streets in the B2b zone of Portland’s Bayside Neighborhood. After years of service as a Department of Public Works maintenance garage, it is appropriate that the site is returning to its residential housing and small retail roots – what it was originally developed as 150 years ago, according to City records.

In *Portland’s Plan 2030* (the 2017 City Comprehensive Plan), analysis showed the number of people both living and working in the city decreased between 2002 and 2014; the plan “supports the principle that all who work in Portland should have the option of living in Portland.” The City set a 10-year population goal of 75% of the municipality’s approximate daytime population of 96,000. New residential sites like 52 Hanover provide real opportunity to help meet this goal.

The location has a Compact Neighborhood Score of 9.5 out of 10. This scoring is based on a natural logarithm of household density, provided through the Housing + Transportation Affordability Index using U.S. Census data.

With increasing retail, office and housing development, Bayside also keeps growing in its sense of place and improved street feel. 52 Hanover will add to these enhancements and the human scale of the pedestrian environment through its active signage, windows, lighting, entrances and landscaping.



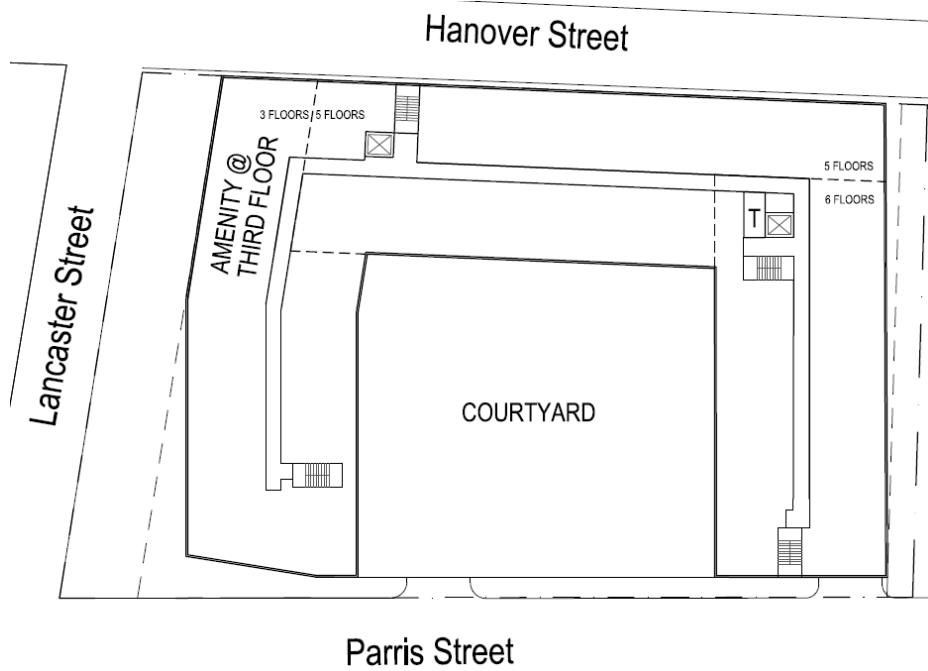
Residential Housing at 52 Hanover

Infill development of any kind contributes to single-occupancy automobile trip reduction. That much more in the case of in-town housing, which is the primary use proposed for 52 Hanover. When people move from one residence to another it provides a key opportunity and critical juncture at which to help them understand their transportation choices and the benefits of alternate transportation. Individuals are more receptive to this information as their daily living and commute patterns have changed with relocation.

One hundred seventy-one (171) residential units are proposed for 52 Hanover, consisting of 23 studios, 112 one-bedroom, and 36 two-bedroom apartments. Seventeen of the units will be deed-restricted as workforce rate housing. 52 Hanover, LLC will retain ownership of the building and Port Property Management will manage the building long-term.

Significant on-site and near-site amenities provide residents with a full-service living environment. People in residential settings often perceive they are dependent upon driving alone because of the number of errands and activities they must carry out in different locations. 52 Hanover will reduce this dependence through building facilities and proximity to services close to the site. Site features that encourage alternate transportation and discourage drive alone vehicle trips include:

- an indoor bicycle/stroller/carseat/handcart storage area
- delivery location and storage for packages and other deliveries
- free wireless internet throughout the building
- communal space that can be used to do telework
- fitness room
- outdoor rooftop courtyard including congregating areas such as fire pits and a wading pool.



...One of the more interesting studies found in reviewing the literature was a 2003 German social science experiment conducted by three researchers (Bamberg, Rolle and Weber) where an individualized marketing intervention was used at a time of what they called a "changed decision" context, meaning immediately after relocation. The research found that if, when in a new situation, people received personally relevant and persuasive information, they were more likely to use it for making new behavioral decisions.

Portland Oregon SmartTrips Welcome Program, Tools of Change Landmark Case Study, 2012





Small Retail at 52 Hanover

The developer is also creating four 1,900 square foot retail spaces off the public-access Lancaster Court. The leasing plans for these are:

- a neighborhood coffee shop - also with access for site residents from the building lobby
- a small grocer (i.e. Rosemont Market)
- two small eateries

The desire for a grocery retailer was expressed by neighborhood residents during the site planning review process for the adjacent 82 Hanover as well. Even short grocery runs are often taken by personal vehicle, so this would reduce some drive alone trips, too.

Parking

Per the site development agreement, 52 Hanover will build and maintain 194 interior parking spaces on the ground and second floors of the building. Access to the ground floor will be from Hanover Street and access to the second floor will be from Parris Street, thus more evenly dispersing motor vehicle trips from and to the site.

In strong support of site TDM efforts, residential and retail leases at 52 Hanover will be exclusive of parking. Parking that is unsubsidized, rented at competitive market rates, and unbundled from tenant leases is of tremendous benefit and a linchpin strategy to discourage drive alone trips and encourage the use of alternate transportation.





Parking that is shared-use also expands its efficiency and is another important TDM strategy. Based on 52 Hanover's initial parking demand analysis (further detailed in Section C) and the City land use code Section 14-332 (c), the minimum amount of required parking for the site will be determined by the developer's parking assessment and the recommendation of the city transportation engineer. Thus, the site intends maximize its parking resources by leasing spaces to tenants at 82 Hanover Street next door and sharing spaces between daytime and evening uses; e.g., with residential tenants accessing them for overnight use.

Port Property staff will actively manage the parking on site. The company will also explore the possible management of 52 Hanover and other lower Bayside parking resources through Unified Parking Partners; UPP could likely expand these resources' most strategic and effective use.

Moreover, 52 Hanover's redevelopment will enable the installation of four new on-street parking spaces, both of benefit to the neighborhood and also facilitating local traffic calming.

Occupant Demographics

The developer anticipates 52 Hanover will most likely attract singles and couples (an average of 1.5 persons per unit) interested in a highly-walkable, low-car use lifestyle and/or lowering their housing and transportation cost burden. This will include Generation Z and Millennial tenants (young professionals and students under age 40), mid-level professionals and executives, and empty-nesters. Some units may not be the tenants' primary residence, also reducing day-to-day traffic to and from the site.

Tenants will include people working downtown or in nearby neighborhoods, so as to avoid the increased highway traffic coming into the City. Downtown Portland is the largest employment center in the state and 52 Hanover has an excellent Job Access Score of 9.4 out of 10. This is based on employment location



and the variety of employment types, similarly provided through the Housing + Transportation Affordability Index (H+T Index) utilizing census data. According to the census, 37% of people living in the West Bayside neighborhood work on the Peninsula - the most common on-peninsula employment destinations being Downtown and Maine Medical Center. By increasing local housing availability, the site offers the opportunity for this percentage to grow as well.

For residents who are students, post-secondary education opportunities such as the Maine College of Art, the University of Southern Maine, and Southern Maine Community College are readily accessible from the site via public transportation.

From an equity standpoint, the site also has an enviable H+T Index rate of 37%; that is, housing (22%) and transportation (15%) costs combined are 37% of household income. Housing by itself is considered affordable if it totals 30% or less of income. Housing and Transportation Affordability (HTA) is considered to be combined housing and transportation costs equaling 45% or less of income. For comparison, the average Cumberland County household spends 52% of income on housing and transportation and the average Maine household spends 58% - both of which are well over what is considered within one's means.

Often these lower transportation costs at sites like 52 Hanover are because people don't need to own as many - or any - private vehicles. That is, vehicle ownership rates are lower for people who live in urban centers. Focusing in specifically on the 52 Hanover census tract, five-year census data analysis (2014-2018) shows that workers who live in West Bayside and commute to all jobs – including anywhere in the region:

- Own significantly fewer vehicles: .7 per household - vs. 1.4 in the city and 1.8 in the region;
- Drive alone considerably less: 37.3% in the 52 Hanover census tract - vs. 64.6% in the city and 78.4% in the region;
- Use alternate modes of transportation and/or telecommute significantly more: 61.6% in West Bayside vs. 38.8% in the city and 20.6% in the region.

This is similar to *Portland's Plan* analysis of larger Peninsula commute patterns, which found:

[T]he percentage of people who drive alone to work on the peninsula is as low as 36%, while the percentage of people who walk to work is in the 30% - 40% range, the percentage of people who bike to work is in the 4% - 9% range, and the percentage of people who take public transportation to work is in the 7% - 13% range. Off the peninsula, these figures shift dramatically to reflect a higher reliance on single-occupancy vehicles for commuting purposes.

Per U.S. Census data, Generation Z and Millennials have been shown to prefer urban environments; they also tend to be more comfortable using modes other than the single-occupancy automobile for transportation. These multimodal habits were heavily influenced by the Great



Recession and driving by these generations has increased slowly as the economy improved. (It is currently being impacted once again by the COVID-19 pandemic – which is negatively impacting bus and carpool rates; although it is positively impacting the number of people who walk and bicycle.) Overall, from a behavior change perspective, this familiarity with different ways of getting around will greatly facilitate these tenants' and retail employees' participation in the 52 Hanover Street TDM program.

Regarding vehicle travel and senior resident demographics, the percentage of the population that drives plateaus for the general public through the ages of 30-55 - and then starts declining after the age of 55 for women and after age 60 for men. Similarly, vehicle miles and person miles traveled per capita both fall precipitously starting at the age of 55. Car ownership has had a slight rebound since the Great Recession. However, between 2015 and 2016, the one increase in car-free living (above the margin of error) was among householders age 65 or older who rent. (Source: American Community Survey of the U.S. Census).

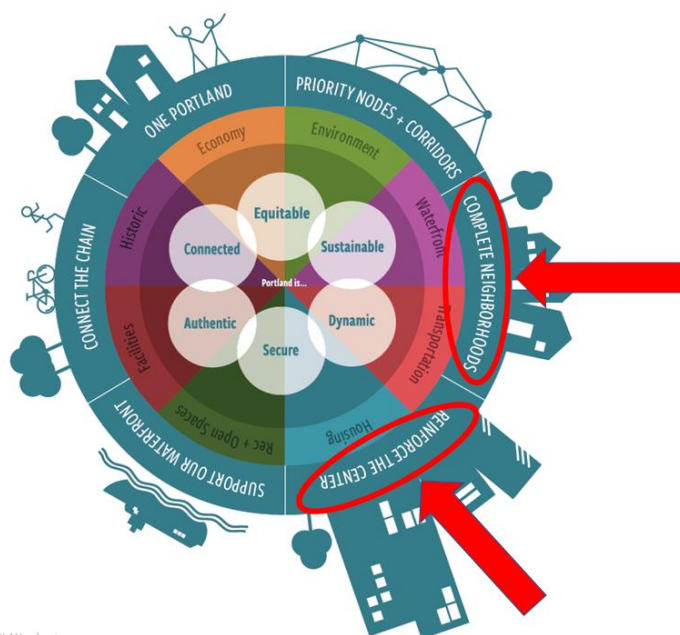
For residents working off the Peninsula, who may commute by single occupancy vehicle, there is also a reverse commute phenomenon. This change in the directionality of trips creates a more balanced inbound-outbound flow of vehicular traffic during the morning and evening peak travel hours.



Larger Transportation Setting

52 Hanover Street and its TDM initiatives are part of Bayside's continued renaissance. The project brings to fruition a number of the housing, mixed-use, downtown neighborhood, urban form, and transportation demand management goals of several recent and historically important Portland studies and plans. Included among them are:

- the original *A New Vision for Bayside* (2000)
- *Bayside Transportation Master Plan* (2018)
- *A Time of Change: Portland Transportation Plan* (1993)
- *Deering Oaks Master Plan* (1994)
- *Green Spaces Blue Edges* (2001)
- *Housing, Sustaining Portland's Future* (2002)
- *Portland Peninsula Transit Study* (2008)
- *Sustainable Portland* (2009)
- *Transforming Forest Avenue* (2012)
- the city's Comprehensive Plan, *Portland's Plan 2030* (2017)



PORTLAND'S PLAN | 2



LOCAL GOALS

WE WILL:

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.

Collaborate with surrounding communities on regional housing solutions.

Encourage quality, sustainable design in new housing development.

Portland's Plan 2030 (2017 Comprehensive Plan)

For example, redevelopment of this site in the center of Portland addresses the land use diversity, housing, and downtown-strengthening outlined in *Portland's Plan* (2017) – described further as Complete Neighborhoods and Reinforce the Center.



52 Hanover Street TDM Plan

More specifically, the *Bayside Transportation Master Plan* noted land use recommendations that 52 Hanover helps fulfill (at right).

In addition, while 52 Hanover Street is not officially within the borders of Downtown, it's near enough that its TDM efforts align well with observations from the 2017 *City of Portland Parking Study for Downtown, The Old Port, and The Eastern Waterfront*. For example, "If future residential development in the study area were to attract a higher percentage of residents who also work in the study area, and do not use their vehicle to commute to work, this would raise the internal capture rate for office parking demand. An internally captured office trip does not need an additional office parking space because the resident employee leaves their vehicle at home. In this way, a single parking space would serve either a residential purpose or an office purpose depending on the time of day. It would help lower parking demand to promote or incentivize the occupancy of new residential development with employees (of any kind) who also work in the study area."

The project location also provides nearby access to Forest Avenue connections with Interstate 295 North and South for automobile transportation.

BAYSIDE TRANSPORTATION MASTER PLAN

SECTION FIVE – ALTERNATIVE DEVELOPMENT AND RECOMMENDATIONS

5.2.6 – Land-Use

The Preble/Elm Streets focus area offers numerous adaptive reuse and infill opportunities. This is an area in transition between Marginal Way and the more established urban fabric and streets beginning at Cumberland Avenue:

- Study the build-out potential and mobility implications of Hanover Street between Kennebec Street and Marginal Way;
- Continue to target the DPW site for mixed-use urban infill;
- Inventory surface parking lots in the area and identify potential infill opportunities and triggers requiring structured parking;
- Maintain and expand both market rate and affordable housing stock; and
- Preble Street is a key gateway street to downtown. New development and redevelopment should address the street to create a pedestrian-friendly environment and maximize land values; and
- Elm Street is also a key gateway street leaving downtown. New development and redevelopment should address the street to create a pedestrian-friendly environment and increase land values.





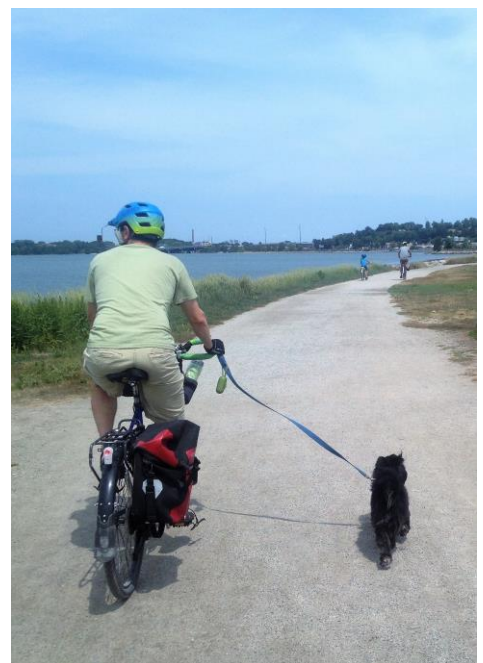
Bicycle & Pedestrian Access

While the site is located within what has traditionally been a light industrial zone with some missing sidewalk links and crossings that aren't always ADA accessible, it is still pedestrian and bicycle-friendly. This is in part because of continued sidewalk, crossing and bike lane improvements being made in the area – including via development projects like this one - and the generally strong sidewalk network and lower-speed street grid of the Portland Peninsula.

From the perspective of residents with any mobility concerns, sidewalks on nearby Forest, Portland, Preble - and those south of Cumberland Avenue - are maintained year-round by the City and the Portland Downtown district, including the removal of snow and ice during the winter months.

52 Hanover also sits in close proximity to the:

- Bayside and Back Cove Trails
- Marginal Way, Forest Avenue, Portland Street and new Preble Street bike lanes
- Protected bicycle lanes on Park Avenue
- Proposed Bayside Trail extension, the planned Preble and Elm Street bicycle infrastructure improvements, and the eventual Deering Oaks Park section of the Neighborhood Byway network.



These are all pivotal links in Portland's alternate transportation system.





Moreover, the building is almost directly across the street from Port City Bikes, which prioritizes service for bicycle commuters.

Residential tenants working anywhere on the Peninsula will be within comfortable walking distance of their home; similarly, for retail employees and site visitors who live on the East End, West End or downtown. Those residents whose employers are located within a five-mile commute distance can also easily bike to work, especially as bicycle networks in Portland, South Portland and Falmouth continue to improve.

Significant near-site amenities and recreational facilities also provide people with a full-service living and working environment. These abound within easy walking distance of 52 Hanover Street for residential tenants, retail employees and site visitors. They include:

- Grocery stores such as Trader Joe's, Whole Foods and Hannaford Brothers; the Portland Farmer's Market at Deering Oaks; and home product suppliers such as Reny's.
- Services such as the U.S. Post Office, Port City Bikes repair shop, Enterprise Car Rental, Coastal Pharmacy & Wellness, Orange Theory and Planet Fitness gyms, and the Portland Public Library
- Open spaces and gardens such as Deering Oaks Park, the Bayside Community Garden, the Oxford Street Playground/Sprayground, and the Back Cove
- Food and entertainment venues, such as Bayside Bowl, Wilson County Barbeque, Two Fat Cats bakery, etc. – plus the property is also only two blocks from the Portland Downtown and Arts Districts, the Downtown Entertainment Overlay Zone and the Congress Street Historic District.



These Bayside and Downtown offerings also provide an attractive dual-purpose trip for 52 Hanover retail employees and site visitors who do end up driving to the site. For example, walking to run errands at neighboring businesses or meeting up with family and friends for after-hours events nearby. In addition, these internally captured trips represent no net new trip generation or parking demand beyond the original trip to the site.



Public Transportation Access

In terms of transit service, 52 Hanover is three quick blocks from the METRO Routes 2, 4 and 5 at the corner of Forest Avenue and Portland Street/Park Avenue. These serve the significant transportation corridors and residential neighborhoods off of Forest Avenue, Brighton Avenue and Outer Congress. The building is also three blocks from Congress Street with access to the South Portland, Lakes Region, Shuttlebus/ZOOM and other METRO bus routes - and a six-minute walk to the METRO Pulse transit hub on Elm Street.

At the METRO Pulse, services include ticket sales, a staffed indoor waiting room, restroom, outdoor seating and the:

- METRO Breez with service to Yarmouth, Freeport and Brunswick
- RTP Lakes Region Explorer with Route 302 service to Westbrook, Windham, Raymond, Casco, Naples and Bridgton
- Other METRO local routes – including Route 7 to Falmouth
- METRO Husky Line with express service to Westbrook and Gorham

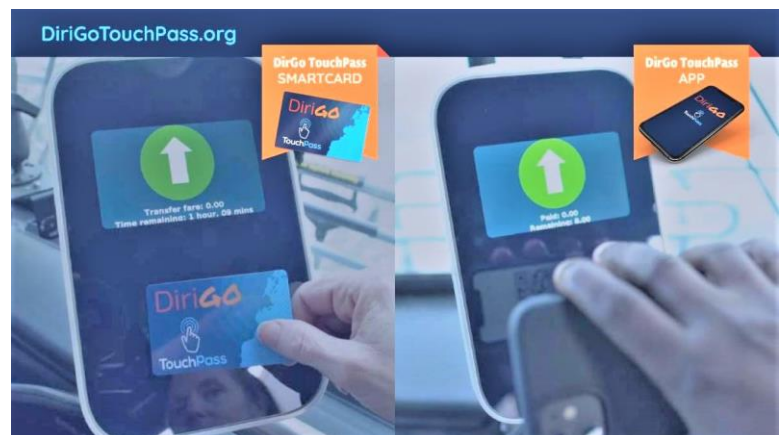
In fact, 52 Hanover is also just a 6-minute walk to the METRO Husky Line stop at the corner of Preble and Marginal Way, with express 20-minute service to Westbrook and 30-minute service to Gorham. This is valuable for both USM students heading to the Gorham campus and also Bayside residents who work in Westbrook. According to *Portland's Plan*, since 2010 the proportion of Portland residents that commute to work in Westbrook has increased.





METRO, South Portland Bus and Casco Bay Ferry Lines all provide real-time arrival information for riders, through the Southern Maine Transit Tracker website and smartphone apps such as Google Maps, Transit and Moovit. In addition, the Lakes Region Explorer and Biddeford Saco Old Orchard Beach Transit also provide live-time bus data through the organizations' websites. All local and express buses are equipped with bicycle racks with space for 2-3 bikes. In addition, the ZOOM bus and most METRO buses and offer Wi-Fi access; some provide in-seat USB ports.

In October 2020, METRO, South Portland Bus Service and Biddeford Saco Old Orchard Beach Transit will be launching the highly desirable Dirigo TouchPass electronic fare system. This enables riders and sites like 52 Hanover to pay only for transit trips taken, versus paying for multi-ride or monthly passes that may or may not be used fully. In addition, the system caps fares, so that riders never pay more than a certain amount each day and each month; once they hit the cap, they ride free for the rest of that time period. For COVID-19 purposes, because the TouchPass is available via either a smartphone application or smart card, it is also a contactless and safe way to pay one's fare.



METRO's Peninsula Loop Reboot (delayed by COVID-19 but with a proposed new routing expected this fall, 2020) is also likely to provide more comprehensive transit service to the Bayside area. This and other transit improvement recommendations have been made in the *Bayside Transportation Master Plan*. These could enable increased ridership of Bayside and Peninsula residents and retail employees to and from 52 Hanover Street.

A visual map of the larger multi-modal context of the site can be viewed in **Appendix A** at the end of this document.

Shared Mobility Access

With the end of UhaulCarshare service in Portland in February 2020, 52 Hanover, LLC is exploring other carshare possibilities for 52 Hanover Street. If an option is found feasible, will offer a discount for resident carshare vehicle use for the first year of residency.

Over the past several years, the City was working on an agreement with JUMP Bikes (by Uber) – recently acquired during COVID-19 by Lime - to set up a dockless electric bikeshare system in Portland. If and when the system is launched, the developer will provide monthly bikeshare memberships for tenants.

B. 52 Hanover's TDM Coordination

52 Hanover, LLC is committed to reducing drive-alone resident, retail employee and visitor automobile trips, improving multi-modal safety, and easing traffic congestion and area parking demand near the site through its TDM efforts.

As the property manager, Port Property has experience with implementing TDM plans at 82 Hanover Street and The Linden (132 Marginal Way) - and manages other properties in the neighborhood as well. It views this plan as tied in with the company's overall Bayside TDM efforts. The business also has a wellness philosophy and encouragement program, which it sees as intrinsically beneficial to local TDM efforts.

The developer has designated Jennifer Munroe, Property Manager for 82 and 52 Hanover Street for Port Property Management, as the TDM Coordinator for the site. She is charged with coordinating the TDM plan implementation and monitoring and making any needed changes.

Highly successful TDM programs share three vital characteristics - they are:

1. Dynamic - piloting strategies, assessing impacts, and modifying tactics as needed;
2. Rigorously supported and monitored by local governing bodies, in this case, the City of Portland;
3. Managed by committed and enthusiastic staff who are responsible for overseeing, promoting and sustaining the program.

Port Property will provide the TDM Coordinator with remuneration to support the work of leading the site's ongoing TDM efforts.

Acknowledging roles and responsibilities change over time in any position, the company and property manager will use the first few months of TDM implementation to enumerate the Coordinator's responsibilities in detail for any other staff to uphold the responsibility of the position.

Day-to-day operations and monitoring of the TDM plan will be conducted in-house by the TDM Coordinator. Port Property will retain the services of a TDM consultant to review initiatives, problem-solve and develop new strategies if and when necessary.



The 52 Hanover TDM Coordinator is responsible for:

- Ensuring strategic parking management and monitoring parking usage
- Coordinating tenant TDM policies and incentives
- Connecting tenants with nearby transportation resources
- Encouraging greater use of preferred modes – walking, bicycling, carpooling, taking bus or rail transit - through transportation kiosk and site-wide promotion
- Overseeing/conducting surveying of tenants
- Filing annual reports and updating the plan with the City
- Exploration of additional TDM strategies, as needed

TDM Coordinator

Jen Munroe, Property Manager
Port Property Management
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(207) 233-8418

C. Trip Generation & Parking Demand Projections & Targets

52 Hanover, LLC has hired Cushman Transportation Consulting, LLC (CTC) to assist with its transportation demand management process. CTC specializes in TDM efforts locally and connects with TDM research and programs across North America – including aspects of setting and managing TDM targets. This all informs the following trip reduction, parking reduction and multimodal goals.

Projected Trip Generation & Parking Demand

The development team has also hired Traffic Solutions to produce Institute for Transportation Engineers (ITE) trip generation and parking demand projections to assess the potential impact of 52 Hanover Street's redevelopment. This has included both local trip generation studies and the use of the most recent data in the 10th edition ITE *Trip Generation Manual* and the 5th edition ITE *Parking Generation Manual*, with distinctions for the multimodal context of the site.

As stated earlier, based on City land use code Section 14-332 (c), the minimum amount of required parking for the site will be determined by the developer's parking assessment and the recommendation of the city transportation engineer. In addition, as referenced in the code, "The planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand, such as housing for persons who cannot drive, housing that participates in a travel demand management program, [and] availability of transit..."

According to the traffic analysis, 52 Hanover can be expected to generate 54 total trips (including 26 residential trips) to and from the site in the weekday AM peak hour and 105 total trips (including 31 residential trips) during the weekday PM peak hour. Per the initial parking demand projection analysis, the average weekday peak hour demand for parking at the site is expected to be 121 total spaces (76 for residential use), and 136 total spaces (76 for residential use) during the Saturday peak period.

Trip Reduction Target

Given the site's multimodal accessibility and the high existing rate of alternate transportation use by those living in the area, the building's TDM efforts should enable a 10% reduction in resident drive alone vehicle trips by the end of 3 years. That is, 2.6 resident weekday morning peak trips and 3.1 resident weekday evening peak trips. The TDM team will revisit this target after the first year of full occupancy at 52 Hanover.

Parking Reduction Target

With the lower vehicle ownership rate of urban dwellers and people living in Bayside, the strong strategy of unsubsidized and unbundled parking for tenants, and the implementation of TDM incentives, it is anticipated that an achievable resident parking demand reduction is 10% by the end of 3 years; i.e., 7.6 residential spaces. The parking demand target will also be revisited after 52 Hanover is fully occupied for the first year.

TDM Targets

The TDM Plan sets the following targets:

- **Trip & parking reduction target:** a 10% reduction in resident vehicle trips and parking demand within 3 years after full occupancy - resulting from TDM program. That is, 2.6 resident weekday morning peak trips, 3.1 resident weekday evening peak trips, 7.6 residential-use spaces
- **Multi-modal target:** 65% of resident and retail employee trips will be on foot, by bicycle, via transit, telecommuting, or carpooling within 3 years after full occupancy
- Will reassess targets after the first full year of 52 Hanover occupancy





Multimodal Target

52 Hanover is setting an initial target of 65% of residents and retail employees making multimodal trips to and from the site, by 3 years after full occupancy. This includes pedestrian, bicycle, transit, telecommute, and carpool/vanpool trips or some combination of these modes. It is a complex target to set because of the current high multimodal rate already existing in the area.

The target is also different from the trip and parking reduction ones above, because it includes both residents and employees and also the diverse commuting habits of these populations at 52 Hanover. That is – with the range of potential tenants and tenant occupations (including retirees), as well as non-traditional retail work shifts - a number of these trips are likely to be outside of the morning and evening peak periods. For example, according to census data, when retired from day-to-day work, an individual's vehicle miles traveled decreases overall. 52 Hanover plans to closely monitor existing trends to attain a reasonable mode-shift goal over time.

It is most useful for 52 Hanover's TDM efforts to address the specific needs of transit users, carpoolers, bicyclists, walkers and telecommuters and set an overarching multimodal trip target for the site – versus targets for each mode. From other TDM experiments across North America, it is clear that individuals' use of various alternate modes shift over time as different residents come and go and/or their needs change. For example, a tenant who uses transit might move to another location or an employee who walks might switch primarily to bicycling. In another instance, a tenant who was able to drive may lose the ability to do so and switch to using transit or carpooling for errands.





D. Trip and Parking Reduction Strategies

In the table on the following page, 52 Hanover, LLC proposes a number of best-practice and sensible parking and trip reduction strategies for the site's TDM Plan. These are based on the development team's understanding of the transportation context, likely residents and the usefulness of various TDM efforts. For example, unsubsidized and unbundled parking will produce the strongest results for decreasing single-occupancy vehicle trips to and from the site.

In addition, the team acknowledges the various needs of different multimodal commuters. For instance, tenants who use transit, walk or bicycle are more able to do so if they have on-site, secure storage for larger commuting gear like strollers, bicycle trailers and shopping handcarts. Moreover, even if current drive-alone residents and retail commuters have to pay for parking, likely this will need to be combined with tangible financial incentives like transit pass subsidies. These are vital to encourage people to experiment with other ways of getting around.

Another critical component for the success of 52 Hanover's TDM Plan is a carefully thought-out marketing plan that engages tenants from when they first move in regarding preferred modes of transportation and provides easily accessible information and subsidies. As shared by Portland Oregon's SmartTrips Welcome program, a residential move is a unique and powerful opportunity for mode experimentation and change. This marketing also builds the site's TDM culture and the sense of multimodal travel as the social norm.

...When a person changes residence, everything changes: the way to the store, the way to work, even the steps to the fridge.

This time of change offers a unique opportunity to create new neural pathways or reinforce old ones that haven't been used for a while and make these stronger than habitual pathways.

Andrew Pelsma, SmartTrips Program Specialist, Portland, Oregon

...To us, this represents a significant number of people with an immediate gap in knowledge about their local travel options.

Linda Ginenthal, SmartTrips Program Manager



As 52 Hanover is developed and under construction, the team will design a promotion strategy that complements other Bayside area TDM work to encourage walking, bicycling, telework and teleservices, carpooling and the use of public transit.

Finally, the region was recently reexamining the need for an area Transportation Management Association (TMA) to benefit sites like 52 Hanover. TMAs are generally public-private entities that assist sites with TDM implementation, outreach and monitoring; advocate for improved transit and act as brokers for services such as carshare and shuttles. 52 Hanover, LLC plans to support the development of a TMA, if found to be feasible, and have 52 Hanover Street participate as a member.

Infrastructure	
Shared-Use Parking	On-site parking will be shared and serve a dual use for overnight parking for residents and daytime parking for 52 and 82 Hanover retailers. Actively managed residential overnight parking works well with day-use visitor/employee parking locations such as these.
Transit & Other TDM Access	TDM webpage with associated physical postings in 52 Hanover resident mailroom and retail tenant employee bulletin boards. TDM webpage will include: link to live-time transit service information for routes near the site (available through Southern Maine Transit Tracker); multimodal map with nearby transit routes, bicycle routes and trails, and walk and bike distances/times; listing of bicycle facilities on site; any future carshare locations and membership information; information on GO MAINE ride-matching, rewards and Emergency Ride Home benefit for all alternate modes of transportation; all other TDM benefits available for residents; contact information for TDM Coordinator.
	Work with other DPW redevelopment sites, METRO and the City of Portland regarding proposed bus stop improvements at Forest & Park Avenue
Pedestrian, Bicycle and Carpool Access	<i>Sidewalks:</i> Reconstruction of any/all street sidewalk segments abutting development
	<i>Multi-use path:</i> latest iteration of path on Lancaster Court, ensuring a continued pedestrian and bicycle connection between the existing lengths of Lancaster Street
	<i>ADA-accessible pedestrian amenities:</i> barrier-free ramp improvements
	<i>Crosswalks:</i> Striping improvements, as required, for existing or proposed crosswalks
	<i>Lighting:</i> Street and building lighting improvements to improve sidewalk illumination
	<i>On-street bicycle parking:</i> 18 on-street bicycle parking spaces
	<i>Possible bicycle corral or other parking:</i> depending on demand, explore with City whether to install seasonal on-street bike corral in Lancaster Court for summer and shoulder seasons; Alternately, committed to meeting a higher demand for on-street bike parking if needed.
	<i>Indoor, secure bicycle/stroller/handcart parking:</i> for bicycles, electric bikes, cargo bikes or trailers, handcarts and strollers. Approximately 80 bicycle parking spaces per the City technical standards.
	<i>Electric bicycle charging:</i> 3-4 outlets for resident electric bikes in storage room; 5% of required bicycle parking spaces per standard in other jurisdictions
	<i>Bicycle repair station:</i> bike repair stand in storage room



Shared Mobility	<i>Carseat storage space:</i> To facilitate child carseat storage, for those commuting by carpool and otherwise sharing rides, there will be an open storage space for car seats in the indoor, secure bicycle parking room.
	<i>Carshare possibilities:</i> With the end of UhaulCarshare service in Portland in February 2020, site owner is exploring other carshare possibilities for 52 Hanover.
	<i>Handcart-share:</i> up to five collapsible shopping/utility carts available for hourly checkout in bicycle/stroller/handcart room. The number depends on space availability and sign-up will be online or via pen & paper system. Carts will have property management branding.
	<i>Cargo bikeshare:</i> experiment with one electric-assist cargo bicycle, available for checkout on hourly basis (e.g., pen and paper sign up system, online, etc.)
Electric Vehicle Charging Station	Provide electric car charging station(s) - for 52 Hanover; one per 50 parking spaces per standard in other jurisdictions
On-Site Amenities	<i>Co-working/community space:</i> work area and meeting space for tenants' use to encourage community-building and telecommuting
	<i>Broadband access:</i> hardwired infrastructure for broadband and Wi-Fi
	<i>Gym:</i> on-site gym to reduce vehicle trips and improve resident physical fitness for active transportation
	<i>Grocery & Other Amenities:</i> Seeking retail tenant(s) that offer amenities that encourage walking trips for simpler needs (e.g., grocery items such as are available at a Rosemont Market, small housewares and hardware items, etc.)
Delivery Supportive Amenities	Facilitate delivery services by providing an area for receipt of deliveries with temporary storage for package and other deliveries
General Contribution to Area Transportation Improvements	Per Chapter 14 of the City of Portland Code, the property is contributing approximately \$250,000 in transportation impact fees, based on the number of residential units and square footage of the retail uses. This will improve traffic operations and transportation in and around the Peninsula.
Incentives	
Parking: Leases/Pricing/Cash Out/Incentives	<i>Unbundled parking:</i> Residential and retail tenants will be charged for parking via a separate lease from each unit rental.

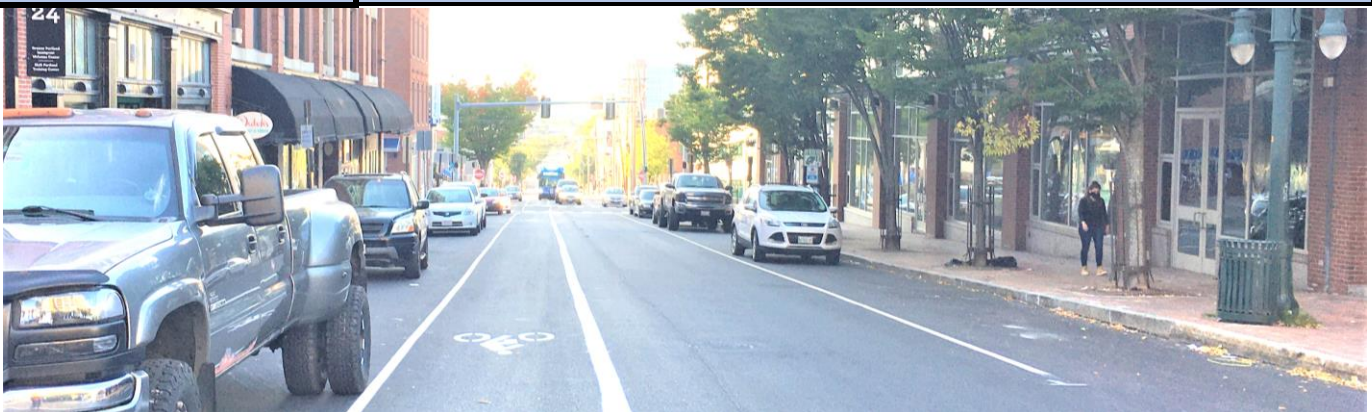


Parking: Leases/Pricing/Cash Out/Incentives (continued)	<i>Encourage all retail tenants to employ at least one of the following strategies:</i> • Charge employees full monthly amount for parking space if driving alone • Offer carpooling or vanpooling employees at least a 30% discounted parking rate and possibly Preferential Parking spaces (those sharing rides would participate in the Preferential Parking program through GO MAINE: carpoolers receive special permits and are prioritized for parking spaces near entrances) • Offer Parking Cash Out: if retail tenant wants to provide a “free” parking benefit to employees, tenant would be required to offer each employee an option of a \$XXX monthly parking cash out. That is, instead of the organization paying for a \$1XX parking space for that employee (which would be a \$XX/month savings to retail tenant). This could be executed in one of three ways: 1. Straight Cash Benefit: \$XX in cash paid to employee, with \$XX remaining to cover payroll tax for employer and employee, because these funds are regarded as income. This money can be used by the employee for any purpose; however, it can also be considered funds to support carpooling (e.g., vehicle maintenance or gas money), walking (e.g., gear or shoe purchase) or biking (e.g., bike shop maintenance) 2. \$XXX Tax-Free Transit or Vanpool Benefit: e.g., a monthly pass for the ZOOM bus from Saco is \$120 per month – so the parking cash out would cover most of that; neither the employer nor the employee are required to pay tax on those funds under the Federal Transit/Vanpool Benefit 3. Mixed Transit/Vanpool Benefit & Cash: For those who pay less for their transit passes (e.g. METRO is \$45 per month), the employee can take part of the cash out funds tax-free for the pass, and then the remaining funds as cash (deducting what is required to cover payroll tax) • Offer short-term day parking provision for retail employees who use alternate transportation to reach the site: that is, provide a limited number of daily parking passes for occasional use by retail employees who are primarily multi-modal commuters; a reasonable maximum could be 20 passes/year or 2 passes/month.
Transit Subsidies	<i>Transit passes:</i> will provide transit subsidy for residents to use transit. <i>Transit pass reduced payments, fare capping and processing:</i> Explore new DiriGo TouchPass system to simplify management of transit subsidy for individual resident trips (launching in October 2020 from METRO, City of South Portland Bus Service and Biddeford Saco Old Orchard Beach Transit).
Pedestrian/Bicycling Subsidies	<i>Bicycle safety courses:</i> Reimburse residents for bicycle safety courses <i>Bicycle Benefits:</i> Purchase Bicycle Benefits memberships (\$5) for residents who bicycle
Shared Mobility Subsidies	<i>Carshare:</i> Discount for resident vehicle use for first year of residency, when/if local carshare is launched <i>Bikeshare:</i> Monthly bikeshare memberships for residents when/if bikeshare starts in Portland
Targeted Promotions	<i>1st year Prize Drawings starting at 85%+ occupancy:</i> monthly prize drawing for multi-modal residents, with benefits such as movie tickets, gift cards, etc. <i>Discounts and coupons to nearby businesses - ongoing:</i> work with local businesses to offer residents discounts and coupons to downtown establishments within walking distance
TDM Coordinator	TDM Coordinator has been designated for 52 Hanover; required for plan implementation, monitoring and reporting to City. Developer will provide remuneration to support the work of this position.



Information

Education for Travel Choice	<i>Webpage:</i> Maintain active web page on property management website for residents. Page to include same information as orientation packet below. Retailers will post and share link to this page. <i>TDM orientation packets, as part of site Welcome packets:</i> new residents and retail employees will be provided with orientation packets regarding the site's TDM program and access to site by various travel modes. Includes: (1) Map of the area, showing the destination, major streets, nearby landmarks and time to walk/bike to them, the closest bus stops and walking times, recommended cycling and walking routes, carshare locations, etc. (2) Information about transit service frequency, fares, first and last runs, and schedules if possible; plus phone numbers and web addresses for transit service providers and taxi companies. (3) How to reach the site from major transportation terminals (bus and train stations, airport, ferry terminal, etc.) (4) Access arrangements for people with disabilities; (5) Availability of bicycle facilities, including secure bike parking and bikeshare, if available; (6) Bicycle Benefits membership and bicycle safety courses; (7) Encouraging residents to become members of GO MAINE and access rewards system, carpool matching and Emergency Ride Home Benefit; (8) carshare information and automobile parking availability and price; (9) Information regarding building TDM program, webpage, and contacting the TDM Coordinator. <i>Commute coaching:</i> One-on-one transportation consultations will be available for residents upon lease of dwelling units, to explore individual transportation options. Thereafter, offered at least once annually. <i>Ongoing TDM program education:</i> 1 or more times per year, TDM Coordinator will email all residents (new and existing, including subletters) and retail tenants the same information as is in the TDM orientation packets. <i>TDM surveying:</i> Required resident and employee transportation surveys and reporting to City will also serve as education tool
Promotion of Alternate Modes	<i>Co-promotion with City and downtown agencies:</i> Work with Portland Downtown and City of Portland's Drive Less, Do More marketing campaign to promote alternatives with residents <i>Social media and social proof:</i> As part of general marketing of the property via social media, will help build social proof and social norms of the site's TDM culture. This is best done with posts of site users engaging in the desired TDM actions (e.g., posting a photo of taking the bus to work or the morning carpool, submitting a photo of walking to one of the retailers, etc.) - vs. just likes or retweets of the idea of using preferred alternate modes.



E. Plan for Monitoring, Data Collection and Reporting

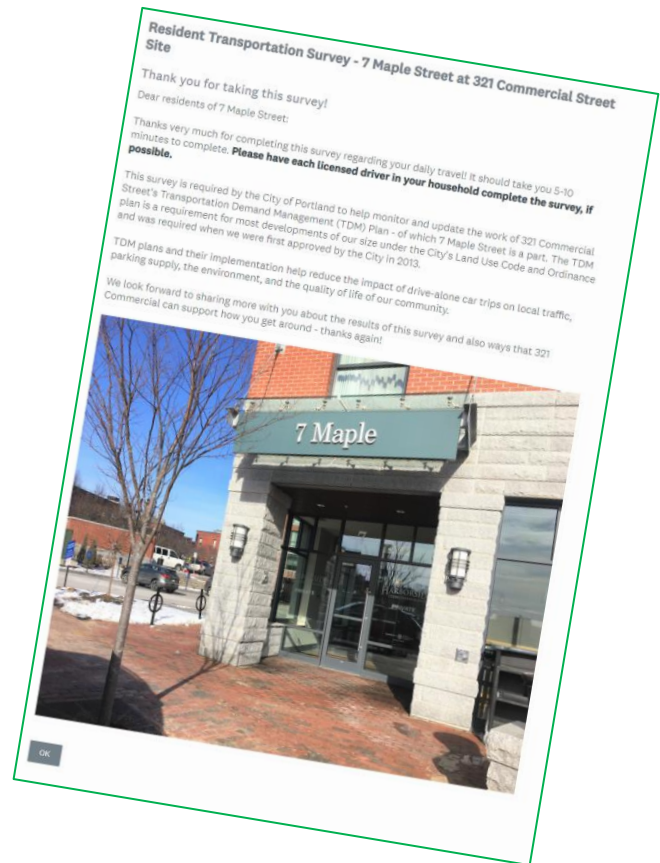
Recognizing that the implementation of a TDM Plan is a dynamic process, the 52 Hanover Street TDM Coordinator will work with the City to monitor the effectiveness of the site's TDM Plan components - and to assess whether the site is achieving the trip and parking reduction and multimodal targets listed above. 52 Hanover will work with tenants to evaluate on-site parking use and incentives for preferred modes and make improvements. Another important piece will be to determine the flexibility of tenants, employees and site visitors to utilize various travel modes.

Tenant Surveys

The TDM Coordinator will conduct annual tenant surveys that provide quantitative data (e.g., trip, parking and mode split) and qualitative data (e.g., perception of alternate transportation, area parking and the site's TDM programming). The site will carry out these surveys once annually for the first three years of full occupancy and then every two years thereafter, with at least 50% tenant participation.

The survey will be developed in consultation with the city's TDM manager and conform to overall city TDM modeling and planning. Survey questions will include:

- Number of people in household
- Resident mode of travel to and from work and/or for other trips away from the site – plus frequency of use of those modes
- Retail employee mode of travel to work
- If parking personal vehicle(s), where parked
- Whether the resident or employee drives during morning or afternoon peak periods
- Use of/participation in:
 - On-site bicycle parking, stroller, hand cart storage
 - Any use of off-site future carshare and/or bikeshare
 - Any use of site TDM incentives, benefits, or programming
 - GO MAINE membership and program participation
- TDM marketing effectiveness
- Preferences, barriers or concerns with modes of travel and likelihood of changing travel behavior given specific incentives or disincentives
- Rating knowledge of walking, bicycling and using the bus in the community
- Space to add suggestions and comments



Note: the use of these survey tools will also assist 52 Hanover with its TDM education efforts. That is, the questions themselves help people think differently about their transportation behavior. The surveys will also provide a reminder of the TDM online resource center and the TDM Coordinator for options.

Annual Report

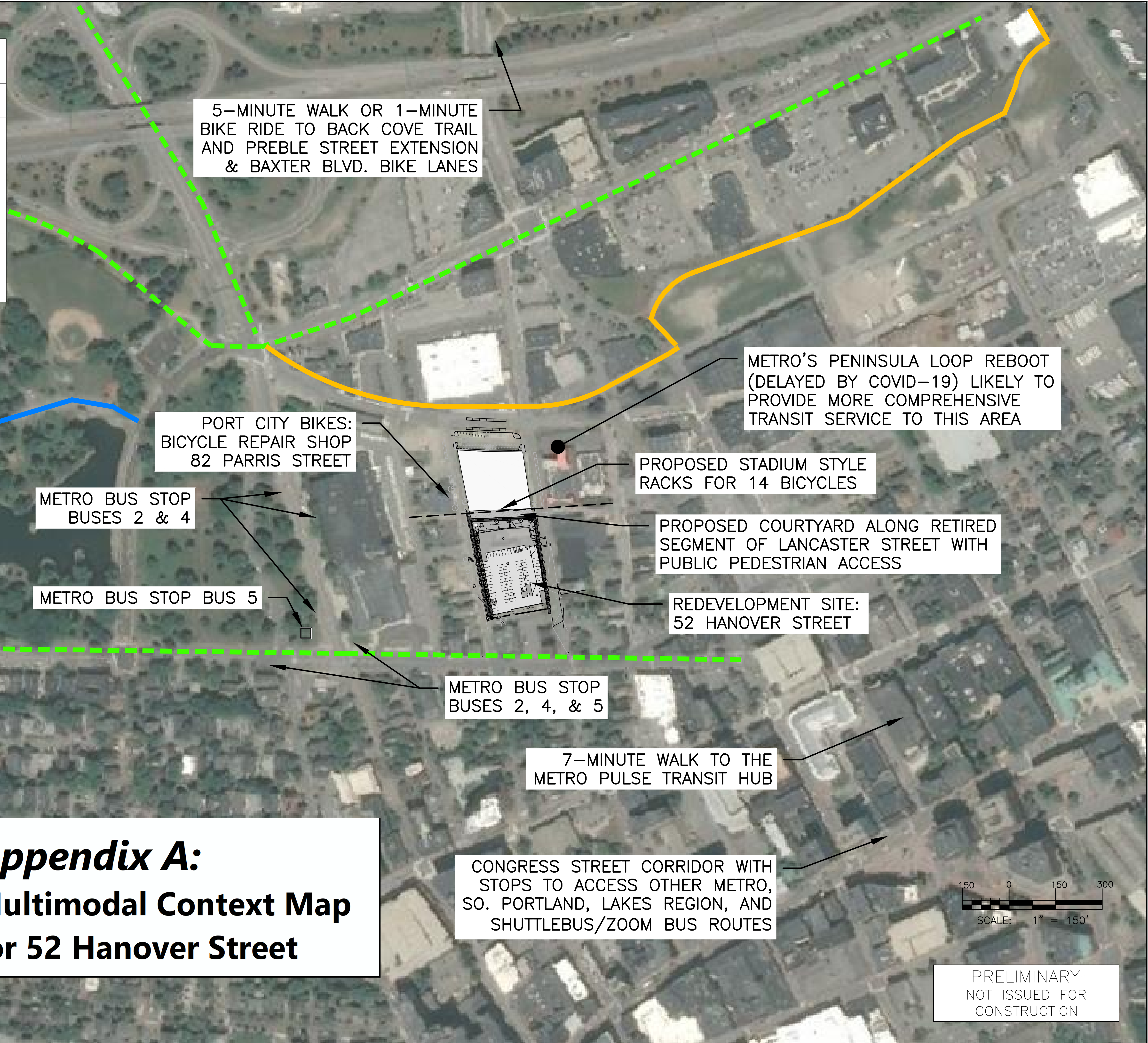
The TDM Coordinator will then produce an annual TDM Report to meet the City's monitoring requirements. The report will include:

- a. the above survey data and percent of units occupied;
- b. how the data directly relates to the plan's reduction targets;
- c. details of that year's TDM operations – including management, strategies, marketing, number of contact points with residents, and any new infrastructure development;
- d. lessons learned and any changes in the TDM plan during the year;
- e. plans for the following year.

F. Appendices

- I. *Appendix A: Multi-modal Context Map for 52 Hanover Street*



[illegible]

TRAFFIC MOVEMENT PERMIT APPLICATION

FOR PROPOSED

“52 Hanover Street”

Mixed-Use Project

PREPARED FOR: Tom Watson & Co. Inc.

PREPARED BY: William J. Bray, PE

October 2020

NOTICE OF INTENT TO FILE

Please take notice that:

Tom Watson & Co., LLC

Is intending to file a Maine Department of Transportation Traffic Movement Permit application with the City of Portland under their delegated review authority pursuant to the provisions of 23 M.R.S.A. § 704–A on or about

October 2, 2020

The application is for:

An eight-story building with 171 residential apartment units and 7,600sf of commercial space with on-site covered parking for 194 spaces. The proposed site is located at 52 Hanover Street on the former Department of Public Work's Vehicle Maintenance Facility. The proposed project will generate a total of 101 trips during the weekday PM site peak hour, 103 trips during a Saturday peak hour and 144 trips during the Sunday peak hour.

At the following location: **52 Hanover Street, Portland, Maine**

A request for a public hearing must be received by the City, in writing, no later than 20 days after the application is found by the City to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the City of Portland's Planning and Urban Development office, during normal working hours. A copy of the application may also be seen at the municipal offices in:

Written public comments may be sent to the Department of Transportation, Traffic Engineering Division, 16 State House Station, Augusta, Maine 04333.

1/2000

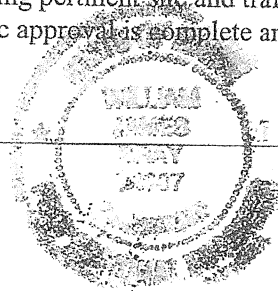
CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: William Bray Re/Cert/Lic No.: 4907

Name (print): William Bray

Date: 9-30-2020



If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature of applicant

10-2-20
Date

September 30, 2020

City of Portland
Tom Errico, PE Traffic consultant

Mr. Errico,

Please use this letter as authorization to allow John Laliberte to sign on behalf of Thomas Watson, CEO/Owner of Port Property Management, for all documents, certificates and permits. Thank you in advance.

Sincerely,

A handwritten signature in black ink, appearing to be 'T. Watson', with a long horizontal flourish extending to the right.

Thomas Watson
CEO/Owner
Port Property Management
82 Hanover Street, Suite 5
Portland, ME 04101

"52 Hanover Street"

Property Abutters

55 Portland Prebble Street LLC
38 Preble Street
Portland, ME 04101

63 Hanover LLC
65 Hanover Street
Portland, ME 04101

82 Hanover LLC
82 Hanover St Suite 5
Portland, ME 04101

Arsenault Christine M
56 Parris Street
Portland, ME 04101

Avesta Housing Development Corporation
307 Cumberland Ave
Portland, ME 04101

Bartlett Stephen W & Cynthis I JTS
16 St Lawrence Street #2
Portland, ME 04101

C58Alder LLC
3375 East Maule Ave
Las Vegas, NV 89120

Forq LLC,
118 State Street, #408
Portland, ME 04101

Hal LLC
65 Hanover Street
Portland, ME 04101

Islamic Society of Portland Maine
PO Box 10294
Portland, ME 04104

Minert Nancy A
55 Tremont Street
South Portland, ME 04106

New Systems Realty LLC
PO Box 2
Portland, ME 04112

Parris Terraces Apartments
60 Parris Street
Portland, ME 04101

United States of America-Administrator of General Serv.
Portland, ME 04101

Williamson Peter C & Lynn M G Williamson JTS
11 Inverness Road
Falmouth, ME 04105

SECTION 1

A. SITE PLAN

The Applicant is proposing to construct an eight-story mixed-use building on the former Department of Public Works Vehicle Maintenance Facility. The project site, a 1.37-acre parcel, is bordered by Hanover Street, Parris Street, and the discontinued portion of Lancaster Street. The City's existing maintenance building, a 18,380 square foot metal framed building (presently vacant), will be razed with construction of the proposed eight-story building.

The present development plan proposes four 1,900sf commercial retail units on the first floor of the building, 171 residential apartment units on floors three through eight and a total of 194 covered parking spaces. The ground floor of the proposed building provides; in addition to the proposed commercial space, a total of 91 covered parking spaces and an additional 103 covered parking spaces are provided on the first floor of the building. Access to the ground floor parking is provided through a driveway entrance on Hanover Street and the first-floor parking spaces are accessed through a driveway entrance on Parris Street.

A Parking Assessment Report prepared in support of the proposed redevelopment project dated September 24, 2020, concludes the proposed redevelopment project creates an average weekday peak parking demand of 90 spaces and a peak parking demand of 108 spaces on a typical Saturday. The balance of parking spaces in the proposed building, 94 weekday and 86 Saturday, will be used to satisfy a portion of the parking demand requirements of the adjoining 82 Hanover Street mixed-use building. A copy of that report is attached as an appendix to this application.

SECTION 1

B. EXISTING AND PROPOSED SITE USES

The Applicant is proposing to construct an eight-story mixed-use building on the former Department of Public Works Vehicle Maintenance Facility. The project site, a 1.37-acre parcel, is bordered by Hanover Street, Parris Street, and the discontinued portion of Lancaster Street. The City's existing maintenance building, a 18,380 square foot metal framed building (presently vacant), will be razed with construction of the proposed eight-story building.

The present development plan proposes four 1,900sf commercial retail units on the first floor of the building, 171 residential apartment units on floors three through eight and a total of 194 covered parking spaces. The ground floor of the proposed building provides, in addition to the proposed commercial space, a total of 91 covered parking spaces and an additional 103 covered parking spaces are provided on the first floor of the building. Access to the ground floor parking is provided through a driveway entrance on Hanover Street and the first-floor parking spaces are accessed through a driveway entrance on Parris Street.

A Parking Assessment Report prepared in support of the proposed redevelopment project dated September 24, 2020, concludes the proposed redevelopment project creates an average weekday peak parking demand of 90 spaces and a peak parking demand of 108 spaces on a typical Saturday. The balance of parking spaces in the proposed building, 94 weekday and 86 Saturday, will be used to satisfy a portion of the parking demand requirements of the adjoining 82 Hanover Street mixed-use building. A copy of that report is attached as an appendix to this application.

PARKING ASSESSMENT REPORT

“52 HANOVER STREET”



Traffic Solutions
William J. Bray, P.E.
17 Mountview Drive
Gorham, ME 04038
(207) 400-6890
trafficsolutions@maine.rr.com

September 24, 2020

Parking Assessment

Proposed

“52 Hanover Street”

INTRODUCTION

Tom Watson & Co., Inc. are proposing to construct an 8-story mixed-use building on the former City’s Public Works Vehicle Maintenance site located at 52 Hanover Street. The project site is bordered by Hanover Street, Parris Street, and the discontinued portion of Lancaster Street.

The present development plan proposes four 1,900sf commercial retail units on the ground floor of the building and 171 residential apartments on floors three through eight. The residential apartment unit mix includes 154 market rate and 17 affordable workforce units; 23 of the apartment units are studios, 112 of the apartment units are one-bedroom and the remaining units (36) are two-bedroom units.

The ground floor of the proposed building provides; in addition to the proposed commercial space, a total of 91 covered parking spaces including: 66 full-size spaces, 22 compact spaces and 3 handicapped spaces. Access to the ground floor is provided through a driveway entrance from Hanover Street. The first floor of the proposed building, which is accessed from Parris Street, provides an additional 103 parking spaces with 75 full size spaces, 25 compact car spaces and 3 handicap spaces. In total, the proposed site design provides a total of 194 on-site parking spaces.

The proposed retail units are anticipated to include one or more of the following projected tenants:

- Neighborhood Coffee Shop
- Neighborhood Grocery
- Bar/Eatery
- Bar/Eatery

The City Zoning Ordinance in Section 14-332.2. (c) states: *“Site plans over 50,000 square feet and projects in the B-6, B-7, and USM Overlay Zones: Where construction is proposed of new structures having a total floor area in excess of fifty thousand (50,000) square feet, the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.”*

This document provides a determination of the “average” peak parking demand for the proposed “52 Hanover Street” building appropriately based upon national parking trends and local parking data. The analytical determination of “average” peak parking demand for a mixed-use development must also account for the time-of-day distribution of the actual parking demand. For example, the peak parking demand requirements of one proposed use could likely occur at 7:00 p.m.; whereas the peak parking demand of a second building use may occur at 1:00 p.m. The net result is that the parking demand of multiple land-uses may be able to use the same parking space at different times of the day; thereby, reducing the actual peak parking demand of the site. Further, the analytical process followed in forecasting the peak parking demand of the proposed site also accounts for internally captured trips; oftentimes referred to as “shared-use” trips. It is reasonable to expect a resident of the proposed building purchasing coffee or perhaps groceries in either the proposed neighborhood coffee and/or grocery store retail units located on the ground floor of the building. As a result, unless these internal trips are accounted for the projection of trips and ultimately parking demand requirements of the proposed project are overstated.

The parking demand requirements of the proposed 52 Hanover Street building are fully met with construction of the proposed 194 on-site parking spaces. In fact, the parking assessment report documents a balance of spaces are provided, which will be used to off-set the parking requirements of the adjoining 82 Hanover Street mixed-use building.

PARKING DEMAND

National parking demand data presented in the 5th Edition of the Institute of Transportation Engineers (ITE) “**PARKING GENERATION**” publication is typically the instrument used in estimating the actual parking demand of a development site. The 5th edition, which was published in January 2019, represents the most current copy of the noted ITE document. The ITE manual provides “average” peak parking demand rates for more than 100 land-use categories including: residential, lodging, recreational, institutional, medical, retail, office, services, etc. Occasionally proposed development uses are more locally specific and/or are not presently accounted for in the national parking publication. In those instances, the average peak parking demand is typically determined based upon local studies conducted at similar development uses. Parking rates are provided for both a weekday and Saturday condition.

The “average” peak parking demand requirements of the proposed 52 Hanover Street mixed-use building is estimated based upon the following projected site uses:

Market Rate Units

- (21) studio units
- (101) one-bedroom units
- (32) two-bedroom units

Affordable Workforce Units

- (2) studio units
- (11) one-bedroom units
- (4) two-bedroom units

Commercial Retail Units

- Neighborhood Grocery Store – 1,900sf
- Neighborhood Coffee Shop – 1,900sf
- Bar/Eatery – 1,900sf

- Bar/Eatery – 1,900sf

The peak parking demand requirements of the proposed market rate apartment units is based upon Land-Use #221- Multi-Family Housing (Mid-Rise) presented in the noted ITE parking generation publication. This land-use category is generally used for buildings between three and 10 floors in height. A peak parking rate of 0.48 spaces per bedroom was applied in calculating the peaking demand requirements of the proposed market rate units. The ITE document only provides valid parking rates for a weekday condition; therefore, a similar parking demand rate was applied for Saturday.

Similarly, the peak parking demand requirements of the proposed affordable workforce apartment units is based upon Land-Use #223 - Affordable Housing – Income Limits in the national parking document. The parking rate used in determining the peak parking demand of the 17 workforce apartment units for a weekday is 0.30 spaces per bedroom and a parking demand rate of 0.33 spaces was used for Saturday.

Parking demand requirements for the proposed neighborhood grocery store is based upon a trip generation study of a neighborhood grocery store located at the intersection of Brackett and Pine Streets. The study results, as presented below in Table A, shows less than 8% of the total combined peak hour trips generated by the Pine Street/Brackett Street grocery store are, in fact, automobile trips. Accordingly, this report assumes off-street parking is only provided for a total of five employees.

Table A
Trip Generation Summary
Neighborhood Grocery
(Brackett Street @ Pine Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
7:30 to 7:45 AM	0	0	0	0	0	0
7:45 to 8:00 AM	0	0	0	0	0	0
8:00 to 8:15 AM	15	0	11	0	26	0
8:15 to 8:30 AM	4	1	8	1	12	2
8:30 to 8:45 AM	6	2	1	3	7	5
8:45 to 9:00 AM	11	2	9	3	20	5
AM Peak Hour Total	36	5	29	7	65	12
3:30 to 3:45 PM	5	0	7	0	12	0
3:45 to 4:00 PM	7	1	7	2	14	3
4:00 to 4:15 PM	5	0	9	0	14	0
4:15 to 4:30 PM	6	1	7	0	13	1
4:30 to 4:45 PM	12	1	10	1	22	2
4:45 to 5:00 PM	21	0	18	0	39	0
5:00 to 5:15 PM	15	1	18	1	33	2
5:15 to 5:30 PM	15	0	14	0	29	0
PM Peak Hour Total	63	2	60	2	123	4

A similar process was followed in projecting the parking requirements of the proposed neighborhood coffee shop. A traffic study was conducted at a neighborhood coffee shop located on Munjoy Hill at Congress and Atlantic Streets. Again, the results of the field survey as presented below in Table B clearly demonstrates the majority of the customers (approximately 92%) of the total recorded trips are pedestrian trips generated within the local neighborhood. It is expected that any customer arriving via automobile to the proposed 52 Hanover

site will park on-street and, as a result, off-street parking is not required. To conservatively project the parking demand of the proposed project a total of five parking spaces are reserved within the proposed building site for employees of the neighborhood coffee shop.

Table B
Trip Generation Summary
Neighborhood Coffee Shop
(Congress Street @ Atlantic Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
8:00 to 8:15 AM	7	1	7	1	14	2
8:15 to 8:30 AM	5	2	3	2	8	4
8:30 to 8:45 AM	9	2	7	2	16	4
8:45 to 9:00 AM	12	3	8	2	20	5
9:00 to 9:15 AM	8	1	10	2	18	3
9:15 to 9:30 AM	4	1	6	1	10	2
Total Trips	45	10	41	10	86	20

Parking demand requirements of the proposed two bar/eatery commercial units are based upon parking rates presented in the ITE Parking Generation publication under Land-Use #932 – High Turnover (Sit-Down) Restaurant with Lounge/Bar. A weekday parking rate of 9.31 spaces per 1,000 GFA and a rate of 13.98 spaces per 1000 GFA for Saturday were used to calculate the peak parking demand requirements of both proposed bar/eatery tenant spaces.

Tables 1a and 1b, as follows, provides the “average” peak parking demand requirements for both a typical weekday and Saturday condition:

Table 1a
“Peak” Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

Proposed Use	Unit Size	Land-Use Code	Peak Parking Demand Rate	Parking Space Requirements
Residential Apartment (Market Rate)	186 bedrooms	LUC 221	0.48 spaces/bedroom	89 spaces
Affordable Workforce Apartment	21 bedrooms	LUC 223	0.30 spaces/bedroom	6 spaces
Neighborhood Coffee Shop	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Neighborhood Grocery	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Bar/Eatery	1,900 sf	LUC 932	9.31 spaces/1,000 GFA	18 spaces
Bar Eatery	1,900 sf	LUC 932	9.31 spaces/1,000 GFA	18 spaces
			TOTAL =	141 spaces

NOTE: Parking demand based upon estimated number of employees

Table 1b
“Peak” Parking Demand Summary
For
“52 Hanover Street”
(Saturday Conditions)

Proposed Use	Unit Size	Land-Use Code	Peak Parking Demand Rate	Parking Space Requirements
Residential Apartment (Market Rate)	186 bedrooms	LUC 221	0.48 spaces/bedroom ⁽²⁾	89 spaces
Affordable Workforce Apartment	21 bedrooms	LUC 223	0.33 spaces/bedroom	7 spaces
Neighborhood Coffee Shop	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Neighborhood Grocery	1,900 sf	Estimated	n/a	5 spaces ⁽¹⁾
Bar/Eatery	1,900 sf	LUC 932	13.98 spaces/1,000 GFA	27 spaces
Bar Eatery	1,900 sf	LUC 932	13.98 spaces/1,000 GFA	27 spaces
			TOTAL =	160 spaces

NOTES:

⁽¹⁾ **Parking demand based upon estimated number of employees.**

⁽²⁾ **Parking demand rate for Saturday is the same as weekday rate. ITE publication has no valid study data for Saturday condition.**

ie “average” unadjusted peak parking demand of the proposed 52 Hanover Street building is estimated at **141** spaces for a typical weekday condition and a slightly greater total of **160** spaces for a Saturday condition.

Parking Demand Adjustments: Due to the diversity of proposed uses within the “52 Hanover Street” building, an adjustment is applied to refine the actual parking demand of the proposed building. The adjustment accounts for multi-purpose trips that occur between one or more tenant spaces within the building; often referred to as “*shared or internally captured*” trips. These trips must be accounted for or the projection of peak parking demand overstates the actual peak parking demand of a specific development site. The National Cooperative Highway Research Program’s (NCHRP) 684 Internal Trip Capture Estimation Tool was utilized in calculating the number of shared or captured trips generated by the proposed site. Separate analyses were conducted for both the weekday morning and peak hour time periods and the trip rates calculated for each time period (10% AM Peak Hour and 19% PM Peak Hour) were then averaged to provide a conservative estimate of 14.5% percent. The NCHRP estimation tool is limited in calculating internal captured trips for only a weekday condition. This report has assumed the percentage of internally captured trips generated by the site on Saturday is equal to the weekday average rate of 14.5%. Copies of the NCHRP worksheets for both the weekday AM and PM peak hours are attached for reference.

Tables 2a and 2b below summarize the adjusted “average” peak parking demand for the proposed site for both a typical weekday and Saturday condition:

Table 2a
Adjusted Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

Proposed Use	Peak Parking Demand (Spaces)	Shared Trip Adjustment ⁽¹⁾	Adjusted Parking Demand
Residential Apartment (Market Rate)	89	-13	76
Affordable Workforce Apartment	6	-1	5
Neighborhood Coffee Shop	5	0	5
Neighborhood Grocery	5	0	5
Bar/Eatery	18	-3	15
Bar/Eatery	18	-3	15
TOTAL	141	-20	121

NOTE:

⁽¹⁾ Shared trip adjustment percentage calculated using (NCHRP) 684 program. Percent value an average of AM & PM peak shared trip percentages.

Table 2b
Adjusted Parking Demand Summary
For
“52 Hanover Street”
(Saturday Condition)

Proposed Use	Peak Parking Demand (Spaces)	Shared Trip Adjustment ⁽¹⁾	Adjusted Parking Demand
Residential Apartment (Market Rate)	89 spaces	-13	76
Affordable Workforce Apartment	7 spaces	-1	6
Neighborhood Coffee Shop	5 spaces	-1	4
Neighborhood Grocery	5 spaces	-1	4
Bar/Eatery	27 spaces	-4	23
Bar/Eatery	27 spaces	-4	23
TOTAL	160 spaces	-24	136

NOTE:

⁽¹⁾ Shared trip adjustment percentage calculated using (NCHRP) 684 program. Percent value is an average of weekday AM & PM peak shared trip percentages.

Hourly Parking Demand: The noted ITE Parking Generation publication provides further guidance in estimating the actual parking demand of a mixed-use or multi-use project. They state the following: *“the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.”*

The ITE Parking Generation manual provides time-of-day percent peak parking demand values for each land-use category for completing this determination. The actual percent values applied in completing these calculations are presented in Table 3a and 3b as follows:

Table 3a
Hourly Peak Parking Demand (percent value) Summary
For
“52 Hanover Street”
(Weekday Condition)

<u>Time of Day</u>	<u>Residential Apartment (Market Rate)</u>	<u>Affordable Workforce Apartment ⁽¹⁾</u>	<u>Neighborhood Grocery ⁽²⁾</u>	<u>Neighborhood Coffee Shop ⁽²⁾</u>	<u>Bar/Eatery ⁽³⁾</u>	<u>Bar/Eatery ⁽³⁾</u>
7:00 AM	71%	71%	100%	100%	0	0
8:00 AM	61%	61%	100%	100%	0	0
9:00 AM	55%	55%	100%	100%	5%	5%
10:00 AM	54%	54%	100%	100%	7%	7%
11:00 AM	53%	53%	100%	100%	16%	16%
12:00 PM	50%	50%	100%	100%	49%	49%
1:00 PM	49%	49%	100%	100%	39%	39%
2:00 PM	49%	49%	100%	100%	27%	27%
3:00 PM	50%	50%	50%	0	19%	19%
4:00 PM	58%	58%	50%	0	22%	22%
5:00 PM	64%	64%	50%	0	60%	60%
6:00 PM	67%	67%	50%	0	94%	94%
7:00 PM	70%	70%	50%	0	100%	100%
8:00 PM	76%	76%	50%	0	81%	81%

NOTES:

⁽¹⁾ Percent values for affordable workforce apartments applies same percent values presented for market rate apartments. ITE data not available for affordable units.

⁽²⁾ Percent values estimated.

⁽³⁾ Bar/eatery rates based on ITE 4th edition; 5th edition does not include percent values.

Table 3b
Hourly Peak Parking Demand (percent values) Summary
For
“52 Hanover Street”
(Saturday Condition)

<u>Time of Day</u>	<u>Residential Apartment (Market Rate)</u>	<u>Affordable Workforce Apartment ⁽¹⁾</u>	<u>Neighborhood Grocery ⁽²⁾</u>	<u>Neighborhood Coffee Shop ⁽²⁾</u>	<u>Bar/Eatery ⁽³⁾</u>	<u>Bar/Eatery ⁽³⁾</u>
7:00 AM	95%	95%	100%	100%	0	0
8:00 AM	88%	88%	100%	100%	0	0
9:00 AM	83%	83%	100%	100%	5%	5%
10:00 AM	75%	75%	100%	100%	7%	7%
11:00 AM	71%	71%	100%	100%	20%	20%
12:00 PM	68%	68%	100%	100%	41%	41%
1:00 PM	66%	66%	100%	100%	53%	53%
2:00 PM	70%	70%	100%	100%	46%	46%
3:00 PM	69%	69%	50%	0	38%	38%
4:00 PM	72%	72%	50%	0	63%	63%
5:00 PM	74%	74%	50%	0	80%	80%
6:00 PM	74%	74%	50%	0	100%	100%
7:00 PM	73%	73%	50%	0	93%	93%
8:00 PM	75%	75%	50%	0	70%	70%

NOTES:

⁽¹⁾ Percent values for affordable workforce apartments applies same percent values presented for market rate apartments.

⁽²⁾ ITE data not available for affordable units.

Percent values estimated.

⁽³⁾ Bar/eatery rates based on ITE 4th edition; 5th edition does not include percent values.

Finally, the following Tables 4a and 4b estimate the “average” adjusted hourly peak parking demand requirements of the proposed project based upon the procedures described in the ITE Parking Generation publication:

Table 4a
Hourly Peak Parking Demand Summary
For
“52 Hanover Street”
(Weekday Condition)

	Residential Apartment (Market Rate)	Affordable Workforce Apartment	Neighborhood Grocery	Neighborhood Coffee Shop	Bar/Eatery	Bar/Eatery	Total
Adjusted Peak Parking Demand	76 spaces	5 spaces	5 spaces	5 spaces	15 spaces	15 spaces	121

Time of Day

7:00 AM	54 spaces	4 spaces	5 spaces	5 spaces	0	0	68
8:00 AM	46 spaces	3 spaces	5 spaces	5 spaces	0	0	59
9:00 AM	42 spaces	3 spaces	5 spaces	5 spaces	1 space	1 space	57
10:00 AM	41 spaces	3 spaces	5 spaces	5 spaces	1 space	1 space	56
11:00 AM	40 spaces	3 spaces	5 spaces	5 spaces	2 spaces	2 spaces	57
12:00 PM	38 spaces	3 spaces	5 spaces	5 spaces	7 spaces	7 spaces	65
1:00 PM	37 spaces	2 spaces	5 spaces	5 spaces	6 spaces	6 spaces	61
2:00 PM	37 spaces	2 spaces	5 spaces	5 spaces	4 spaces	4 spaces	57
3:00 PM	38 spaces	3 spaces	3 spaces	0	3 spaces	3 spaces	50
4:00 PM	44 spaces	3 spaces	3 spaces	0	3 spaces	3 spaces	56
5:00 PM	49 spaces	3 spaces	3 spaces	0	9 spaces	9 spaces	73
6:00 PM	51 spaces	3 spaces	3 spaces	0	14 spaces	14 spaces	85
7:00 PM	53 spaces	4 spaces	3 spaces	0	15 spaces	15 spaces	90
8:00 PM	58 spaces	4 spaces	3 spaces	0	12 spaces	12 spaces	89

Table 4b
Hourly Peak Parking Demand Summary
For
“52 Hanover Street”
(Saturday Condition)

	Residential Apartment (Market Rate)	Affordable Workforce Apartment	Neighborhood Grocery	Neighborhood Coffee Shop	Bar/Eatery	Bar/Eatery	Total
Adjusted Peak Parking Demand	76 spaces	6 spaces	4 spaces	4 spaces	23 spaces	23 spaces	136

Time of Day

7:00 AM	72 spaces	6 spaces	4 spaces	4 spaces	0	0	86
8:00 AM	67 spaces	5 spaces	4 spaces	4 spaces	0	0	80
9:00 AM	63 spaces	5 spaces	4 spaces	4 spaces	1 space	1 space	78
10:00 AM	57 spaces	5 spaces	4 spaces	4 spaces	2 spaces	2 spaces	74
11:00 AM	54 spaces	4 spaces	4 spaces	4 spaces	5 spaces	5 spaces	76
12:00 PM	52 spaces	4 spaces	4 spaces	4 spaces	9 spaces	9 spaces	82
1:00 PM	50 spaces	4 spaces	4 spaces	4 spaces	12 spaces	12 spaces	86
2:00 PM	53 spaces	4 spaces	4 spaces	4 spaces	11 spaces	11 spaces	87
3:00 PM	52 spaces	4 spaces	2 spaces	0	9 spaces	9 spaces	76
4:00 PM	55 spaces	4 spaces	2 spaces	0	14 spaces	14 spaces	89
5:00 PM	56 spaces	4 spaces	2 spaces	0	18 spaces	18 spaces	98
6:00 PM	56 spaces	4 spaces	2 spaces	0	23 spaces	23 spaces	108
7:00 PM	55 spaces	4 spaces	2 spaces	0	21 spaces	21 spaces	103
8:00 PM	57 spaces	5 spaces	2 spaces	0	16 spaces	16 spaces	96

Accordingly, the average adjusted peak hourly parking demand of the site (90 spaces) for a typical weekday condition occurs at 7:00 PM. The adjusted parking demand (108 spaces) on a typical Saturday occurs at 6:00 PM.

PARKING SUPPLY

The proposed 52 Hanover Street building design provides 194 covered parking spaces located on the ground and first floors of the proposed development site. The Applicant will assign a total of 90 parking spaces for all weekdays and 108 spaces on Saturday to accommodate the calculated peak parking demand requirements of the proposed mixed-use building. The remaining 104 weekday parking spaces and 86 available spaces on Saturday will be allocated to meet a portion of the parking requirements of the adjacent mixed-use building located at 82 Hanover Street.

SUMMARY

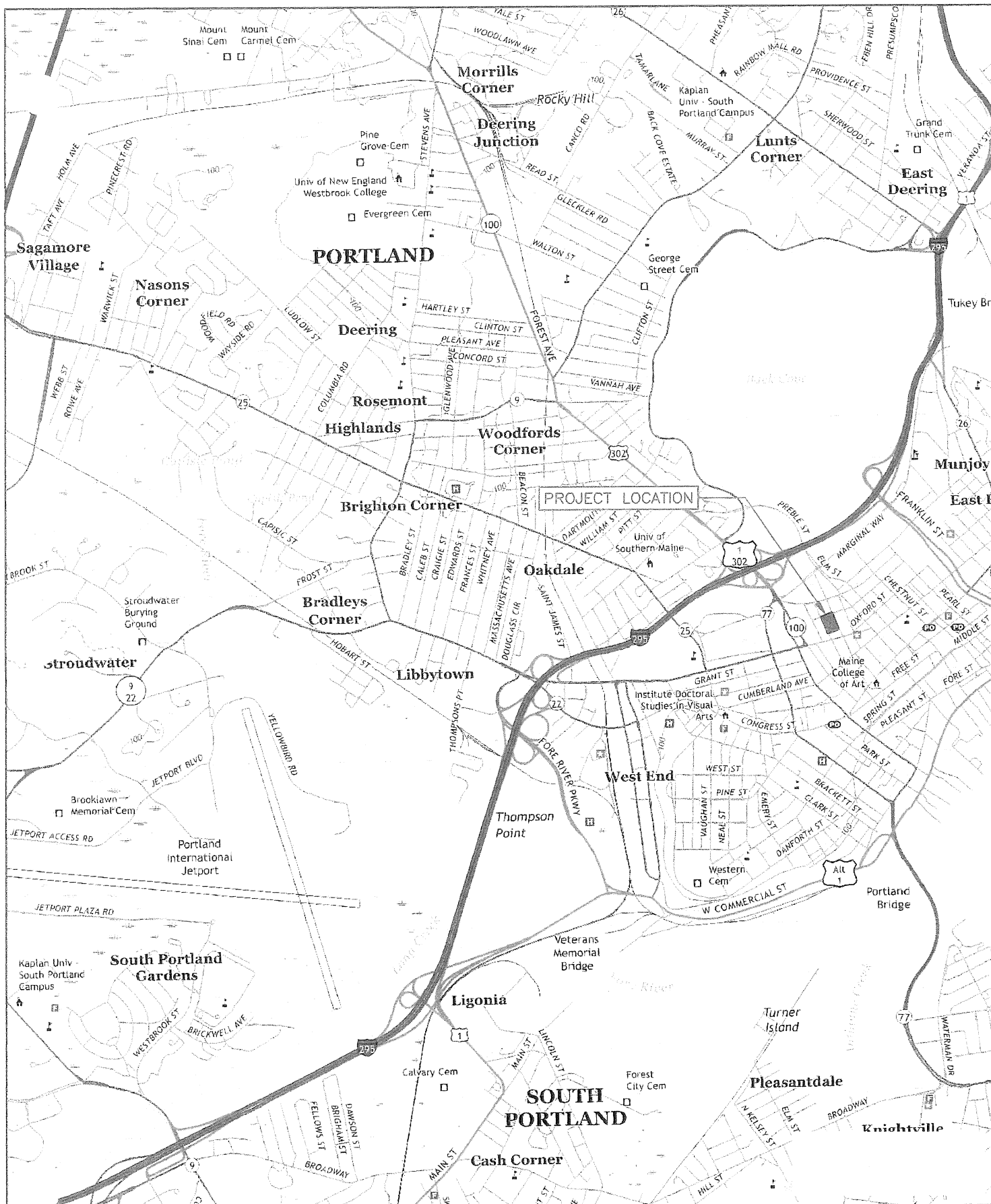
- The proposed 52 Hanover Street mixed-use building includes a total of 171 residential apartment units and four (4) 1,900sf commercial retail units is projected to generate an “average” peak parking demand of approximately **141** spaces on a typical weekday and **160** spaces on Saturday. The estimates of peak parking demand were developed based upon national parking demand rates presented in the 5th edition of the Institute of Transportation’s **Parking Generation** publication and parking data collected locally within the City of Portland.
- The determination of “average” peak parking demand for the proposed project includes an adjustment for “shared-use” trips, which account for the occurrence of multi-purpose trips between one or more tenant spaces. The noted parking adjustments reduce the “average” peak parking demand of the site to **121** weekday spaces and **136** spaces on a typical Saturday.
- The final step in forecasting the “average” peak parking demand requirements of the proposed 52 Hanover Street building considers the “shared parking space” benefits of a mixed-use or multi-use project. The previously referenced **Parking Generation** publication provides the following guidance: *“the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.”* The parking manual provides time-of-day percent of peak parking demand values for each land-use category; whereby, the actual hourly parking demand of the project site can be calculated. The results of this final process show the “average” peak parking demand of the 52 Hanover Street site occurs at 7:00 p.m. on a typical weekday and at 6:00 PM on Saturday. The peak hourly parking demand for the weekday is estimated at **90** spaces and the Saturday parking space projection is **108** spaces.
- Traffic Solutions recommends a maximum number of 90 weekday spaces and 108 spaces on Saturday be reserved for building tenants to meet the estimated average “peak” parking demand of the proposed mixed-use building project. The balance of spaces (approximately 94 weekday and 86 Saturday) within the proposed 52 Hanover Street site will be used to satisfy a portion of the peak parking demand of the adjoining 82 Hanover Street mixed-use building.

A handwritten signature in black ink is written over a circular official seal. The seal is partially obscured by the signature but appears to contain text around its perimeter. The signature is fluid and extends to the right.

SECTION 1

C. SITE AND VICINITY BOUNDARIES

The attached regional vicinity map shows the proposed project site location in the City of Portland.



THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

DRAWING NO.
R-1

FILE: CIVIL
DATE: 8/31/2020
UN: 1093.2
SCALE: NTS
DESIGN BY: SJL
DRAWN BY: KRB
CHECKED BY: WHS



DRAWING NAME:
REGIONAL VICINITY MAP

PROJECT NAME:
52 HANOVER STREET

CLIENT:
TOM WATSON & CO., LLC

ISSUED FOR	BY
TMP	DATE 8/31/20

SECTION 1

D. PROPOSED USES IN THE GENERAL VICINITY OF THE PROPOSED DEVELOPMENT

Performance of the required traffic assessment will account for all projects whose trips potentially impact the roadway system adjacent to the proposed site.

SECTION 1

E. TRIP GENERATION

Site Trip Generation – Proposed Residential Apartments (171 Units): Trip generation is based upon tables presented in the tenth edition of the Institute of Transportation's Engineers "TRIP GENERATION" manual. The following trip rates were applied in that effort:

Land-Use #221: Multi-family Housing (Mid-Rise)

Weekday AM Peak Hour (Street)	= 0.20 trips/unit
Weekday PM Peak Hour (Street)	= 0.18 trips/unit
Weekday AM Peak Hour (Generator)	= 0.15 trips/unit
Weekday PM Peak Hour (Generator)	= 0.18 trips/unit
Saturday Peak Hour (Generator)	= 0.20 trips/unit ⁽¹⁾
Sunday Peak Hour (Generator)	= 0.20 trips/unit ⁽¹⁾

NOTE: ⁽¹⁾ Trip rate not available for Saturday or Sunday condition. Trip rate of weekday AM peak hour was applied.

Table 1, below, provides a summary of the trip generation for the proposed 171 residential apartments units:

Table 1
Peak Hour Trip Generation Summary
(171 Residential Apartments)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	34 trips
PM Peak Hour (Street)	31 trips
AM Peak Hour (Generator)	26 trips
PM Peak Hour (Generator)	31 trips
Saturday Peak Hour (Generator)	34 trips
Sunday Peak Hour (Generator)	34 trips

Site Trip Generation – Proposed Bar/Eatery (2 Units @ 1,900sf each): Trip generation is based upon tables presented in the tenth edition of the Institute of Transportation's Engineers "TRIP GENERATION" manual. The following trip rates were applied in that effort:

Land-Use #932: High-Turnover (Sit-Down) Restaurant

Weekday AM Peak Hour (Street)	= closed
Weekday PM Peak Hour (Street)	= 9.97 trips/1,000sf
Weekday AM Peak Hour (Generator)	= closed
Weekday PM Peak Hour (Generator)	= 17.41 trips/1,000sf
Saturday Peak Hour (Generator)	= 11.19 trips/1,000sf
Sunday Peak Hour (Generator)	= 25.83 trips/1,000sf

Table 2, below, provides a summary of the trip generation for the proposed Bar/Eatery:

SECTION 1

E. TRIP GENERATION (Continued)

Table 2
Peak Hour Trip Generation Summary
(Bar/Eatery 2-1,900sf Units)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	closed
PM Peak Hour (Street)	38 trips
AM Peak Hour (Generator)	closed
PM Peak Hour (Generator)	66 trips
Saturday Peak Hour (Generator)	43 trips
Sunday Peak Hour (Generator)	98 trips

Site Trip Generation – Proposed Neighborhood Grocery Store (1,900sf Retail Space): Site trip generation is developed based upon a local traffic study conducted at an existing neighborhood grocery store located at the intersection of Brackett and Pine Streets. The following Table A provides a summary of the results of that traffic survey:

Table A
Trip Generation Summary
Neighborhood Grocery
(Brackett Street @ Pine Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
7:30 to 7:45 AM	0	0	0	0	0	0
7:45 to 8:00 AM	0	0	0	0	0	0
8:00 to 8:15 AM	15	0	11	0	26	0
8:15 to 8:30 AM	4	1	8	1	12	2
8:30 to 8:45 AM	6	2	1	3	7	5
8:45 to 9:00 AM	11	2	9	3	20	5
AM Peak Hour Total	36	5	29	7	65	12
3:30 to 3:45 PM	5	0	7	0	12	0
3:45 to 4:00 PM	7	1	7	2	14	3
4:00 to 4:15 PM	5	0	9	0	14	0
4:15 to 4:30 PM	6	1	7	0	13	1
4:30 to 4:45 PM	12	1	10	1	22	2
4:45 to 5:00 PM	21	0	18	0	39	0
5:00 to 5:15 PM	15	1	18	1	33	2
5:15 to 5:30 PM	15	0	14	0	29	0
PM Peak Hour Total	63	2	60	2	123	4

As presented in the body of Table A, the existing neighborhood grocery store located in the West End section of the City generates very few vehicle trips during either the AM or PM peak hours. In the morning peak hour, a total of 12 vehicle trips were recorded and a much lower volume of four vehicle trips were observed in the evening peak hour. Similar trip projections are applied for the proposed neighborhood grocery store. Vehicular trips generated by the proposed grocery store; albeit a very small number, are fully expected to use available on-street parking spaces to patronize the proposed grocery store business. In the opinion of this application, the actual number of vehicular trips generated by the proposed grocery store will be far less than the estimated values presented in Table 3.

SECTION 1

E. TRIP GENERATION (Continued)

Table 3 presents the peak hour trip projections for the proposed neighborhood grocery store:

Table 3
Peak Hour Trip Generation Summary
(Neighborhood Grocery Store)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	12 trips
PM Peak Hour (Street)	4 trips
AM Peak Hour (Generator)	12 trips ⁽¹⁾
PM Peak Hour (Generator)	4 trips ⁽²⁾
Saturday Peak Hour (Generator)	12 trips ⁽¹⁾
Sunday Peak Hour (Generator)	12 trips ⁽¹⁾

NOTES:

⁽¹⁾ Trip forecast based upon AM Peak Hour (Street) data.

⁽²⁾ Trip forecast based upon PM peak Hour (Street) data.

Site Trip Generation – Proposed Neighborhood Coffee Shop (1,900sf Retail Space): Site trip generation is developed based upon a local traffic study conducted at an existing neighborhood coffee shop located at the intersection of Congress and Atlantic Streets on Munjoy Hill. The following Table B provides a summary of the results of that traffic survey:

Table B
Trip Generation Summary
Neighborhood Coffee Shop
(Congress Street @ Atlantic Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
8:00 to 8:15 AM	7	1	7	1	14	2
8:15 to 8:30 AM	5	2	3	2	8	4
8:30 to 8:45 AM	9	2	7	2	16	4
8:45 to 9:00 AM	12	3	8	2	20	5
9:00 to 9:15 AM	8	1	10	2	18	3
9:15 to 9:30 AM	4	1	6	1	10	2
AM Peak Hour Total	33	7	31	7	64	14

As presented in the body of Table B, the existing neighborhood coffee shop located on Munjoy Hill generates very few vehicle trips during the AM peak hours, with a total of 14 vehicle trips recorded during the morning peak hour. A similar trip generation value is estimated for the proposed neighborhood coffee shop. Vehicular trips generated by the proposed coffee shop, albeit a very small number, are fully expected to use available on-street parking spaces to patronize the proposed coffee shop. In the opinion of this application, the actual number of vehicular trips generated will be far less than the estimated values presented in Table 4 below.

SECTION 1

E. TRIP GENERATION (Continued)

Table 4
Peak Hour Trip Generation Summary
Neighborhood Coffee Shop

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	14 trips
PM Peak Hour (Street)	closed
AM Peak Hour (Generator)	14 trips ⁽¹⁾
PM Peak Hour (Generator)	closed
Saturday Peak Hour (Generator)	14 trips ⁽¹⁾
Sunday Peak Hour (Generator)	closed

NOTES: ⁽¹⁾ Trip estimates based upon existing AM peak hour data collected at existing Munjoy Hill site.

Table 5 presents the expected total peak hour trip generation of the proposed 52 Hanover Street Redevelopment Project:

Table 5
Peak Hour Trip Generation Summary
(The Proposed 52 Hanover Street Redevelopment Project)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	60 trips
PM Peak Hour (Street)	73 trips
AM Peak Hour (Generator)	52 trips
PM Peak Hour (Generator)	101 trips
Saturday Peak Hour (Generator)	103 trips
Sunday Peak Hour (Generator)	144 trips

Accordingly, the proposed 52 Hanover Street site is to generate approximately **60** vehicle trips during the AM peak hour of the street and an additional **101** trips in the evening peak hour of the site. The site will generate somewhat larger trip volumes during the peak hours of both weekend days with a total of **103** trips generated on Saturday and **144** trips on Sunday.

SECTION 1

F. TRIP GENERATION CREDIT

Trip Generation Credit: MaineDOT allows a trip generation credit to be taken for on-site uses that are displaced with construction of the proposed site that were operational within the last 10 years. Portland's DPW Vehicle Maintenance Facility and fueling station were both operational for a period of time during 2019.

Traffic Solutions completed vehicle classification counts at the City's Hanover Street fueling station on Wednesday, February 20, 2019 between the hours of 7:00 a.m. to 9:00 a.m. and, again, between 3:00 p.m. and 5:30 p.m. All vehicles entering and exiting the fueling facility were recorded and classified by vehicle type and department affiliation in 15-minute intervals between the noted time periods. Table C, as follows, presents the recorded trip data:

Table C
Existing City of Portland
Hanover Street Fueling Station
Traffic Survey Summary

<u>Time Interval</u>	<u>Trips Entering Facility</u>	<u>Trips Leaving Facility</u>	<u>Total Trips</u>	<u>Department Affiliation</u>	<u>Vehicle Classification</u>
7:00 to 7:15 AM	1	1	2	Police	Jeep SUV
7:15 to 7:30	0	0	0	-	-
7:30 to 7:45	1	1	2	Parks & Rec.	Crew Cab
7:45 to 8:00	0	0	0	-	-
8:00 to 8:15	3	2	5	Trades, Parks & Rec., Public Works	Van, Pick-Up, Fuel Vehicle
8:15 to 8:30	0	1	1	Public Works	Fuel Vehicle
8:30 to 8:45	2	1	3	Police, Public Works	Unmarked Vehicle, Small dump truck
8:45 to 9:00	0	1	1	Public Works	Small dump truck
AM Peak Hour- 8:00 to 9:00	5	5	10		
3:00 to 3:15 PM	5	4	9	2 Police Fire, 2 Public Works	2 Police Cruisers, Ladder #6, Public Works Director vehicle, Public Works Pick-up
3:15 to 3:30	1	2	3	2 Public Works	1 Public Works Pick-Up, 1 1.5 yd Dump Truck
3:30 to 3:45	2	0	2	2 Police	2 cruisers
3:45 to 4:00	1	2	3	2 Police	1 cruiser
4:00 to 4:15	1	1	2	Golf Course Jr. Bus	Golf Course
4:15 to 4:30	4	3	7	4 police	4 Police Cruisers
4:30 to 4:45	0	1	1	Police	Police Cruiser
4:45 to 5:00	0	0	0	-	-
5:00 to 5:15	1	0	1	Fire Truck	Ladder #3
5:15 to 5:30	0	1	1	Fire Truck	Ladder #3
PM Peak Hour – 3:00 to 4:00	9	8	17		

SECTION 1

F. TRIP GENERATION CREDIT (Continued)

From a summary of the traffic survey, a peak hour of traffic was determined for both the morning and afternoon travel periods. The morning peak hour falls between 8:00 and 9:00 a.m. when a total of 10 vehicles were observed either entering or exiting the fueling station and a total of 17 trips was counted in the evening peak hour, which occurs between 3:00 and 4:00 p.m.

A similar study was conducted August 11/12, 2020 at the City’s Public Works Maintenance facility located on Canco Road to establish peak hour trip generation for the DPW vehicle maintenance facility. Those studies recorded a total of eight (8) passenger equivalent trips (pce) in the morning peak hour and a slightly larger volume of 11 pce trips in the afternoon peak hour.

Combined, the former DPW vehicle maintenance and adjoining fueling station generate about 18 pce trips in the morning peak hour and 28 pce trips in the evening peak hour.

Table 1 presents the adjusted peak hour trip generation of the proposed 52 Hanover Street Redevelopment site:

Table 1
“Net” Peak Hour Trip Generation Summary

<u>Peak Hour Time Period</u>	<u>Existing DPW Maintenance and Fueling Station Trip Summary</u>	<u>Proposed 52 Hanover Street Trip Summary</u>	<u>Adjusted Peak Hour Trip Generation</u>
AM Peak Hour (Street)	18 pce trips	60 trips	42 trips
PM Peak Hour (Street)	28 pce trips	73 trips	45 trips
AM Peak Hour (Generator)	18 pce trips ⁽¹⁾	52 trips	34 trips
PM Peak Hour (Generator)	28 pce trips ⁽²⁾	101 trips	73 trips
Saturday Peak Hour (Generator)	18 pce trips ⁽¹⁾	103 trips	85 trips
Sunday Peak Hour (Generator)	18 pce trips ⁽¹⁾	144 trips	126 trips

NOTE:

⁽¹⁾ The prior site trip generation of the City’s Vehicle Maintenance and Fueling Station uses for the weekday AM peak hour of the generator and both peak Saturday and Sunday peak periods were based upon traffic data collected during the weekday AM peak hour of the street.

⁽²⁾ The prior site trip generation of the City’s Vehicle Maintenance and Fueling Station uses for the weekday PM peak hour of the generator was based upon traffic data collected during the weekday PM peak hour of the street.

“Net” Change in Site Trip Generation – Peak Hour Time Periods

The 52 Hanover Street site will generate a “net” volume of **42** trips in the AM peak hour of the street, a total of **45** trips in the PM peak hour of the street and **126** trips during the Sunday peak hour of the site. The only time period meeting MaineDOT’s Chapter 305 Rules and Regulations for determination of a Traffic Movement Permit is the noted peak hour of the site on Sunday.

SECTION 1

G. TRIP ADJUSTMENTS

Vehicle Trip Composition: This report has assumed all vehicle trips generated by the proposed project are “*primary*” or “*new*” vehicle trips to the area street network.

Shared-Use Adjustment: A finite number of residents, employees of the proposed commercial spaces and/or customers of those same spaces are classified as internal or shared trips; trips that do not leave the confines of the proposed site. These multi-purpose trips, if not accounted for, overestimate the actual vehicular traffic impacts of the 52 Hanover Street site. For example, an apartment resident purchasing their morning coffee at the proposed neighborhood coffee shop doing so by simply walking from their apartment to the proposed coffee shop. Numerous other likely internal trip patterns will be generated by the proposed site and their impact must be accounted for.

The National Cooperative Highway Research Program’s (NCHRP) 684 Internal Trip Capture Estimation Tool provides a process for estimating the number of shared or captured trips generated by a development project. Copies of the spreadsheets used in the analysis follow. The summarized internal capture rates, as determined from the NCHRP 684 Worksheet Section 5-A, provide the following internal capture rates (percentages) applicable to the 191 Marginal Way site development uses:

<u>Trip Capture Percent</u>	<u>Total</u>	<u>Entering Trips</u>	<u>Exiting Trips</u>
AM Peak Hour	10%	18%	7%
PM Peak Hour	19%	15%	26%

Traffic Solutions, to conservatively forecast the number of internally captured or shared trips generated by the proposed 52 Hanover Street mixed-use project, has applied a 14.5% captured trip rate; which, is the average of the estimated percentage calculated for the AM and PM peak hours (The NCHRP program does not provide projections for peak hour time periods other than the weekday AM and PM peak hours for the AM peak hour).

Based upon the described methodology presented above, a total of **21** [144 trips x 14.5% = 21] internal captured or shared trips are generated by the proposed 52 Hanover Street site during the Sunday peak hour of the site. Accordingly, the proposed 52 Hanover Street site is expected to generate a total of **123** trips in the Sunday peak hour that travel onto or from the public street system.

Project Name:	52 Hanover Street
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	2	2	1.00	2	2
Restaurant	1.00	24	24	1.00	16	16
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	22	22	1.00	9	9
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	7		1	3	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	1	0
Retail	0		7	0	10	0
Restaurant	0	1		0	4	0
Cinema/Entertainment	0	0	1		1	0
Residential	0	0	3	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	1	2	1	0	0
Restaurant	3	21	24	21	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	19	22	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	1	2	1	0	0
Restaurant	4	12	16	12	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	7	9	7	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

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

²Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	52 Hanover Street	Organization:	Traffic Solutions		
Project Location:	Portland, ME	Performed By:	MMI		
Scenario Description:	PM Peak Hour	Date:	8/31/2020		
Analysis Year:	2020	Checked By:			
Analysis Period:	PM Peak Hour	Date:			

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	850	2,000	SF	4	2	2
Restaurant	932	2,494	SF	40	24	16
Cinema/Entertainment				0		
Residential	221	171	DU	31	22	9
Hotel				0		
All Other Land Uses ²				0		
Total				75	48	27

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

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

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	0	0
Restaurant	0	1		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	75	48	27
Internal Capture Percentage	19%	15%	26%
External Vehicle-Trips ³	61	41	20
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	50%	50%
Restaurant	13%	25%
Cinema/Entertainment	N/A	N/A
Residential	14%	22%
Hotel	N/A	N/A

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

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

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

⁴Person-Trips

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

Project Name:	52 Hanover Street
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	5	5	1.00	7	7
Restaurant	1.00	8	8	1.00	8	8
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	30	30
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	2		1	0	1	0
Restaurant	2	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	6	0		0
Hotel	0	0	0	0	0	

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

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	5	5	5	0	0
Restaurant	3	5	8	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	4	4	4	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	6	7	6	0	0
Restaurant	0	8	8	8	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	28	30	28	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

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

²Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	52 Hanover Street	Organization:	Traffic Solutions		
Project Location:	Portland, ME	Performed By:	MMI		
Scenario Description:	AM Peak Hour	Date:	8/31/2020		
Analysis Year:	2020	Checked By:			
Analysis Period:	AM Peak Hour	Date:			

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	850	2,000	SF	12	5	7
Restaurant	932	2,494	SF	16	8	8
Cinema/Entertainment				0		
Residential	221	171	DU	34	4	30
Hotel				0		
All Other Land Uses ²				0		
Total				62	17	45

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

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

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	62	17	45
Internal Capture Percentage	10%	18%	7%
External Vehicle-Trips ³	56	14	42
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	14%
Restaurant	38%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	7%
Hotel	N/A	N/A

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

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

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

⁴Person-Trips

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

SECTION 1

H. TRIP DISTRIBUTION

Site Trip Distribution: The 10th edition of the Institute of Transportation Engineers “TRIP GENERATION” publication provides the following trip distributions rates for a proposed multi-family residential apartment unit:

Land-Use Code #221 – Multi-family Housing (Mid-Rise) ⁽¹⁾

Sunday Peak Hour = 62% enter/38% exit

NOTE: ⁽¹⁾ All distribution rates based upon “General Urban/Suburban” Data

Site Trip Distribution: The 10th edition of the Institute of Transportation Engineers “TRIP GENERATION” publication provides the following trip distribution rates for a proposed bar/eatery:

Land-Use Code #932 High-Turnover (Sit-Down) Restaurant

Sunday Peak Hour = 55% enter/45% exit

Site Trip Distribution – Proposed Neighborhood Grocery Store (1,900sf Retail Space): Site trip distribution rates are based upon the survey data collected at the existing neighborhood grocery store located at the intersection of Brackett and Pine Streets. The following distribution rates were applied:

Proposed Neighborhood Grocery Store

Sunday Peak Hour = 50% enter/50% exit ⁽¹⁾

NOTE: ⁽¹⁾ Distribution rate based upon field data collected in PM peak hour.

Site Trip Distribution – Proposed Neighborhood Coffee Shop (1,900sf Retail Space): Site trip distribution rates are based upon the survey data collected at the existing neighborhood coffee shop located at the intersection of Congress and Atlantic Streets. The following distribution rates were applied:

Proposed Neighborhood Coffee Shop

Sunday Peak Hour = closed

Table 1 below provides a summary of the expected volume of trips entering and exiting the site during the Sunday peak hour time period.

Table 1

Site Trip Distribution
(Sunday Peak Hour)

<u>Peak Hour Time Period</u>	<u>Trip Distribution Values</u>		<u>Total Adjusted Trips</u>
	<u>Entering Trips</u>	<u>Exiting Trips</u>	
Sunday Peak Hour	81 trips	63 trips	144 trips

Accordingly, in the Sunday peak hour of the site the heaviest volume of trips (81 trips) enters the site and 63 trips exit.

SECTION 1

I. TRIP ASSIGNMENT

Vehicle Trip Assignment (Sunday Peak Hour of the Site): A trip assignment was prepared for the peak hour of the site on Sunday, which assumes the peak hour time period of each proposed site use occurs simultaneously during the same one-hour time period; whereas in reality, peak travel periods of dissimilar site uses do not occur during the same peak hour. For example, the peak hour of the proposed apartments likely occurs earlier in the day on a typical Sunday, whereas the peak hour of the proposed bar/eatery businesses occurs in the afternoon and early evening hours. The trip assignment information is provided to demonstrate the maximum number of trips that could potentially be generated by the proposed site during a single one-hour time period in the peak hour of a typical Sunday.

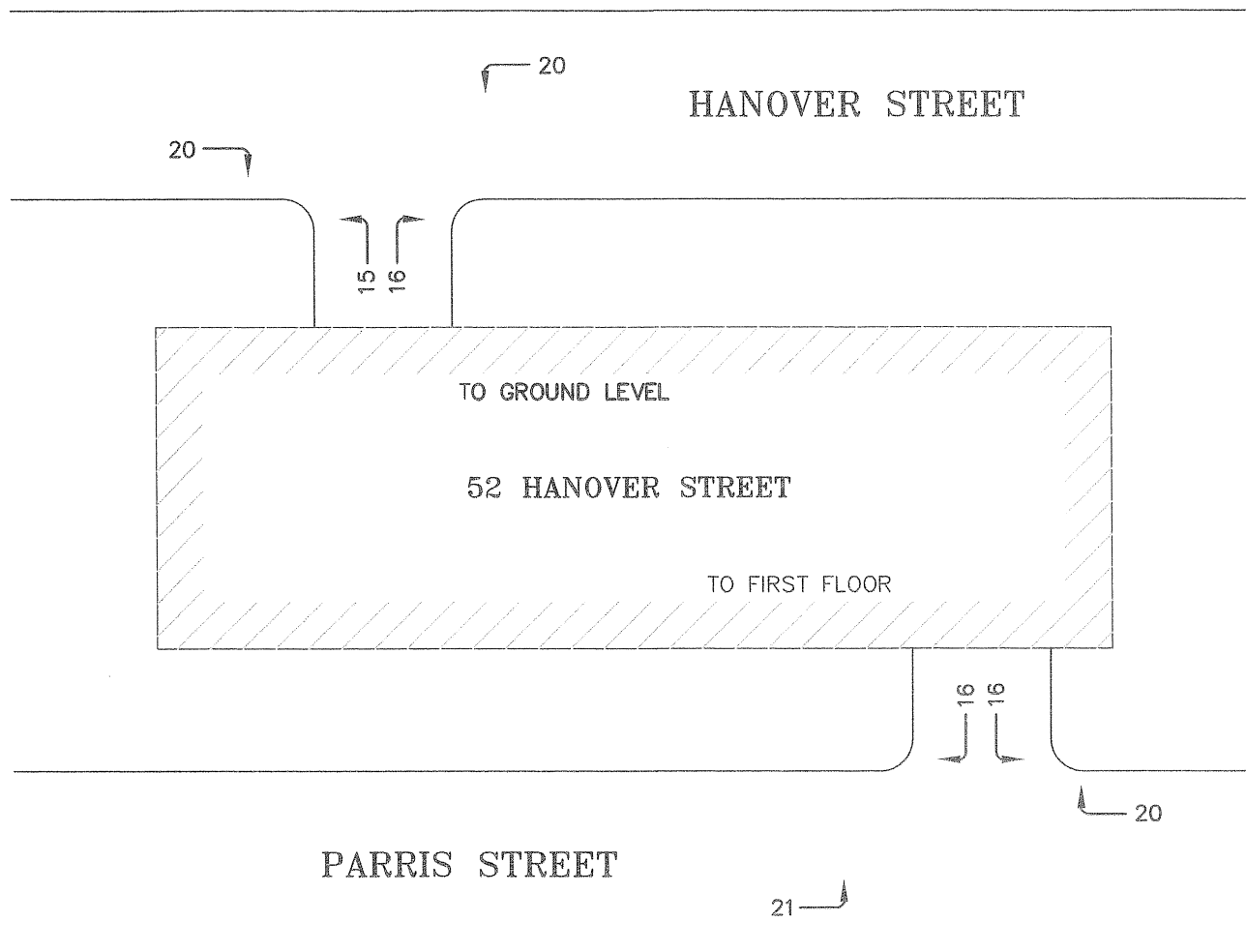
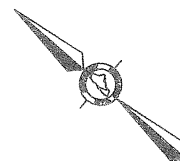
Peak hour trips forecast to enter and exit the 52 Hanover Street site in the Sunday peak hour were evenly assigned through both proposed site entrances located on Hanover and Parris Streets. Figure 1 illustratively presents the trip assignment for the Sunday peak hour of the site.

Site Trip Generation – Extra Parking Garage Trips: The proposed 52 Hanover Street project proposes to provide a total of 194 on-site parking spaces; the average peak parking demand of the proposed site on a weekend day is estimated at 108 spaces leaving a balance of 86 on-site parking spaces. Tom Watson & Co., LLC will use the balance of the parking spaces in the 52 Hanover Street building to off-set the parking requirements of the adjacent 82 Hanover Street mixed-use building. The parking requirements of the 82 Hanover Street building are currently supported through both limited on-site spaces and contractual agreements with local property owners. Motorists occupying these owned and/or leased spaces are presently existing traffic circulating through the neighborhood street system. These existing trips must be re-assigned to both proposed 52 Hanover Street site entrances located on both Hanover Street and Parris Street to establish the total volume of peak hour trips circulating through the proposed site driveways.

Trips generated by occupants of these overflow parking spaces will most likely arrive and depart the parking decks during times of the day or evening other than the peak hours. However, to project a “worse-case” condition, trips generated by these extra (balance) of on-site parking spaces are estimated based upon parking trends found at an existing waterfront parking garage during the weekday evening peak hour (Similar data wasn’t readily available for a Sunday time period). The parking garage data shows that approximately 27% of the garage capacity enters or exits the structure in the PM peak hour with a directional split of 14% entering the garage and 86% exiting. These trip patterns were applied in estimating the existing garage trips that potentially will be generated by the extra or balance of (86) garage spaces in the 52 Hanover Street parking decks. Accordingly, the extra garage spaces can be expected to generate a total of 23 vehicle trips during the Sunday peak hour. Three (3) trips enter the garage and the remaining 20 trips will exit.

These additional trips generated by the balance of parking spaces in the 52 Hanover Street building are evenly assigned through both proposed site entrances located on Hanover and Parris Streets. Figure 2 illustratively presents the trip assignment for the Sunday peak hour of the site.

Figure 3 combines the Sunday peak hour trip assignments for the proposed 52 Hanover Street site (Figure 1) with the travel assignment generated by the balance of parking spaces in the proposed building (Figure 2).

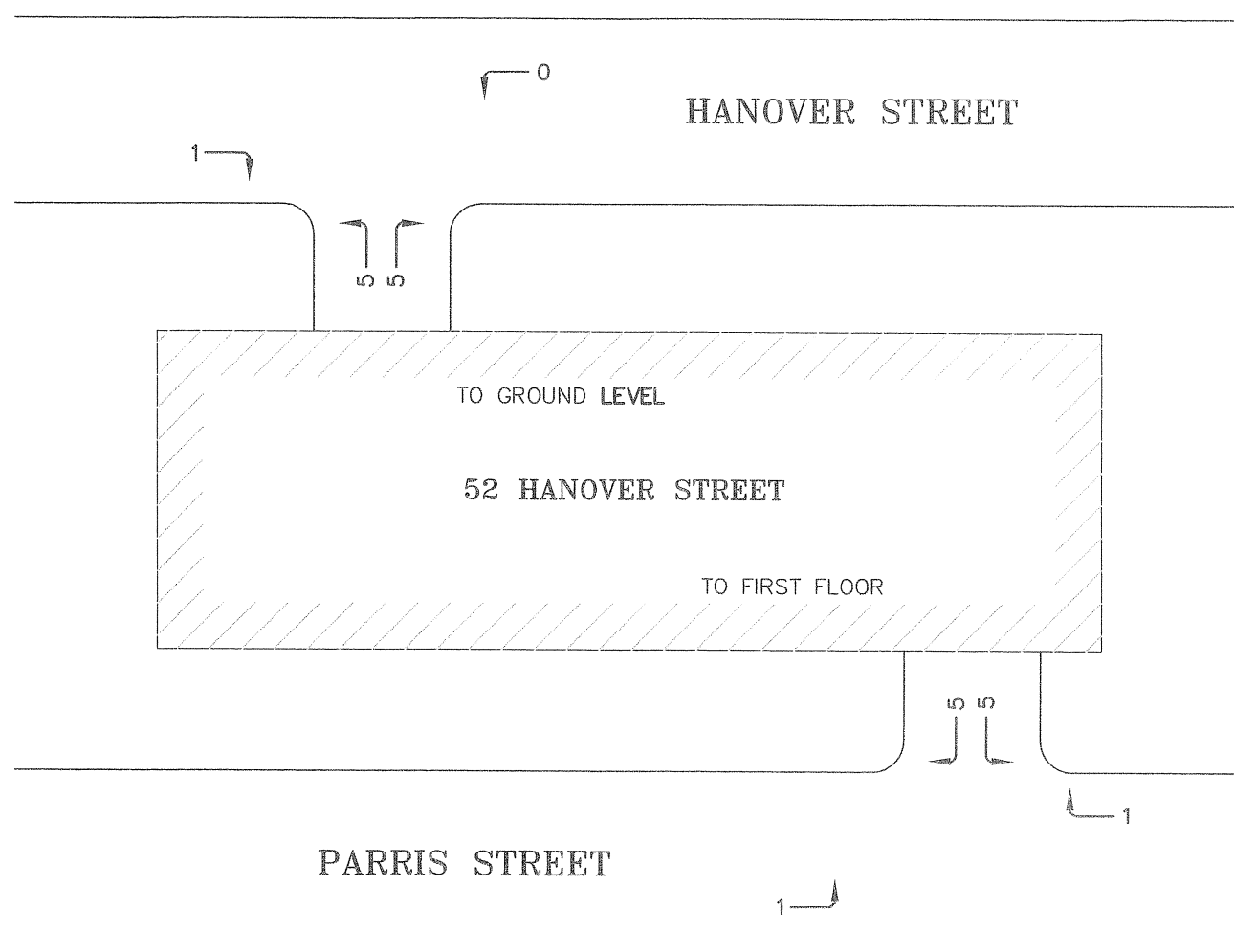
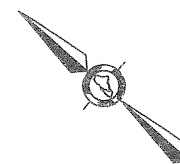


SUNDAY PEAK HOUR TRAFFIC ASSIGNMENT
SITE GENERATED TRIPS
FIGURE 1

Project Name and Location 52 HANOVER REDEVELOPMENT	
DATE: OCTOBER, 2020	FIGURE: 1

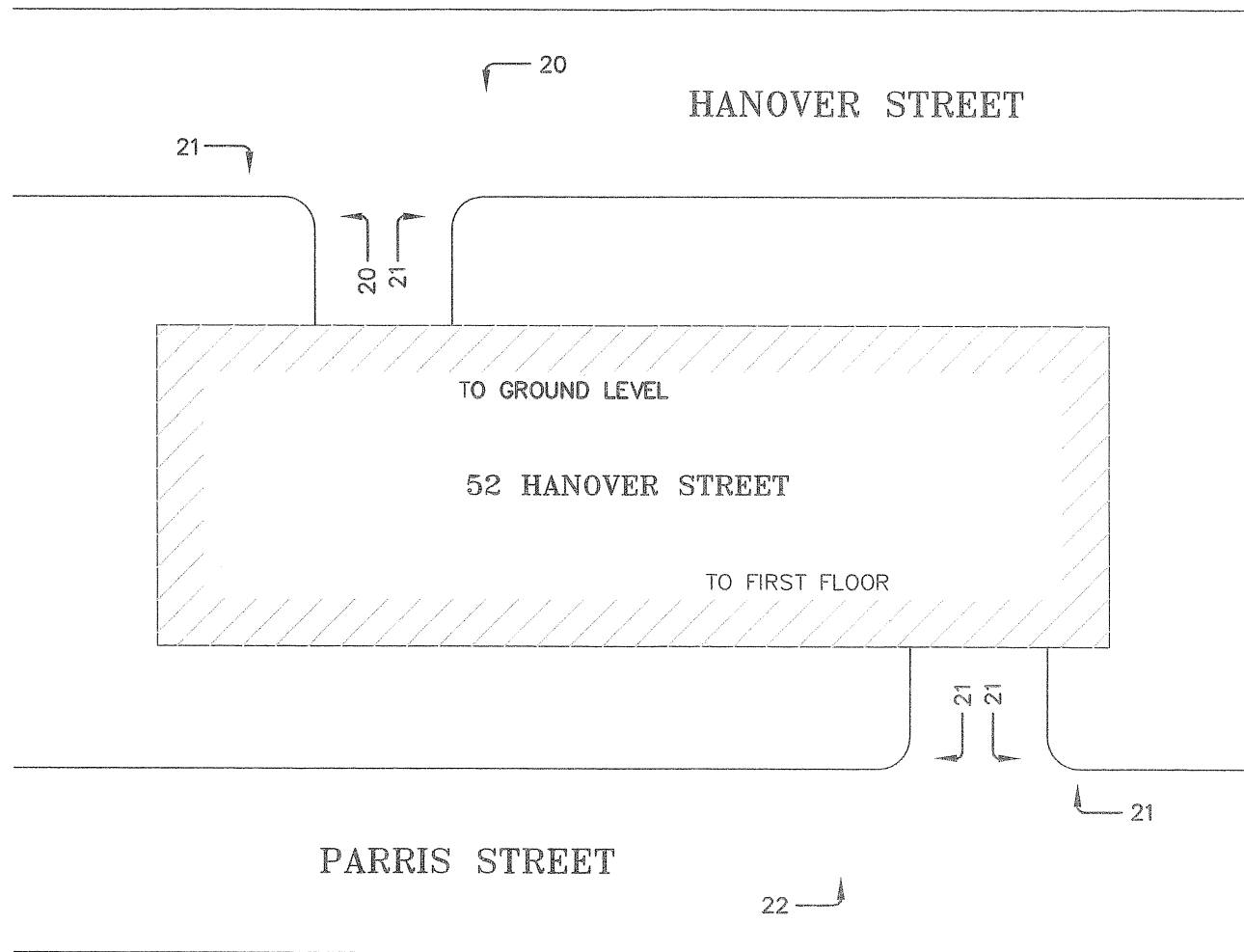
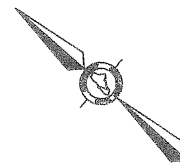
TRAFFIC SOLUTIONS
17 MOUNTVIEW DRIVE, GORHAM, MAINE 04038

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SUNDAY PEAK HOUR TRAFFIC ASSIGNMENT
EXTRA GARAGE TRIPS
FIGURE 2

Project Name and Location 52 HANOVER REDEVELOPMENT		TRAFFIC SOLUTIONS 17 MOUNTVIEW DRIVE, GORHAM, MAINE 04038	
DATE: OCTOBER, 2020	FIGURE: 2		



SUNDAY PEAK HOUR TRAFFIC ASSIGNMENT
TOTAL COMBINED DRIVEWAY TRIPS
FIGURE 3

Project Name and Location: 52 HANOVER REDEVELOPMENT		TRAFFIC SOLUTIONS 17 MOUNTVIEW DRIVE, GORHAM, MAINE 04038
DATE: OCTOBER, 2020	FIGURE: 3	

SECTION 2

TRAFFIC ACCIDENTS

The Maine Department of Transportation's (MDOT) Accident Records Section provided the latest three-year (2017 through 2019) crash data for the section of Hanover Street between Marginal Way and Portland Street, the section of Kennebec Street between Hanover Street and Parris Street, the section of Portland Street between Parris Street and Hanover Street and the segment of Parris Street between Kennebec and Portland Streets.

MaineDOT's safety audit is summarized as follows:

2017 -2019 Traffic Accident Summary

<u>Location</u>	<u>Total Crashes</u>	<u>Critical Rate Factor</u>
1. Hanover Street @ Marginal Way	2	0.40
2. Hanover Street @ Kennebec Street	1	0.51
3. Hanover Street @ Lancaster Street	1	1.22
4. Hanover Street @ Portland Street	4	1.73
5. Parris Street @ Lancaster Street	2	3.82
6. Parris Street @ Portland Street	2	0.65
7. Hanover Street btw. Marginal Way and Kennebec Street	1	0.25
8. Hanover Street btw. Kennebec Street and Lancaster Street	1	0.71
9. Hanover Street btw. Lancaster Street and Portland Street	9	7.11
10. Parris Street btw. Lancaster Street and Portland Street	4	3.38
11. Portland Street btw. Parris Street and Hanover Street	1	0.58

The MDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents and,***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the table shows, the section of Hanover Street between Lancaster Street and Portland Street meets both of MaineDOT's criteria for identification of a high crash location, with a total of nine crashes and a corresponding critical rate factor of 7.11. MaineDOT provided a detailed vehicle collision diagram for the street segment that maps the crash patterns of each of the nine vehicle collisions. MaineDOT's crash diagram doesn't conclusively identify any single crash pattern within the road segment. The majority of the nine accidents occurred in the vicinity of the existing 52 Hanover Street site. Two crashes were "hit and run" crashes; two additional crash incidents were "vehicle backing accidents" and two of the remaining 5 crashes were "hit and run" crashes.



Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

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

REPORT DESCRIPTION

Portland: Hanover St from Marginal Way (node 18999) to Portland St (node 19045); Parris St from Kennebec St (node 19007) to Portland St (node 19046); Kennebec St from Hanover St (node 19008) to Parris St; and Portland St from Parris St to Hanover St

REPORT PARAMETERS

Year 2017, Start Month 1 through Year 2019 End Month: 12

Route: 0560345	Start Node: 18999 End Node: 19045	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☐ Exclude Last Node
Route: 0560565	Start Node: 19007 End Node: 19046	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☐ Exclude Last Node
Route: 0560414	Start Node: 19008 End Node: 19007	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node
Route: 0560593	Start Node: 19046 End Node: 19045	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node

Crash Summary I

Nodes															
Node	Route - MP	Node Description	U/R	Total Crashes	K	A	B	C	PD	Injury	Percent Annual M Ent-Veh	Crash Rate	Critical Rate	CRF	
19018	0560345 - 0.17	Int of HANOVER ST LANCASTER ST	2	1	0	0	0	0	1	0.0	0.401	0.83	0.68	1.22	
												Statewide Crash Rate:	0.16		
19008	0560345 - 0.11	Int of HANOVER ST KENNEBEC ST	2	1	0	0	1	0	0	100.0	1.167	0.29	0.57	0.00	
												Statewide Crash Rate:	0.16		
19045	0560345 - 0.26	Int of HANOVER ST PORTLAND ST	2	4	0	0	1	1	2	50.0	1.516	0.88	0.51	1.73	
												Statewide Crash Rate:	0.15		
18999	0560345 - 0	Int of HANOVER ST MARGINAL WY	2	2	0	0	0	0	2	0.0	3.953	0.17	0.42	0.00	
												Statewide Crash Rate:	0.16		
19007	0560565 - 0	0509427 POR,KENNEBEC,PARRIS ST.	2	1	0	0	0	0	1	0.0	0.488	0.68	0.67	1.02	
												Statewide Crash Rate:	0.16		
19019	0560565 - 0.06	Int of LANCASTER ST PARRIS ST	2	2	0	0	0	0	2	0.0	0.255	2.61	0.68	3.82	
												Statewide Crash Rate:	0.16		
19046	0560565 - 0.15	Int of PARRIS ST PORTLAND ST	2	2	0	0	1	1	0	100.0	2.231	0.30	0.46	0.00	
												Statewide Crash Rate:	0.15		
Study Years: 3.00		NODE TOTALS:		13	0	0	3	2	8	38.5	10.011	0.43	0.33	1.33	

Crash Summary I

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	Sec K	Crashes				Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF	
								Injury A	B	C	PD						
18999	19008	194689	0 - 0.11	0560345 - 0	0.11	2	1	0	0	0	0	1	0.0	0.00115	290.49	1158.94	0.00
Int of HANOVER ST MARGINAL WY				RD INV 05 60345	Statewide Crash Rate: 412.49												
19008	19018	5080409	0 - 0.06	0560345 - 0.11	0.06	2	1	0	0	0	0	1	0.0	0.00029	1141.84	1609.46	0.00
Int of HANOVER ST KENNEBEC ST				RD INV 05 60345	Statewide Crash Rate: 412.49												
19018	19045	5080405	0 - 0.09	0560345 - 0.17	0.09	2	9	0	1	0	1	6	25.0	0.00026	11738.33	1649.81	7.11
Int of HANOVER ST LANCASTER ST				RD INV 05 60345	Statewide Crash Rate: 412.49												
19007	19019	194701	0 - 0.06	0560565 - 0	0.06	2	0	0	0	0	0	0	0.0	0.00013	0.00	1779.50	0.00
0509427 POR,KENNEBEC,PARRIS ST.				RD INV 05 60565	Statewide Crash Rate: 412.49												
19019	19046	5080404	0 - 0.09	0560565 - 0.06	0.09	2	4	0	0	0	0	4	0.0	0.00024	5653.00	1672.67	3.38
Int of LANCASTER ST PARRIS ST				RD INV 05 60565	Statewide Crash Rate: 412.49												
19007	19008	194700	0 - 0.05	0560414 - 0.33	0.05	2	0	0	0	0	0	0	0.0	0.00025	0.00	1661.68	0.00
0509427 POR,KENNEBEC,PARRIS ST.				RD INV 05 60414	Statewide Crash Rate: 412.49												
19045	19046	3106840	0 - 0.05	0560593 - 0.09	0.05	2	1	0	0	0	0	1	0.0	0.00088	380.52	654.66	0.00
Int of HANOVER ST PORTLAND ST				RD INV 05 60593	Statewide Crash Rate: 176.79												
Study Years:		3.00	Section Totals:		0.51		16	0	1	0	1	13	12.5	0.00318	1675.75	786.77	2.13
			Grand Totals:		0.51		29	0	1	3	3	21	24.1	0.00318	3037.30	973.90	3.12

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: CUMBERLAND

TOWN: PORTLAND

LOW NODE: 19018 HIGH NODE: 19045

REGION: 1

U/R: URBAN

DESCRIPTION: Hanover St from Lancaster St to Portland St

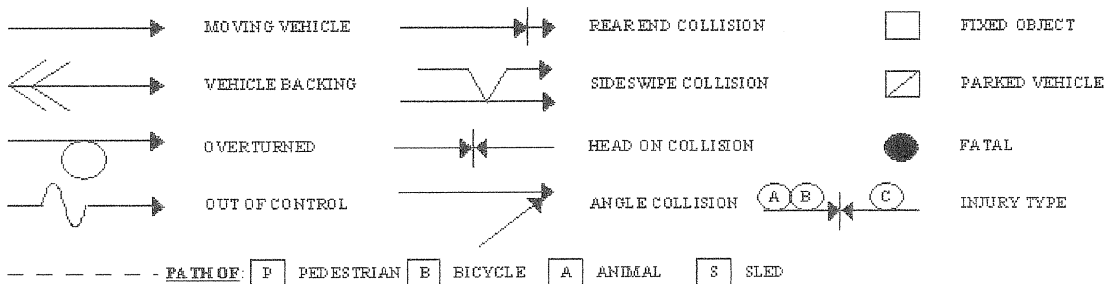
RTE # / RD #: 0560345 DATE DRAWN: 6/23/2020 DRAWN BY: BOB K

STUDY FROM: 1/1/2017

STUDY TO: 12/31/2019

CRASH RATE: 11738.3 CRF: 7.06 % INJURY: 22.2 TOTAL CRASHES: 9

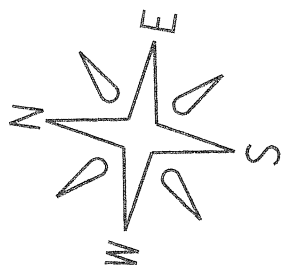
LEGEND



PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM



Prepared by Office of Safety
RFK3 6-23-20

Portland

Link: I9018-I9045

Element: 5080405

Study Period: 2017-2019

of Crashes: 9 / CRF: 7.06

I9018

I9045

I9290 7-14-18 8:55A D/C Hit and run

plow blade hit all 4 vehicles
37947 12-12-17 9:30A S/S Improper pass

30401 10-11-17 11:36A D/C Improper turn

47842 3-29-19 1:57P D/CL Unknown

Hanover St.

72752 11-21-19 1:23P D/C Speed/O.U.I.

32413 10-9-18 8:50A D/C Bike Error

2633 1-18-19 1:39P D/CL Improper backing

44843 3-1-19 2:00P D/C Improper backing

13056 5-3-18 2:45P W/R Hit & Run

Public Works

SECTION 3

A. ENTRANCE/EXIT LOCATION

The present development plan proposes four 1,900sf commercial retail units on the first floor of the building, 171 residential apartment units on floors three through eight and a total of 194 covered parking spaces. The ground floor of the proposed eight-story mixed-use building provides, in addition to the proposed commercial space, a total of 91 covered parking spaces and an additional 103 covered parking spaces are provided on the first floor of the building. Access to the ground floor parking is provided through a driveway entrance on Hanover Street and the first-floor parking spaces are accessed through a driveway entrance on Parris Street. The proposed Hanover Street entrance is located about 110-feet south of the common property line with the adjacent 82 Hanover Street mixed-use building. Existing driveways located along this site frontage will be appropriately closed creating a single 24-foot wide driveway entrance serving the ground floor of the proposed site. The proposed driveway entrance located on the Parris Street frontage of the site providing access to the first-floor parking spaces is located at the southerly corner of the proposed property. The existing driveway apron located on this side of the proposed property will be closed with construction of new concrete sidewalks and granite curbing.

SECTION 3

B. ENTRANCE AND EXIT PLAN VIEW

The City of Portland's Technical Standards require the following sight distance standards for a non-mobility roadway:

Sight Distance Standards

Speed Limit	Sight Distance
25 mph	200 feet
30	250
35	305
40	360
45	425
50	495
55	570

Both Parris and Hanover Streets are currently not posted with a designated speed limit; the assessment of sight distance is based upon a 25mph speed limit, which requires an unobstructed sightline of 200-feet. Acceptable sight distances are attainable in both directions of travel from the proposed centerline of the proposed driveway entrances. On-street parking adjacent to both proposed driveway entrances should be prohibited for a minimum of one-car length (20-feet) to ensure acceptable sight distance is maintained.

SECTION 3

C. ENTRANCE/EXIT DESIGN

The proposed project, including all required off-site improvements (if applicable), will be designed and constructed as directed by the City of Portland.

SECTION 4

TITLE, RIGHT OR INTEREST

Attached is a QUITCLAIM DEED WITHOUT COVENANT, signed on December 12, 2018 that grants to 52 Hanover Street, LLC the described land for the proposed site.

QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation having a mailing address of 389 Congress Street, Portland, Maine 04101 ("Grantor"), FOR CONSIDERATION PAID, releases to **52 HANOVER, LLC**, a Maine limited liability company having a mailing address of 104 Grant Street, Portland, Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located on Hanover Street and Parris Street, in the City of Portland, County of Cumberland and State of Maine (the "Premises"), more particularly described on Exhibit A attached hereto and made part hereof.

Grantee covenants and agrees by acceptance of this Deed that the Premises herein conveyed is subject to the Declaration of Covenants set forth in Exhibit B attached hereto and hereby made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 12 day of December, 2018.

WITNESS:

CITY OF PORTLAND

Sonia T. Bean

Jon P. Jennings
Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

December 12, 2018

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

Sonia T. Bean
~~Attorney-at-Law~~/Notary Public
Commission Expires:
Print Name:

SONIA T. BEAN
NOTARY PUBLIC
State of Maine
My Commission Expires
April 8, 2024

Exhibit A

Hanover Street and Parris Street

A certain lot or parcel of land together with the buildings thereon located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, identified as Parcel B and as depicted on a plan entitled "Plan of Subdivision Plat 52 Hanover Street Portland, Maine" dated November 29, 2017 by Titcomb Associates, revised through July 24, 2018, approved by the City of Portland Planning Board on March 22, 2018, and recorded in Cumberland County Registry of Deeds in Plan Book 218, Page 342 (the "Plan"), such lot or parcel of land being more particularly bounded and described as follows:

Beginning at an iron pin set (capped 5/8" iron) at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" as delineated on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued Lancaster Street and said Parcel A a distance of Two Hundred 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street;
- 2) S 23°56'25" E by said Hanover Street a distance of Two Hundred Ninety-Seven and 02/100 (297.02) feet to an iron pin set (capped 5/8" iron) at the northerly corner of land designated as "Parcel C" as delineated on said Plan;
- 3) S 65°26'46" W by said Parcel C a distance of One Hundred Eighty-Six and 21/100 (186.21) feet to an aluminum disk set on the northeasterly side line of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Three Hundred Twenty-Two and 54/100 (322.54) feet to the point of beginning.

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

The above described parcel contains 59,625 square feet.

This conveyance is subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable to the Premises.

Reserving to the Grantor, its successors and assigns, for the benefit of the public, an approximately 5-foot-wide public pedestrian access easement (the "Public Pedestrian Easement") over a portion of a certain lot or parcel of land, located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a capped 5/8" iron pin set at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued portion of Lancaster Street and said Parcel A a distance of Two Hundred and 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street and the southeasterly corner of said Parcel A;
- 2) S 23°56'25" E by said Hanover Street a distance of Five and 03/100 (5.03) feet to a point;
- 3) S 72°42'45" W through land designated as "Parcel B" as delineated on said Plan a distance of Two Hundred and 51/100 (200.51) feet to a point on the northeasterly sideline of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Five and 06/100 (5.06) feet to the point of beginning.

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

The above described parcel (the "Public Pedestrian Easement Area") contains 1,003 square feet lying over a portion of "Parcel B" as delineated on the Plan. By acceptance of this deed, Grantee acknowledges and agrees that the purpose of the Public Pedestrian Easement is to grant public pedestrian access on and over the Public Pedestrian Easement Area, which Grantee shall maintain as an ADA compliant area for pedestrian, bicycle, and similar non-motorized pedestrian uses. The Public Pedestrian Easement Area shall be subject to such rules or ordinances that the City of Portland may adopt from time to time in the interests of public safety, which are generally applicable to similar pedestrian easements, provided that Grantee does not waive any rights, and expressly reserves the right, to argue that any such future rules or ordinances do not apply to it on the basis that the existing conditions of the Public Pedestrian Easement Area are grandfathered and/or that such rules or ordinances cannot be retroactively applied.

Notwithstanding the foregoing, wheelchair and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance and repair responsibilities within the Public Pedestrian Easement Area shall belong solely to the Grantee, its successors and

assigns. Grantee shall be responsible for removal of snow and ice from the Public Pedestrian Easement Area and to otherwise comply with all laws, rules, regulations, and ordinances governing the removal of snow and ice. Grantor shall have the right, but not the obligation, to repair or maintain the Public Pedestrian Easement Area, including, as reasonably necessary, any subsurface repairs or maintenance, or removal of snow or ice therefrom, when Grantor, in its sole discretion, deems such repairs, maintenance, or snow or ice removal necessary to ensure public safety and protect the public use and enjoyment of the Public Pedestrian Easement Area. No buildings or any kind of permanent structure will be erected in the Public Pedestrian Easement Area, and Grantee shall not use or authorize any use, condition or state of disrepair that would be contrary to or otherwise inhibit the public pedestrian uses of the Public Pedestrian Easement Area.

EXHIBIT B

Declaration of Covenants

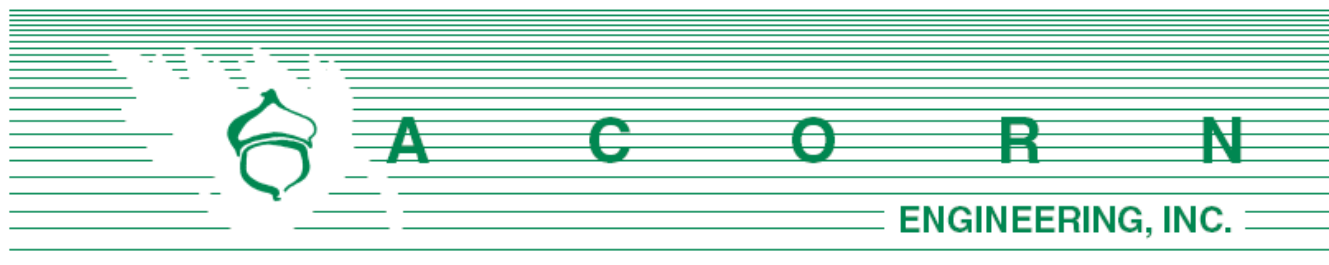
1. Payment In Lieu Of Property Taxes. Grantee covenants and agrees that in the event that the Premises or any portion thereof shall become exempt from real or personal property taxes, by transfer, conversion, or otherwise, during the City's fiscal year that begins following the date of the deed to which this Declaration is attached, or in the fiscal years thereafter, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount of the lesser of (a) the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable, or (b) such other target percentage as may be approved as part of a City payment in lieu of taxes ("PILOT") policy that may be in effect at the time taxes are due on such property. Grantee shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.
2. Environmental Indemnification. Grantee covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the Grantor's release, handling or storage of hazardous wastes or hazardous materials on the Premises.
3. The covenants and agreements set forth herein may be amended or modified in whole or in part only by written agreement of Grantee and Grantor.
4. The Covenants set forth herein are intended to be and shall be considered covenants that run with the Premises and shall bind all subsequent owners of the Premises.
5. Except as specifically set forth herein, the Covenants set forth herein shall survive a sale, transfer, foreclosure or transfer of title in lieu of foreclosure, or other disposition of the Premises.
6. The Covenants set forth herein are enforceable by Grantor as a contract and shall inure to the benefit of and be enforceable by Grantor, its successors, and assigns.
7. The validity of any clause, part or provision of the covenants, restrictions herein shall not affect the validity of the remaining portions of thereof.

SECTION 5

PUBLIC OR PRIVATE RIGHTS-OF-WAY

The described property located at 52 Hanover Street includes the following public easements:

- 1) The former location of Lancaster Street is subject to a utility easement retained by the City as set forth in a certificate of discontinuance dated July 20, 2018.
- 2) The 52 Hanover Street property shares a 10-wide public pedestrian and bicycle easement retained by the City of Portland with the adjacent 82 Hanover Street property. The public easement extends from Parris Street to Hanover Street roughly along the former centerline of the discontinued portion of Lancaster Street.
- 3) The portion of the property described in Book 23202, page 38 is subject to use restrictions as set forth in Book 16707 page 206 and modified in Book 29610 page 223.



Maine Department of Environmental Protection
City of Portland, Maine

October 5, 2020

Subject: Delegated Review: Stormwater Management Permit
52 Hanover Street Redevelopment – Portland, Maine

To Whom It May Concern:

Acorn Engineering has been retained by Tom Watson & Co., LLC to provide civil engineering and permitting services for the proposed redevelopment of the former Public Works (PW) facility on Hanover Street in Portland. The Applicant now seeks to redevelop the 1.37-acre site into 171 residential units with four ground level retailers and two levels of covered/structured parking. On behalf of our client, we are pleased to submit a Stormwater Management Permit application for this beneficial redevelopment subject to Delegated Review by the City of Portland. Concurrently, the project is anticipated to undergo a Level III Site Plan/Subdivision review subject to approval from the Portland Planning Board.

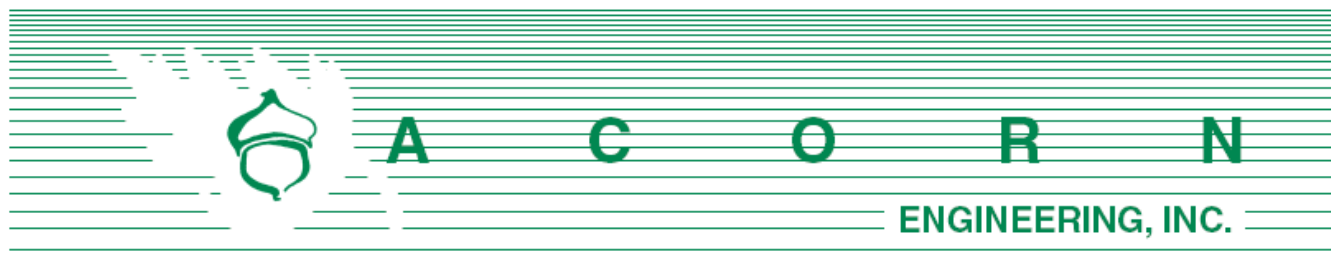
The proposed project includes demolition of the existing structure and redevelopment of the site with a 6-8-story building consisting of 171 residential units, two levels of covered parking, ground level retail lots, and an active courtyard area contiguous with the existing 82 Hanover courtyard and 10'-wide midblock public pedestrian/bicycle easement. The existing site is entirely impervious with approximately two thirds of the area comprised of pavement whereas the proposed redevelopment includes reducing the overall impervious to area to 1.30 acres, with non-roof impervious area decreasing from 0.93 acres to 0.22 acres. In addition to net reduction in runoff and pollutant loading, there are proposed stormwater upgrades to the existing infrastructure that will improve the current state of the site, including routing all stormwater to the separated storm drain in Parris Street. Presently, nearly all runoff drains to the combined sewer mains. Lastly, it should be noted that the calculations set within this application are conservative in that a portion of the roof may include "green" roofs as an amenity, which the pollutant ranking map did not consider.

After completing the calculations under the Redevelopment Standards within Chapter 500, the Ranked Impact Change from Table 3 is less than zero due to the reduction in impervious area and land use intensity and thus the project is not required to provide water quality treatment measures. Accordingly, this application focuses on outlining the Redevelopment Standards. We look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please do not hesitate to contact us.

Sincerely,

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

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



The following documents and drawings are included as part of this application.

Documents:

1. Stormwater Management Law Permit Application
2. Fee Worksheet
3. Professional and Notice Certification
4. Notice of Intent to File
5. Certificate of Good Standing
6. Title, Right, or Interest
7. Photos of the Project Site
8. Basic Standards Submissions (Erosion & Sedimentation Control Report)
9. General Standards Submissions (Stormwater Management Report)

Drawings:

Civil Site Plan Set, Dated 09/25/20

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RESOURCES

Stormwater Application Form

FOR DEP USE

L- _____

ATS# _____

FEES PAID _____

DATE RECEIVED _____

PLEASE TYPE OR PRINT IN INK

This application is for (Check the one that applies):		☒ New application		☐ Amendment	
1. Name of Applicant:	Tom Watson & Co., LLC		5. Name of Agent:	Will Savage	
2. Applicant's Mailing Address:	82 Hanover St, Portland, ME 04101		6. Agent's Mailing Address:	65 Hanover St., Portland, ME 04101	
3. Applicant's Phone #:	207-699-2219		7. Agent's Phone #:	207-775-2655	
4. Email address (REQUIRED-license will be sent via email):	tom@portpropmgt.com		8. E-mail address (REQUIRED-license will be sent via email)	wsavage@acorn-engineering.com	
9. Location of Project: (Road, Street, Rt.#)	52 Hanover St		10. Town:	Portland	
			11. County:	Cumberland	
12. Type of Direct Watershed: (Check all that apply)	☐ Lake not most at risk ☐ Lake most at risk ☐ Lake most at risk, severely blooming ☐ River, stream or brook ☐ Urban impaired stream ☐ Freshwater wetland ☐ Coastal wetland ☐ Wellhead of public water supply		13. Amount of Disturbed Area:	Total Amt. = <u>1.37</u> acres	
			14. Amount of Developed Area:	☒ 1 or more acres, but less than 5 acres ☐ 5 acres or more Total Amt. = <u>1.37</u> acres	
			15. Amount of Impervious Area:	☐ less than 20,000 sq. ft. ☐ 20,000 sq. ft. to 1 acre ☒ 1 to 3 acres ☐ 3 or more acres Total Amount of Impervious Acres =	
16. Applicable Standards: (Check all that apply)	☐ Stormwater PBR ☒ Basic standards ☒ General standards: BMP ☐ General standards: phosphorus ☐ Flooding standard ☐ Urban impaired stream standards ☐ Other: _____		17. Type of Stormwater Control:	☐ Vegetative (e.g. buffers) ☐ Structural (e.g. underdrained filters, ponds, infiltration structures)	
18. Exceptions &/or Waivers Requested:	BMP Standards ▼ ☐ Pretreatment measures ☐ Discharge to ocean/major river segment ☐ Linear portion of project ☐ Utility corridor ☒ Redevelopment		Urban impaired stream standard ▼ ☐ Developed area not landscaped or impervious ☐ Redevelopment		Flooding Standard ▼ ☐ Discharge to ocean/major river segment ☐ Insignificant increase in peak flow
19. Proposed Start Date and Brief Project Description:	The proposed project includes the redevelopment of the existing Portland Public Works garage into a 8-story mixed use building. With 171 proposed residential units and 7,600 SF of retail units (4 units).				
20. Size of Lot or Parcel:	☐ _____ sq. ft., or ☒ <u>1.37</u> acres	UTM Easting:	2926909.91	UTM Northing:	301094.94
21. Title, Right or Interest:	☒ own ☐ lease ☐ purchase option ☐ written agreement				
22. Deed Reference Numbers:	Book#: 35353	Page: 234	24. Map and Lot Numbers:	Map #: 33	Lot #8B
23. DEP Staff Previously Contacted:		25. Project started prior to application?	☐ Yes ☒ No	Completed?	☐ Yes ☐ No

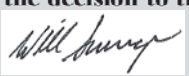
SIGNATURES / CERTIFICATIONS ON PAGE 2

26. Resubmission of Application?	☐ Yes → ☒ No	If yes, previous application #		Previous project manager:	
27. Written Notice of Violation?	☐ Yes → ☒ No	If yes, name of DEP enforcement staff involved:			
28. Detailed Directions to the Project Site:		From I-295N, take exit 7 toward Franklin St; turn right onto Marginal Way; turn left onto Hanover St.			
29. Stormwater Permit by Rule Submissions ▼		30. Stormwater Application Submissions ▼			
☐ This form (including signature page) ☐ Fee ☐ Topographic Map ☐ Plan or Drawing ☐ Photos of Area		☒ This form (including signature page) ☒ Fee ☒ Proof of title, right or interest ☒ Certificate of good standing (if applicable) ☒ Photos of Area ☐ Copy of Public Notice		☐ Professional & Notice Certification ☒ Basic standards submissions ☒ General standards submissions ☐ Flooding standard submissions ☐ Other standard submissions ☐ Compensation Fee (if required)	
31. FEES, Amount Enclosed:		DELEGATED REVIEW - FEE THROUGH CSS PORTAL			
Does the agent have an interest in the project? If yes, what is the interest?: ☐ Yes → ☒ No					

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:

CERTIFICATIONS/ SIGNATURES

"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 am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. 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.	
Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by	
E-mailing the decision to the electronic address located on the front page of this application (see #4 for the applicant and #9 for the agent."	
Signed: 	Title <u>Principal</u> Date: <u>10.7.2020</u>
Notice of Intent to Comply with Maine Construction General Permit	With this Stormwater Law application form and my signature below, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards. Signed  Date: <u>10.7.2020</u>

NOTE: If a Notice of Intent is required, you must file a Notice of Termination (attached as Form G) within 20 days of completing permanent stabilization of the project site.

ADDITIONAL SIGNATURES/CERTIFICATIONS

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for stormwater approval is complete and accurate to the best of his/her knowledge.

Signature: William Savage

Name (print): William Savage, PE

Date: 10.7.2020

Re/Cert/Lic No: 11419

Engineer X

Geologist _____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect _____

Fee Worksheet

Use this form to help determine the permit fee. The fee is based upon the amount of disturbed area associated with the project. **THE EXAMPLE BELOW IS NOT BASED ON CURRENT FEES.** To determine current stormwater licensing fees, please visit the Department's website at: <http://www.maine.gov/dep/permits/>

NOTE: Ditches, swales, ditch turn-outs, level spreaders, and similar Best Management Practices (BMPs) used solely to convey or discharge water to a vegetated buffer are not considered, by themselves, to constitute structural BMPs, provided that the applicant assumes that all water quality treatment takes place in the buffer. If any treatment is assumed within the BMPs used to convey water to the buffer, they are treated as structural BMPs for the purposes of determining the applicable fee (and review period). "Disturbed area" and "impervious area" are defined in Chapter 500, Section 2(F) and (L).

Example (a): If solely vegetative control measures are used (e.g. buffers), using an example fee of \$250.00* for up to one acre of disturbed area, plus \$125.00† for each additional whole acre of disturbed area, the total fee is calculated as shown below.

Project will create 2.34 acres of disturbed area.

$$\text{Fee} = \$250.00 + [\$125.00 \times (1)] = \$375.00$$

Your fee:

Current fee from fee schedule plus [1/2 current fee times # additional whole acres] equals application fee
 \$ _____ + [\$ _____ X (____)] = \$ _____

Example (b): If any structural control measures are used (e.g. underdrained filters, ponds, infiltration systems), using an example fee of \$500.00 for up to one acre of disturbed area, plus \$250.00 for each additional whole acre of disturbed area, the total fee is calculated as shown below.

Project will create 2.34 acres of disturbed area.

$$\text{Fee} = \$500.00 + [\$250.00 \times (1)]. \text{ Fee} = \$750.00.$$

Your fee:

Current fee from fee schedule plus [1/2 current fee times # additional whole acres] equals application fee
 \$ _____ + [\$ _____ X (____)] = \$ _____

* The total fee for the first acre of disturbed area is obtained by combining the processing and licensing fees contained in the current fee schedule.

† The fee for each additional whole acre of disturbed area is one-half the combined processing and licensing fee.

Public Notice Filing and Certification

The DEP Rules, Chapter 2, require an applicant to provide public notice for all Stormwater Law projects with the exception of minor revisions and condition compliance applications. In the notice, the applicant must describe the proposed activity and where it is located. **“Abutter”** for the purposes of the notice provision means any person who owns property that is BOTH (1) adjoining and (2) within one mile of the delineated project boundary, including owners of property directly across a public or private right of way.

1. **Newspaper:** You must publish the Notice of Intent to File in a newspaper circulated in the area where the activity is located. The notice must appear in the newspaper within 30 days prior to the filing of the application with the Department. You may use the attached Notice of Intent to File form, or one containing identical information, for newspaper publication and certified mailing.
2. **Abutting Property Owners:** You must send a copy of the Notice of Intent to File by certified mail to the owners of the property abutting the activity. Their names and addresses can be obtained from the town tax maps or local officials. They must receive notice within 30 days prior to the filing of the application with the Department.
3. **Municipal Office:** You must send a copy of the Notice of Intent to File and a **duplicate of the entire application** to the Municipal Office.

ATTACH a list of then names and addresses of the owners of abutting property.

CERTIFICATION

By signing below, the applicant or authorized agent certifies that:

1. A notice of Intent to File was published in a newspaper circulated in the area where the project site is located within 30 days prior to filing the application;
2. A certified mailing of the Notice of Intent to File was sent to all abutters within 30 days of the filing of the application.
3. A certified mailing of the Notice of Intent to File, and a duplicate copy of the application was sent to the town office of the municipality in which the project is located; and
4. Provided notice of, if required, and held a public informational meeting in accordance with Chapter 2. Rules Concerning the Processing of Applications, Section 14, prior to filing the application. Notice of the meeting was sent by certified mail to abutters and to the town office of the municipality in which the project is located at least ten days prior to the meeting. Notice of the meeting was also published once in a newspaper circulated in the area where the project site is located at least seven days prior to the meeting.

The Public Informational Meeting was held on NA.

Date

Approximately - members of the public attended the Public Informational Meeting.

Signature of Applicant or authorized agent

Date

Public Notice: Notice of Intent to File

Please take notice that

Tom Watson & Co., LLC 82 Hanover St, Portland ME, 04101
 (Name, Address and Phone # of Applicant)
 phone: 207-699-2219

is intending to file a Stormwater Law permit application with the Maine Department of
 Environmental Protection pursuant to the provisions of 38 M.R.S.A. § 420-D on or about
October 9, 2020
 (anticipated filing date)

This application is for

The proposed redevelopment of an existing public works garage to a 8-story mixed use residential/commercial building.
 (description of the project)
52 Hanover St, Portland, ME 04101 (Former Public Works garage)
 (project location)

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in Portland,
Augusta or Bangor) (circle one) during normal working hours. A copy of the application may also be seen at the municipal

offices in Portland, Maine.
 (town)

Written public comments may be sent to the regional office in Portland, Augusta, or Bangor where the application is filed for public inspection.

MDEP, Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333
 MDEP, Southern Maine Regional Office, 312 Canco Road, Portland, Maine 04103
 MDEP, Eastern Maine Regional Office, 106 Hogan Road, Bangor, Maine 04401

5. Certificate of Good Standing

Please see the attached Certificate of Good Standing from the Department of the Secretary of State for Tom Watson & Co., LLC.





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: Tue Sep 29 2020 09:51:18. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
TOM WATSON & CO., LLC	20062993DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/11/2006	N/A	MAINE

Other Names (A=Assumed ; F=Former)

NONE

Clerk/Registered Agent

WILLIAM H LEETE
MITTEL ASEN, LLC
85 EXCHANGE STREET
PORTLAND, ME 04101

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\(\\$30.00\)](#)

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please contact the Bureau's Reporting and Information Section at 207-624-7752 or [e-mail](#) or visit our [Feedback](#) page.

© Department of the Secretary of State

6. Title, Right or Interest

Please see attached for purchase agreements.



QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation having a mailing address of 389 Congress Street, Portland, Maine 04101 ("Grantor"), FOR CONSIDERATION PAID, releases to **52 HANOVER, LLC**, a Maine limited liability company having a mailing address of 104 Grant Street, Portland, Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located on Hanover Street and Parris Street, in the City of Portland, County of Cumberland and State of Maine (the "Premises"), more particularly described on Exhibit A attached hereto and made part hereof.

Grantee covenants and agrees by acceptance of this Deed that the Premises herein conveyed is subject to the Declaration of Covenants set forth in Exhibit B attached hereto and hereby made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 12 day of December, 2018.

WITNESS:

CITY OF PORTLAND

Sonia Bean

Jon P. Jennings
Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

December 12, 2018

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

Sonia T. Bean
~~Attorney-at-Law~~/Notary Public

Commission Expires:

Print Name:

SONIA T. BEAN
NOTARY PUBLIC
State of Maine
My Commission Expires
April 8, 2024

Exhibit A

Hanover Street and Parris Street

A certain lot or parcel of land together with the buildings thereon located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, identified as Parcel B and as depicted on a plan entitled "Plan of Subdivision Plat 52 Hanover Street Portland, Maine" dated November 29, 2017 by Titcomb Associates, revised through July 24, 2018, approved by the City of Portland Planning Board on March 22, 2018, and recorded in Cumberland County Registry of Deeds in Plan Book 218, Page 342 (the "Plan"), such lot or parcel of land being more particularly bounded and described as follows:

Beginning at an iron pin set (capped 5/8" iron) at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" as delineated on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued Lancaster Street and said Parcel A a distance of Two Hundred 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street;
- 2) S 23°56'25" E by said Hanover Street a distance of Two Hundred Ninety-Seven and 02/100 (297.02) feet to an iron pin set (capped 5/8" iron) at the northerly corner of land designated as "Parcel C" as delineated on said Plan;
- 3) S 65°26'46" W by said Parcel C a distance of One Hundred Eighty-Six and 21/100 (186.21) feet to an aluminum disk set on the northeasterly side line of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Three Hundred Twenty-Two and 54/100 (322.54) feet to the point of beginning.

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

The above described parcel contains 59,625 square feet.

This conveyance is subject to any and all easements or appurtenances of record, insofar as the same are in force and applicable to the Premises.

Reserving to the Grantor, its successors and assigns, for the benefit of the public, an approximately 5-foot-wide public pedestrian access easement (the "Public Pedestrian Easement") over a portion of a certain lot or parcel of land, located on the northeasterly side of Parris Street and the southwesterly side of Hanover Street in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a capped 5/8" iron pin set at the intersection of the northeasterly sideline of Parris Street and the southerly sideline of a discontinued portion of Lancaster Street, said point of beginning also being the southwesterly corner of land designated as "Parcel A" on the Plan. Thence:

- 1) N 72°42'45" E by said discontinued portion of Lancaster Street and said Parcel A a distance of Two Hundred and 72/100 (200.72) feet to an aluminum disk set on the southwesterly sideline of Hanover Street and the southeasterly corner of said Parcel A;
- 2) S 23°56'25" E by said Hanover Street a distance of Five and 03/100 (5.03) feet to a point;
- 3) S 72°42'45" W through land designated as "Parcel B" as delineated on said Plan a distance of Two Hundred and 51/100 (200.51) feet to a point on the northeasterly sideline of said Parris Street;
- 4) N 26°16'45" W by said Parris Street a distance of Five and 06/100 (5.06) feet to the point of beginning.

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

The above described parcel (the "Public Pedestrian Easement Area") contains 1,003 square feet lying over a portion of "Parcel B" as delineated on the Plan. By acceptance of this deed, Grantee acknowledges and agrees that the purpose of the Public Pedestrian Easement is to grant public pedestrian access on and over the Public Pedestrian Easement Area, which Grantee shall maintain as an ADA compliant area for pedestrian, bicycle, and similar non-motorized pedestrian uses. The Public Pedestrian Easement Area shall be subject to such rules or ordinances that the City of Portland may adopt from time to time in the interests of public safety, which are generally applicable to similar pedestrian easements, provided that Grantee does not waive any rights, and expressly reserves the right, to argue that any such future rules or ordinances do not apply to it on the basis that the existing conditions of the Public Pedestrian Easement Area are grandfathered and/or that such rules or ordinances cannot be retroactively applied.

Notwithstanding the foregoing, wheelchair and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance and repair responsibilities within the Public Pedestrian Easement Area shall belong solely to the Grantee, its successors and

assigns. Grantee shall be responsible for removal of snow and ice from the Public Pedestrian Easement Area and to otherwise comply with all laws, rules, regulations, and ordinances governing the removal of snow and ice. Grantor shall have the right, but not the obligation, to repair or maintain the Public Pedestrian Easement Area, including, as reasonably necessary, any subsurface repairs or maintenance, or removal of snow or ice therefrom, when Grantor, in its sole discretion, deems such repairs, maintenance, or snow or ice removal necessary to ensure public safety and protect the public use and enjoyment of the Public Pedestrian Easement Area. No buildings or any kind of permanent structure will be erected in the Public Pedestrian Easement Area, and Grantee shall not use or authorize any use, condition or state of disrepair that would be contrary to or otherwise inhibit the public pedestrian uses of the Public Pedestrian Easement Area.

EXHIBIT B

Declaration of Covenants

1. Payment In Lieu Of Property Taxes. Grantee covenants and agrees that in the event that the Premises or any portion thereof shall become exempt from real or personal property taxes, by transfer, conversion, or otherwise, during the City's fiscal year that begins following the date of the deed to which this Declaration is attached, or in the fiscal years thereafter, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount of the lesser of (a) the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable, or (b) such other target percentage as may be approved as part of a City payment in lieu of taxes ("PILOT") policy that may be in effect at the time taxes are due on such property. Grantee shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

2. Environmental Indemnification. Grantee covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the Grantor's release, handling or storage of hazardous wastes or hazardous materials on the Premises.

3. The covenants and agreements set forth herein may be amended or modified in whole or in part only by written agreement of Grantee and Grantor.

4. The Covenants set forth herein are intended to be and shall be considered covenants that run with the Premises and shall bind all subsequent owners of the Premises.

5. Except as specifically set forth herein, the Covenants set forth herein shall survive a sale, transfer, foreclosure or transfer of title in lieu of foreclosure, or other disposition of the Premises.

6. The Covenants set forth herein are enforceable by Grantor as a contract and shall inure to the benefit of and be enforceable by Grantor, its successors, and assigns.

7. The validity of any clause, part or provision of the covenants, restrictions herein shall not affect the validity of the remaining portions of thereof.

7. Photos of the Project Site





Figure 1. Facing approx. south on Hanover St.



Figure 2. Facing approx. north on Hanover St.





Figure 3. Facing approx. west while located near north edge of the site.



Figure 4. Facing Parris St. while standing along the west edge of the site.





Figure 5. Facing approx. south while located near south corner of site.



Figure 6. Facing approx. southeast while located near south corner of site.





Figure 7. Facing approx. east while located along southern edge of existing building.



Figure 8. Facing approx. southwest while located along southern edge of site.





Figure 9. Facing embankment while located along southern edge of site (embankment pictured is located on southern abutter's property).



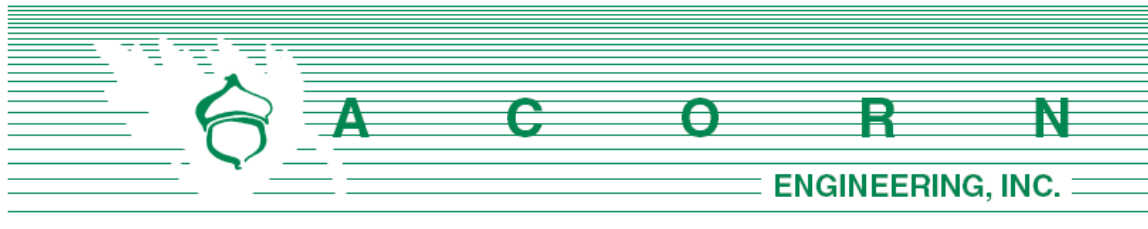
Figure 10. Facing embankment while located along southern edge of site (left portion of embankment pictured is located on site).



8. Basic Standards Submissions

Please see the attached document, Erosion and Sedimentation Control Plan, developed in accordance with the Basic Standards submission requirements.





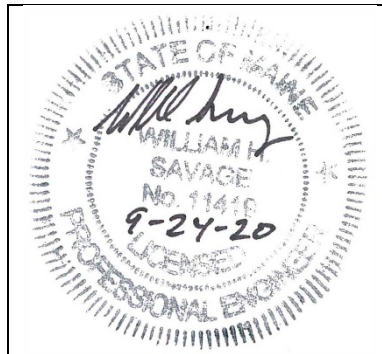
K. EROSION & SEDIMENTATION **CONTROL REPORT**

Prepared For:

**Tom Watson & Co., LLC
82 Hanover Street
Portland, Maine 04101**

Prepared By:

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



September 2020

INTRODUCTION

Acorn Engineering, Inc. has been retained by Tom Watson & Co., LLC to provide civil engineering services for the proposed mixed-use residential and retail building at 52 Hanover Street. The proposed project includes demolition of the existing structure and redevelopment of the site with a six-story building consisting of residential units, a two-level parking structure, and ground level retail lots.

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 bordered by Hanover and Parris Street. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine Dated January 25, 2018, revised August 14, 2018.

The property is in the B-2b Community Business Zone. Abutting Uses include:

- North Commercial Space
- West Residential & Business
- South Office Space
- East Residential & Office

A large portion of the site is occupied by the existing structure. The rest of the site contains parking for the existing structure on all sides. The site is currently graded so the driveways slope away from the building and towards the abutting streets. The grades range from approximately 5 to 10% near the building. On the southeast corner of the lot there is an embankment reinforced with stone blocks that separates the lot from the south abutter.

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
Au Gres Loamy Sand	.15	.15
Deerfield Loamy Fine Sand	0.20	0.20

The soil “K” value for the soil, listed above, shows 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 the soil “K” value shows 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

There are no critical areas that require special attention during 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 Parris and Hanover streets 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 $\frac{1}{2}$ 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 Construction Management & Erosion Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion & Sedimentation 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. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Prioritize the downhill side to contain runoff within the site while providing an engineered outlet to the municipal storm drain system within Parris Street.
6. Commence earthwork operations, associated with the parking lot construction.
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 and 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.

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



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.



9. General Standards Submissions

The following Stormwater Management Report and corresponding attachments have been developed in accordance with the General Standards submission requirements.

Phosphorous export calculations were not performed for the proposed redevelopment as Phosphorous Standards do not apply.



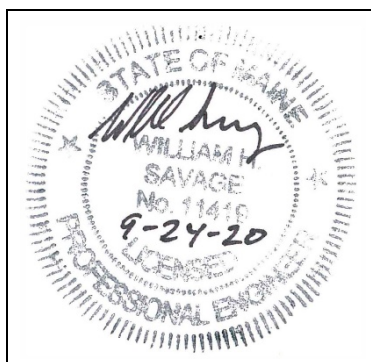
J. STORMWATER MANAGEMENT **REPORT**

Prepared For:

**Tom Watson & Co., LLC
82 Hanover Street
Portland, Maine 04101**

Prepared By:

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



September 2020



INTRODUCTION

Acorn Engineering, Inc. has been retained by Tom Watson & Co., LLC to provide civil engineering services for the proposed redevelopment of 52 Hanover Street. The proposed project includes demolition of the existing structure and redevelopment of the site with a six-story building consisting of residential units, a two-level parking structure, and ground level retail lots. The property consists of approximately 1.37 acres of land in Portland's Bayside neighborhood. The site is currently comprised of entirely impervious area. The proposed project will decrease the impervious area and improve the overall pollutant ranking. Lastly, the development will seek to redirect all surface water runoff to the separated storm drain system vs the current condition where almost all runoff enters the combined sewer system.

A stormwater analysis was prepared to demonstrate that the project will meet the requirements set forth by Maine DEP Chapter 500 General Standards and the following requirements from 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.

EXISTING CONDITIONS

The proposed project site is located at 52 Hanover Street in Portland at the former Public Works vehicle maintenance garage. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine Dated January 25, 2018, revised August 14, 2018.

The property is in the B-2b Community Business Zone. Abutting Uses include:

- North Commercial Space
- West Residential & Business
- South Office Space
- East Residential & Office

A large portion of the site is occupied by the existing structure. The rest of the site contains parking for the existing structure on all sides. The site is currently graded so the driveways slope away from the building and towards the abutting streets. The grades range from approximately 5 to 10% near the building. On the southeast corner of the lot there is an embankment reinforced with stone blocks that separates the lot from the southerly abutter.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting and existing impervious surfaces, a field inventory of significant natural features was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.



PROPOSED DEVELOPMENT

The proposed development includes demolition of the existing structure and redevelopment of the site with a six-story building. Approximately 171 residential units with various amenities are planned with two levels of structured parking. Additionally, multiple retail units are proposed on the ground level adjacent to the existing 82 Hanover patio and Lancaster Court pedestrian/bicycle easement. Pedestrian access to the site shall be provided off both adjacent streets.

The proposed drainage improvements include collecting runoff using field inlets on the northside of the proposed building. The field inlets would tie into a proposed manhole near the northwest corner of the building and drain to the Parris Street storm main from there. On the south side of the building, it is proposed to use the existing drainage system with a proposed catch basin to connect into the system with 8" piping. On the east side of the lot it is proposed to replace the existing drainage lines with new 8" piping.

The development will be served by the Portland Water District, CMP, Spectrum, Consolidated Communications, Unitil, and municipal sewer and storm systems. Utility mains and services have been coordinated with each respective utility company.

Water quantity has not specifically been analyzed as part of this project as one can assume the peak rates will decrease due to the same watershed area and composition containing less impervious area. Additionally, the entirety of the runoff is anticipated to be redirected from the existing combined sewer to the separated storm drain.

For an analysis on water quality, please refer to the following section.

GENERAL STANDARDS – WATER QUALITY

Given the site's existing impervious area, the redevelopment standards were applied to this project. The existing land uses and pollutant rankings are as follows:

Table 1 – Land Use and Pollutant Summary Table:			
Existing Conditions			
Land use	Pollutant Ranking	Existing Area	Weighted Ave. Ranking
Roads where idling may occur; high use parking lots	5	0	0
Other roads; medium use parking lots	4	0.929 ac.	2.71
Other parking lots and driveways;	3	0	0



flat roof asphalt rooftops roofs on an industrial facility			
Other rooftops; grassed areas mowed > twice per year; walkways / foot-traffic-only pavement	2	0.440 ac.	0.64
Non-grass landscaped areas; Stormwater treatment / storage systems	1	0	0
TOTAL		1.369 ac.	3.35

Furthermore, the proposed land use rankings are as follows:

Table 2 – Land Use and Pollutant Summary Table: Proposed Conditions			
Land use	Pollutant Ranking	Proposed Area	Weighted Ave. Ranking
Roads where idling may occur; high use parking lots	5	0.007 ac.	0.03
Other roads; medium use parking lots	4	0	0
Other parking lots and driveways; flat roof asphalt rooftops roofs on an industrial facility	3	0	0
Other rooftops; grassed areas mowed > twice per year; walkways / foot-traffic-only pavement	2	1.289 ac.	1.88
Non-grass landscaped areas; Stormwater treatment / storage systems	1	0.072 ac.	0.05



TOTAL		1.369 ac.	1.96
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Corresponding pre- and post-development redevelopment maps can be viewed in Attachments 1 and 2 of this report.

From Tables 1 & 2 above, the resulting pollutant ranking for the proposed redevelopment is -1.39 (Chapter 500, Table 2). The corresponding treatment level for this ranking is 0% (Chapter 500, Table 3). However, given the proposed vegetative plantings and potential green roofs, the site will inherently provide some level of treatment greater than typical runoff from impervious areas.

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
- Phase II Environmental Site Assessment

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 3 - “K” Value		
Soils Type	Subsurface	Substratum
Au Gres Loamy Sand	0.15	0.15
Deerfield Loamy Fine Sand	0.20	0.20

The soil “K” value for the soil, listed above, shows 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 the soil “K” value shows 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.



CONCLUSION

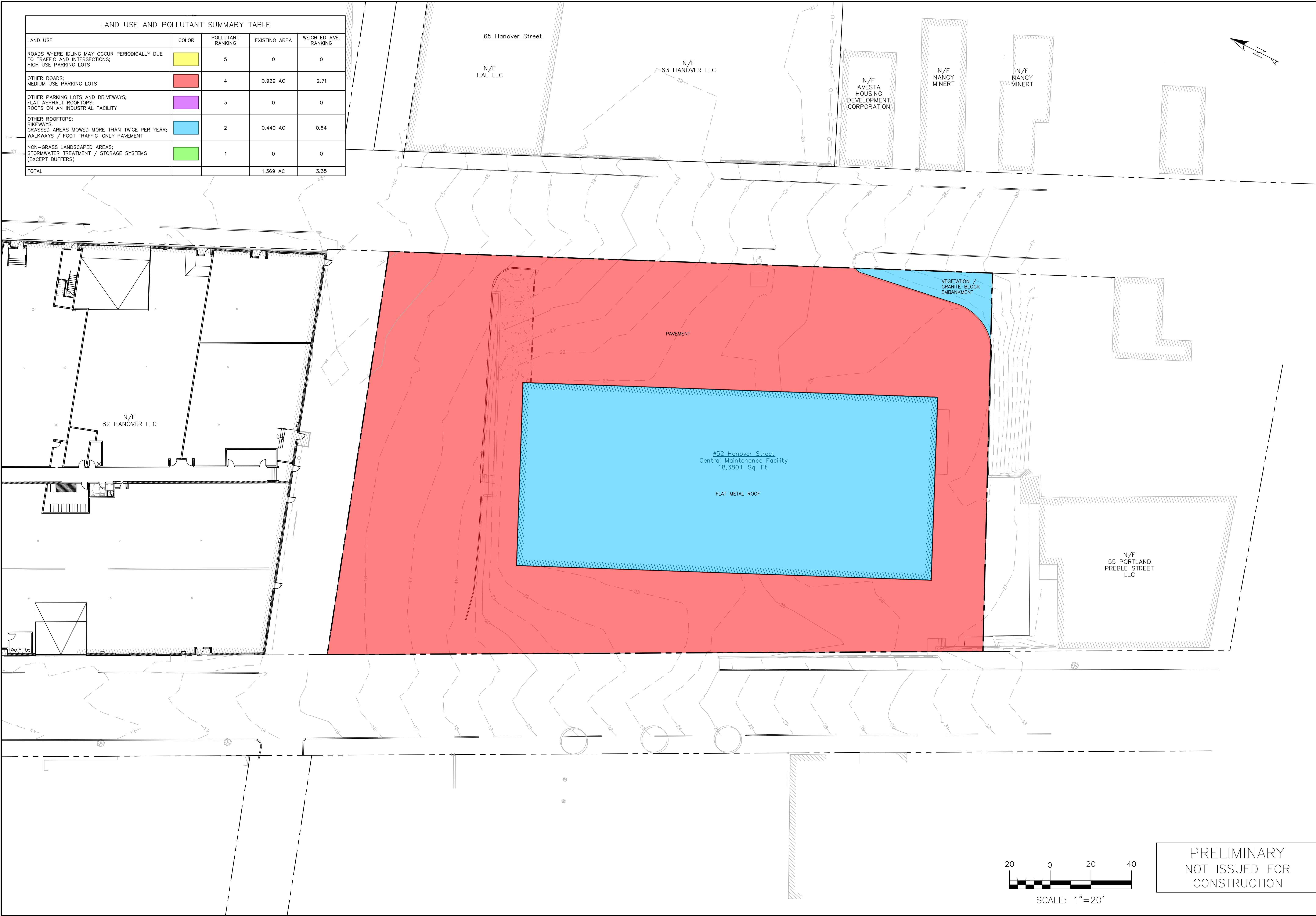
The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way. Overall, the project will provide an improvement to stormwater runoff and overall management from several perspective as outlined above.

ATTACHMENTS

Attachment 1: Pre-Development Redevelopment Exhibit
Attachment 2: Post-Development Redevelopment Exhibit
Attachment 3: Soils Map



LAND USE AND POLLUTANT SUMMARY TABLE				
LAND USE	COLOR	POLLUTANT RANKING	EXISTING AREA	WEIGHTED AVE. RANKING
ROADS WHERE IDLING MAY OCCUR PERIODICALLY DUE TO TRAFFIC AND INTERSECTIONS; HIGH USE PARKING LOTS		5	0	0
OTHER ROADS; MEDIUM USE PARKING LOTS		4	0.929 AC	2.71
OTHER PARKING LOTS AND DRIVEWAYS; FLAT ASPHALT ROOFTOPS; ROOFS ON AN INDUSTRIAL FACILITY		3	0	0
OTHER ROOFTOPS; BIKEWAYS; GRASSED AREAS MOWED MORE THAN TWICE PER YEAR; WALKWAYS / FOOT TRAFFIC-ONLY PAVEMENT		2	0.440 AC	0.64
NON-GRASS LANDSCAPED AREAS; STORMWATER TREATMENT / STORAGE SYSTEMS (EXCEPT BUFFERS)		1	0	0
TOTAL			1.369 AC	3.35



ISSUED FOR
XXXX

BY
XXX
22/02/22

DRAWING NAME
STORMWATER MANAGEMENT – EXISTING SURFACE SUMMARY

PROJECT NAME
52 HANOVER REDEVELOPMENT

CLIENT
TOM WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

ENGINEERING, INC.

ACORN

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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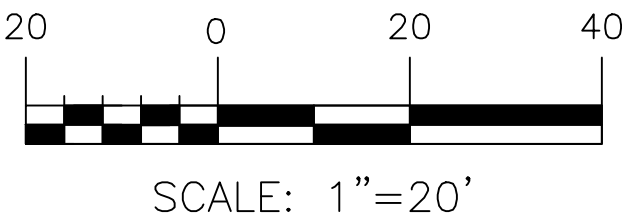
SCALE: AS NOTED

DESIGNED BY: SJL

DRAWN BY: KRB

CHECKED BY: WHS

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PRELIMINARY
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CONSTRUCTION

LAND USE AND POLLUTANT SUMMARY TABLE				
LAND USE	COLOR	POLLUTANT RANKING	EXISTING AREA	WEIGHTED AVE. RANKING
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OTHER PARKING LOTS AND DRIVEWAYS; FLAT ASPHALT ROOFTOPS; ROOFS ON AN INDUSTRIAL FACILITY		3	0	
OTHER ROOFTOPS; BIKEWAYS; GRASSED AREAS MOWED MORE THAN TWICE PER YEAR; WALKWAYS / FOOT TRAFFIC-ONLY PAVEMENT		2	1.289 AC.	1.88
NON-GRASS LANDSCAPED AREAS; STORMWATER TREATMENT / STORAGE SYSTEMS (EXCEPT BUFFERS)		1	0.072 AC.	0.05
TOTAL			1.369 AC	1.96



ISSUED FOR
PRE APP

BY
DATE
WHS
7/16/20

STORMWATER MANAGEMENT –
PROPOSED SURFACE SUMMARY

52 HANOVER REDEVELOPMENT

TOM WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

DRAWING NAME:
PROJECT NAME:
CLIENT:

ENGINEERING, INC.

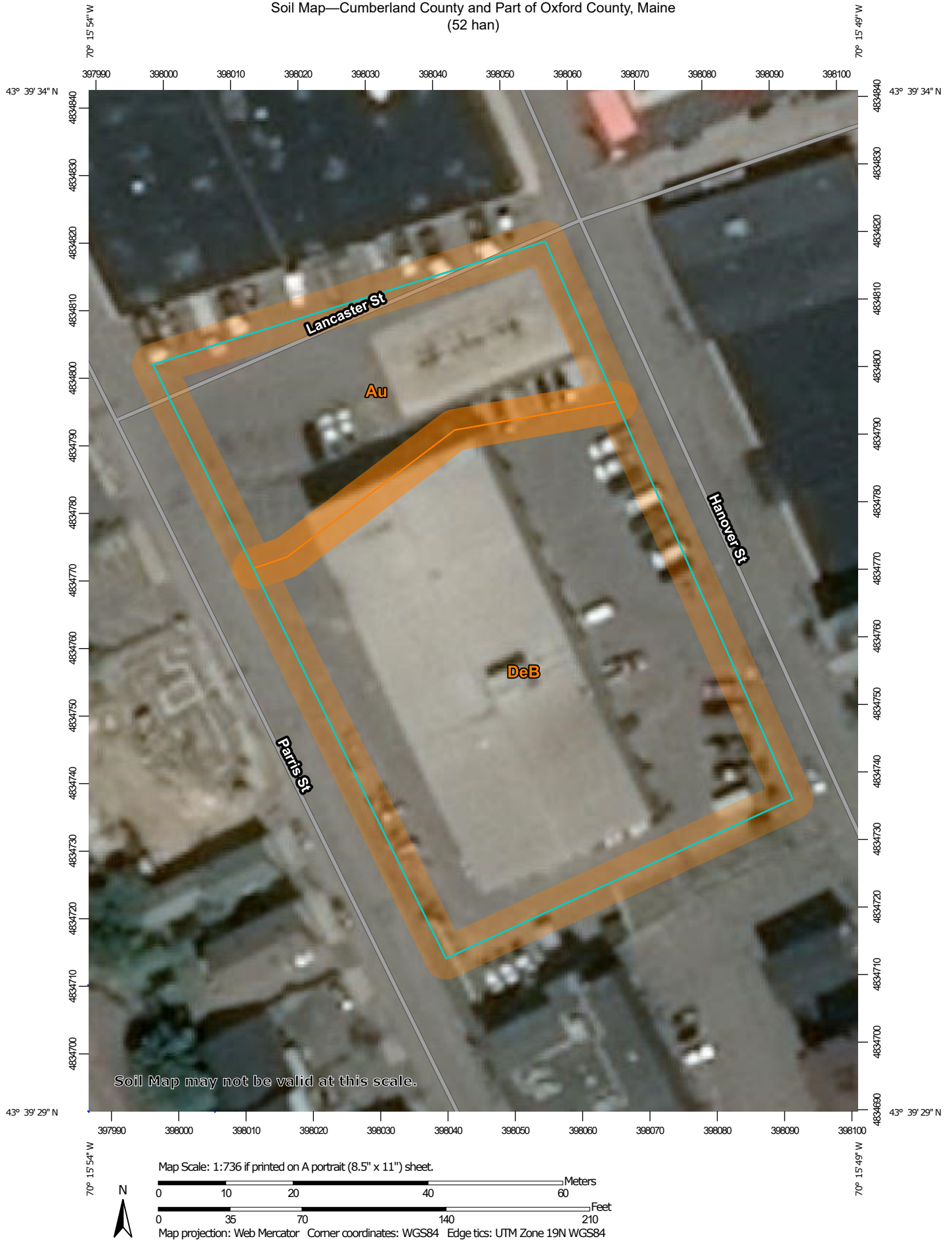
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DESIGNED BY: SJL
DRAWN BY: KRB
CHECKED BY: WHS

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Soil Map—Cumberland County and Part of Oxford County, Maine
(52 han)



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 17, Jun 5, 2020

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
Au	Au Gres loamy sand	0.4	29.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	1.0	70.5%
Totals for Area of Interest		1.4	100.0%

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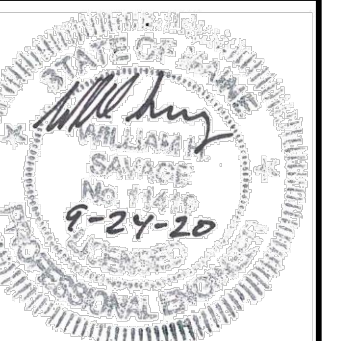
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LOUI WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

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CHECKED BY:	WHS



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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.

- CIVIL SITE NOTES:

3. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO ACORN TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP, ERECTION, AND CONSTRUCTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ACORN'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 ACORN OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE 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. PRIOR TO BACKFILL,, PROVIDE CURING OF CONCRETE FOR 28 DAYS OR AS DIRECTED BY MATERIALS TESTING ENGINEER.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE, IF APPLICABLE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. ACORN BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND SITE OBSERVATION VISITS DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.
14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650-652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).
15. ALL TRENCH PAVEMENT REPAIR SHALL BE COMPLETED WITH THE USE OF A STREET PAYER WITH A SCREEN WIDTH CAPABLE OF SPANNING THE FULL WIDTH OF THE TRENCH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. ALL SITE DRAINAGE-RELATED WORK SHALL BE REVIEWED BY ACORN ENGINEERING.
3. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT. 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.

- 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 CONDITIONS SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR TO ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN — LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND, A MDEP STORMWATER MANAGEMENT PERMIT ADMINISTERED BY THE CITY OF PORTLAND UNDER THEIR DELEGATED REVIEW, AND A MAINE CONSTRUCTION GENERAL PERMIT.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

1. 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 ACORN ENVIRONMENTAL OR APPROVED EQUIVALENT. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
2. 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 ADJACENT LAND OWNERS. PRIOR TO THE CONTRACTOR FINISHING THE WORK, THEY SHALL PROVIDE ACORN WITH 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.
3. 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.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.
5. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
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.

1. DISTURBED AREAS ARE DEFINED AS THOSE SURFACES WHERE EXISTING VEGETATION OR STRUCTURES HAVE BEEN REMOVED, EXPOSING NATIVE SOIL TO THE ELEMENTS.
2. ALL ROUTINE WORK ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
3. 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.
4. 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.
5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENTATION CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
6. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
7. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

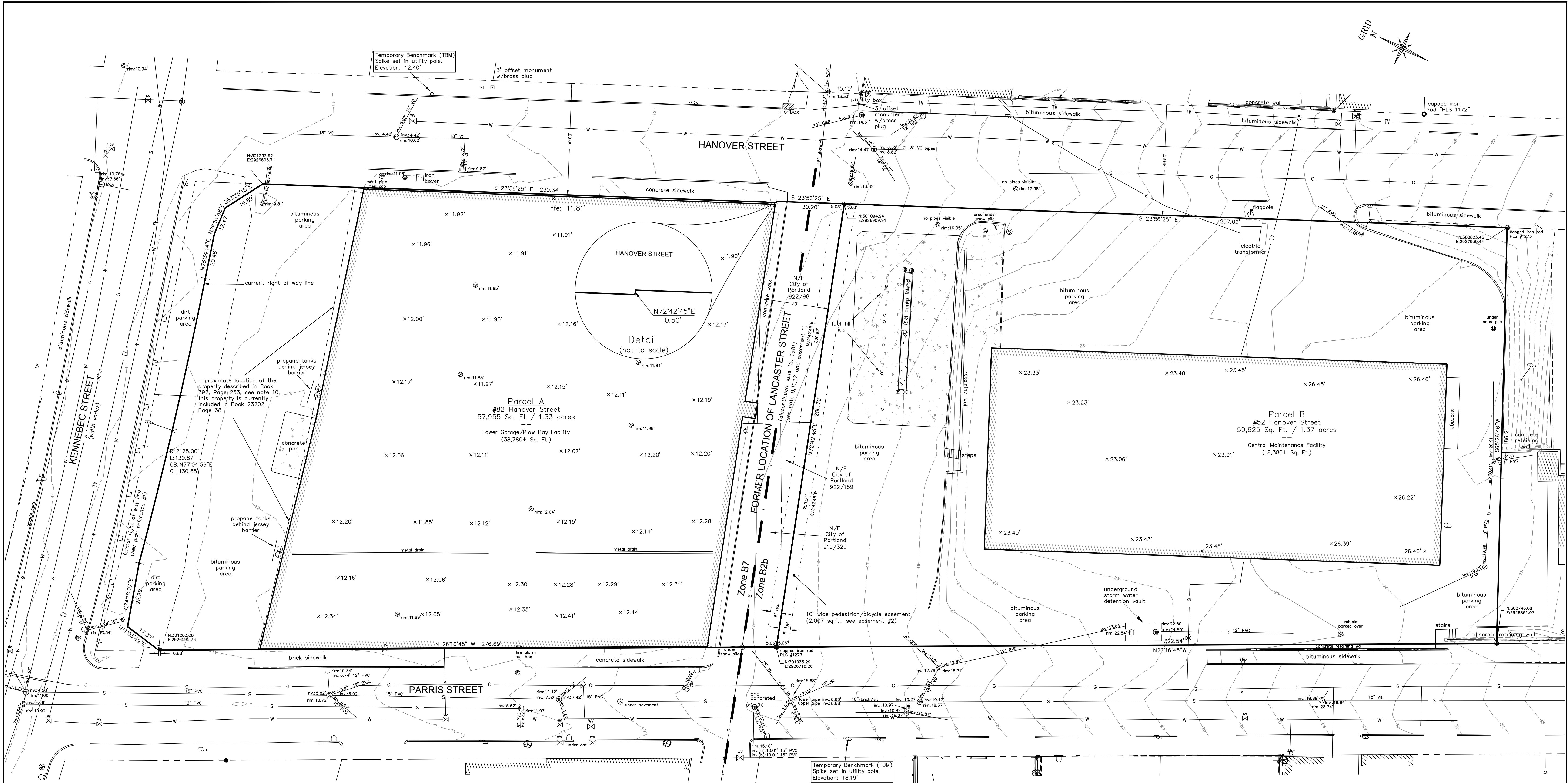
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

- 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.
- 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.
- SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
- CONTRACTOR TO PROVIDE 5.5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
- THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN WITHIN THE PLAN SET.
- WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE", MOST RECENT REVISION.
- 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.
- 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.
- ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 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.
- COORDINATE EXIT POINT FOR SECONDARY UTILITY SERVICES WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN WITHIN THE UTILITY PLAN.
- 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.
- 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.
- ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED PIPE LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS OR RETAINER GLANDS. RETAINER GLANDS ALLOWED FOR DUCTILE IRON PIPE ONLY. PROVIDE ALL BENDS, HORIZONTAL AND VERTICAL, AS REQUIRED TO MEET THE GRADES AND ALIGNMENTS INDICATED ON THE DRAWINGS.
- ALL WASTEWATER PIPING, EXCLUDING BUILDING DRAINS, AND ALL PRESSURIZED PIPING, TO INCLUDE WATER MAINS, INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE.
- WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO ENSURE A COMPLETE AND PROPERLY FUNCTIONING CONNECTION. CONTRACTOR TO VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. ADAPTERS AND FITTINGS ARE INCIDENTAL TO THE PIPE INSTALLATION.
- WHENEVER POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A WATER LINE CROSSES UNDER THE WASTEWATER LINE, A FULL LENGTH OF WASTEWATER PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.
- THE CONTRACTOR SHALL BE ANTICIPATE THAT THE NATIVE SILT AND CLAY SOILS WILL NOT BE SUITABLE FOR PIPE TRENCH BACKFILL IN PAVED AREAS.
- GROUNDWATER SHALL BE CONTROLLED TO A LEVEL OF AT LEAST ONE FOOT BELOW SUBGRADE OF THE PIPE OR STRUCTURE. THE CONTRACTOR SHALL MAINTAIN THE LOWERED GROUNDWATER LEVEL UNTIL CONSTRUCTION HAS BEEN COMPLETED TO SUCH AN EXTENT THAT THE STRUCTURES OR PIPES WILL NOT BE FLOATED OR OTHERWISE DAMAGED.
- EXCAVATION TO SUBGRADE IN NATIVE SILT AND CLAY SHALL BE COMPLETED WITH A SMOOTH EDGE BUCKET TO MINIMIZE SUBGRADE DISTURBANCE.
- ALL ADJUSTMENTS TO FINISHED GRADE ARE TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM STRUCTURES THAT REQUIRE ADJUSTMENT WITH THE ENGINEER OR OWNERS REPRESENTATIVE PRIOR TO ADJUSTING FRAMES.

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:

- 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. 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
3. 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.
4. A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY HAS BEEN COMPLETED BY CREDERE ASSOCIATES, LLC DATED, 4/5/17. A PHASE II – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY HAS BEEN COMPLETED BY BEACON ENVIRONMENTAL CONSULTANTS, LLC DATED, 2/7/18.
5. CONTRACTOR TO REFER TO VRAP LETTER AND SOIL MANAGEMENT PLAN.

PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION



NOTES

- Book and Page references are to the Cumberland County Registry of Deeds.
- Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone based on a digital drawing file provided by the City of Portland.
- Elevations are based the City of Portland datum, tied to City TBM #59, "Top of granite monument @ drill hole, below iron drip box, in concrete sidewalk ramp at southwest corner Alder/Kennebec. El.=10.145'.
- Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.
- Properties lie within Zone C based on FIRM Community #230051 Panel #0013-B, dated July 17, 1988. They do not lie within a special flood hazard area.
- Boundary and right of way information shown per plan references 1, 2, & 3.
- Project area was covered by snow and ice at the time of the survey and some features may have been obscured and not shown on this plan.
- Right of way lines shown per electronic drawing file provided by the City of Portland Department of Engineering. See plan reference #4.
- The portion of Lancaster Street shown was discontinued June 15, 1981, City of Portland records, Volume 98, Page 187. This discontinuance does not expressly exclude public rights over the discontinued street. According to 23 M.R.S.A. 3026(1) a street discontinuance after September 3, 1965, leaves an automatic public easement unless specific language states otherwise. As set forth in a Certificate of Discontinuance dated July 20, 2018 recorded in Book____, Page____, the Portland City Council voted to extinguish the public easement within the former location of Lancaster Street as part of this subdivision.
- The portion of the property described in Book 23202, Page 38 was conveyed to Portland and Rochester Railroad Company (Portland Terminal Company) by N. L. Woodbury in Book 392, Page 253, April 3, 1872. This conveyance is a pull claim deed that conveys a "The right of way and use for their (P&RRC) railroad". This deed ends with the statement "Meaning and intending to convey the right only to occupy the foresaid premises for the purpose of their Railroad.....". Obtaining a title opinion concerning this portion of the property is recommended.
- A sewer easement is reserved by the City of Portland over the discontinued portion of Lancaster Street per the June 15, 1981 discontinuance found in the City of Portland records Volume 98, Page 187.
- Parcel A (82 Hanover Street) is subject to a restrictive covenant pertaining to the use of the former Lancaster Street right-of-way as set forth in a deed for Parcel A recorded in Book____, Page____.

PLAN REFERENCES

- Plan of Standard Boundary Survey, 82 Hanover Street, made for City of Portland by Titcomb Associates dated November 1, 2017.
- Plan of Standard Boundary Survey, 52 Hanover Street, made for City of Portland by Titcomb Associates dated November 2, 2017.
- Plan of Subdivision Plat made for City of Portland by Titcomb Associates, dated November 29, 2017 as revised through July 24, 2018, recorded in Plan Book 218, Page 342.
- Digital Drawing File of Kennebec Street and surrounding streets provided by the City of Portland Department of Engineering.
- City of Portland Property Plan #6.
- City of Portland Vault Plan #195/11.
- City of Portland Vault Plan #210/13.

OWNER OF RECORD

City of Portland
389 Congress Street
Portland, ME 04101

Book 3197, Page 20
Book 3197, Page 422
Book 3199, Page 832
Book 3200, Page 773
Book 3378, Page 214
Book 3419, Page 109
Book 3541, Page 11
Book 3771, Page 344
Book 4740, Page 210
Book 6246, Page 337
Book 6401, Page 196
Book 23202, Page 38

LEGEND

Monument - found	Iron marker - found	Nail w/washer - found	Property line (abutter)	Right of way line	Chain link fence	Guard rail	Edge of pavement	Edge of gravel	Curb	Sign	Lamp or light pole	Utility pole	Guy wire	Gas valve	Water valve	Water shutoff	Fire hydrant	Sewer manhole	Telephone manhole
○	●	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

EASEMENTS

- The former location of Lancaster Street is subject to a utility easement retained by the City as set forth in a Certificate of Discontinuance dated July 20, 2018 recorded in Book____, Page____.
- An approximately 5 foot wide portion of Parcel A and an approximately 5 foot wide portion of Parcel B are subject to an approximately 10 foot wide public pedestrian and bicycle easement retained by the City of Portland as set forth in a deed for Parcel A recorded in Book____, Page____ and a deed for Parcel B to be recorded upon the City's sale of Parcel B.
- The portion of the property described in Book 23202, Page 38 is subject to use restrictions as set forth in Book 16707, Page 206 and modified in Book 29610, Page 223.

CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

Rex J. Croteau, P.L.S. #2273

SCALE

1" = 20'

20 0 20 40

Rev. 1	8/14/2018	Updating R/W, easements, notes.	JMS
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PLAN OF
Existing Conditions

52 & 82 Hanover Street

Portland, Maine

MADE FOR
Acorn Engineering, Inc.

154 York Street, Suite 2

Portland, Maine

JOB #217075

DATE: January 25, 2018

SCALE: 1" = 20'

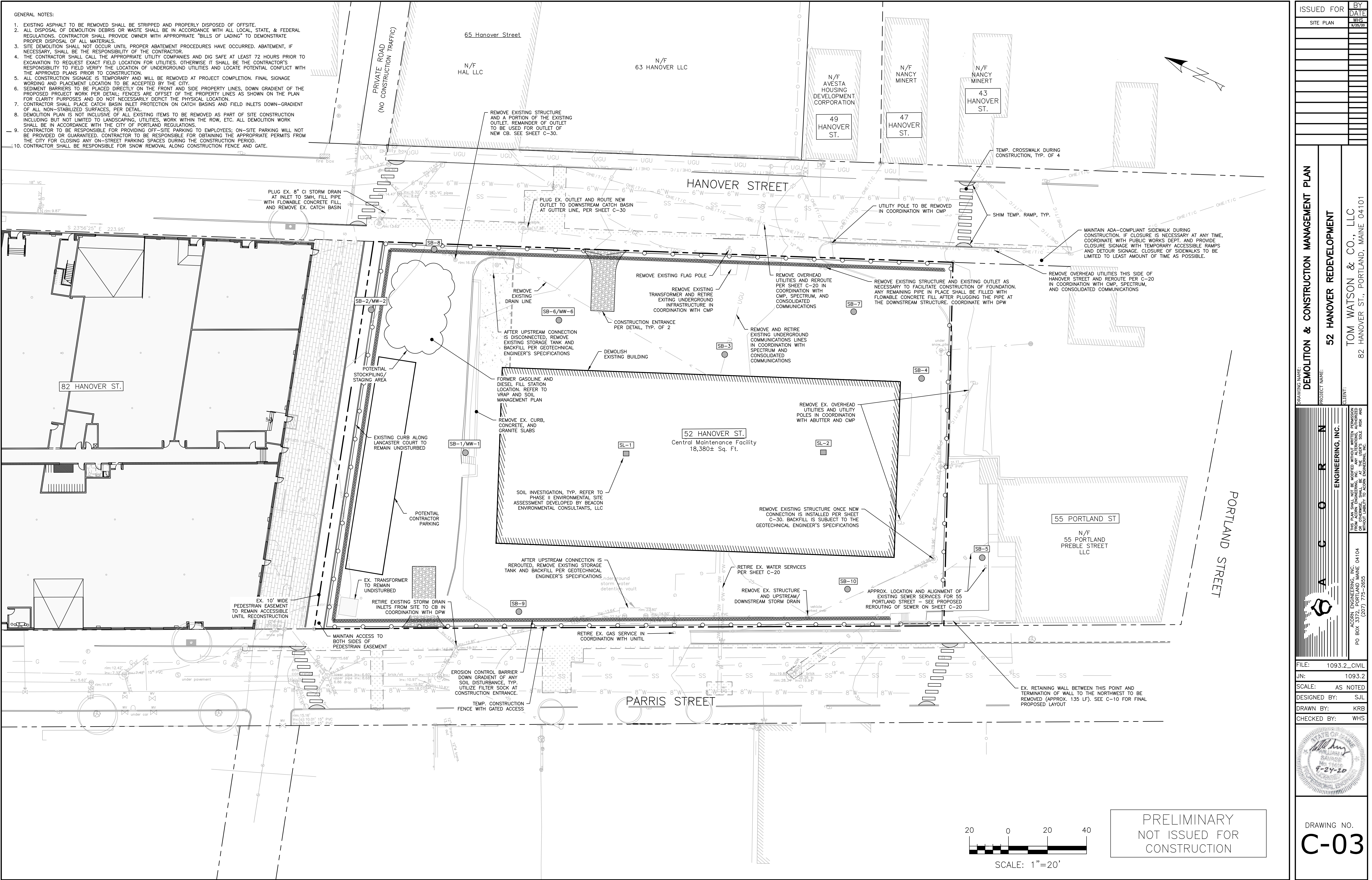
BOOK #906

217075_Topo R1.dwg

133 Gray Road, Falmouth, Maine 04105

(207)797-9199 www.titcombsurvey.com

Page 281



ISSUED FOR		BY
SITE PLAN		WHS
		9/25/20

DRAWING NAME:	
DEMOLITION & CONSTRUCTION MANAGEMENT PLAN	

PROJECT NAME:	
52 HANOVER REDEVELOPMENT	

CLIENT:	
TOM WATSON & CO., LLC	
82 HANOVER ST., PORTLAND, MAINE 04101	

ACORN ENGINEERING, INC.	
PO BOX 3372, PORTLAND MAINE 04104	
(207) 775-2655	

FILE:	
1093.2_CIVIL	

JN:	
1093.2	

SCALE:	
AS NOTED	

DESIGNED BY:	
SUL	

DRAWN BY:	
KRB	

CHECKED BY:	
WHS	

DRAWING NO.	
C-03	

GENERAL NOTES:

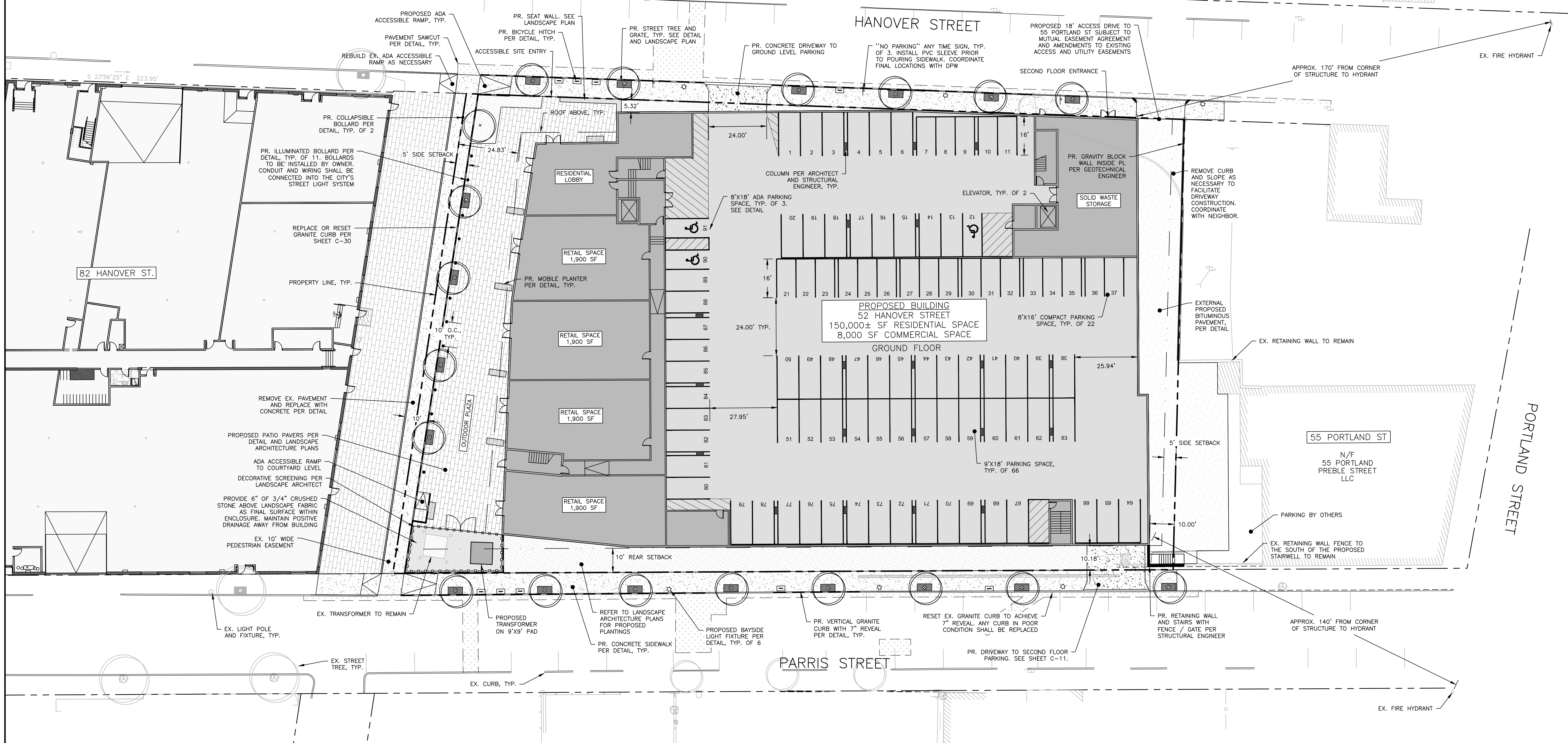
1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. UPON COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.

PARKING SUMMARY: GROUND	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	66
COMPACT (8'X16')	22
ADA (8'X18')	3
TOTAL SPACES	91

SPACE AND BULK STANDARDS		
ZONE: B--2b	REQUIRED	PROPOSED
MINIMUM LOT SIZE	NONE	59,625 SF
MINIMUM STREET FRONTAGE	NONE	250 FT.
MINIMUM FRONT YARD SETBACK	NONE	0 FT
MINIMUM REAR YARD SETBACK	10 FT	10.18 FT
MINIMUM SIDE YARD SETBACK	5 FT	10.00 FT
MAXIMUM LOT COVERAGE	100%	95%
MAXIMUM RESIDENTIAL DENSITY	435 SF PER D.U.	331 SF PER D.U. *
MAXIMUM BUILDING HEIGHT	85 FT	85 FT
VEHICLE PARKING	194**	194
BICYCLE PARKING	78	80

* REFER TO SEC. 14-487(G) FOR ALLOWABLE 25% DENSITY INCREASE FOR ON-SITE WORKFORCE UNITS

** REFER TO PARKING ANALYSIS



PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION



SCALE: 1"=20'

[illegible]

SITE PLAN -- GROUND FLOOR

TOM WATSON & CO., LLC
382 HANOVER ST., PORTLAND, MAINE 04101

PROJECT NAME:

1. **Introduction**

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE:	10932	CIVIL
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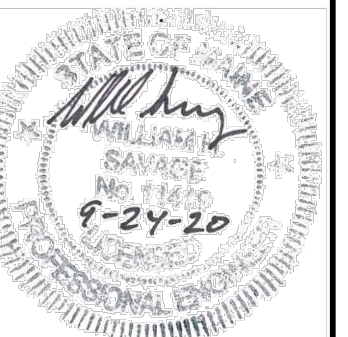
N:	1093.2
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SALE:	AS NOTED
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DESIGNED BY: SJL

RAWN BY: KRB

HECKED BY: WHS



DRAWING NO.

C-10

GENERAL NOTES:

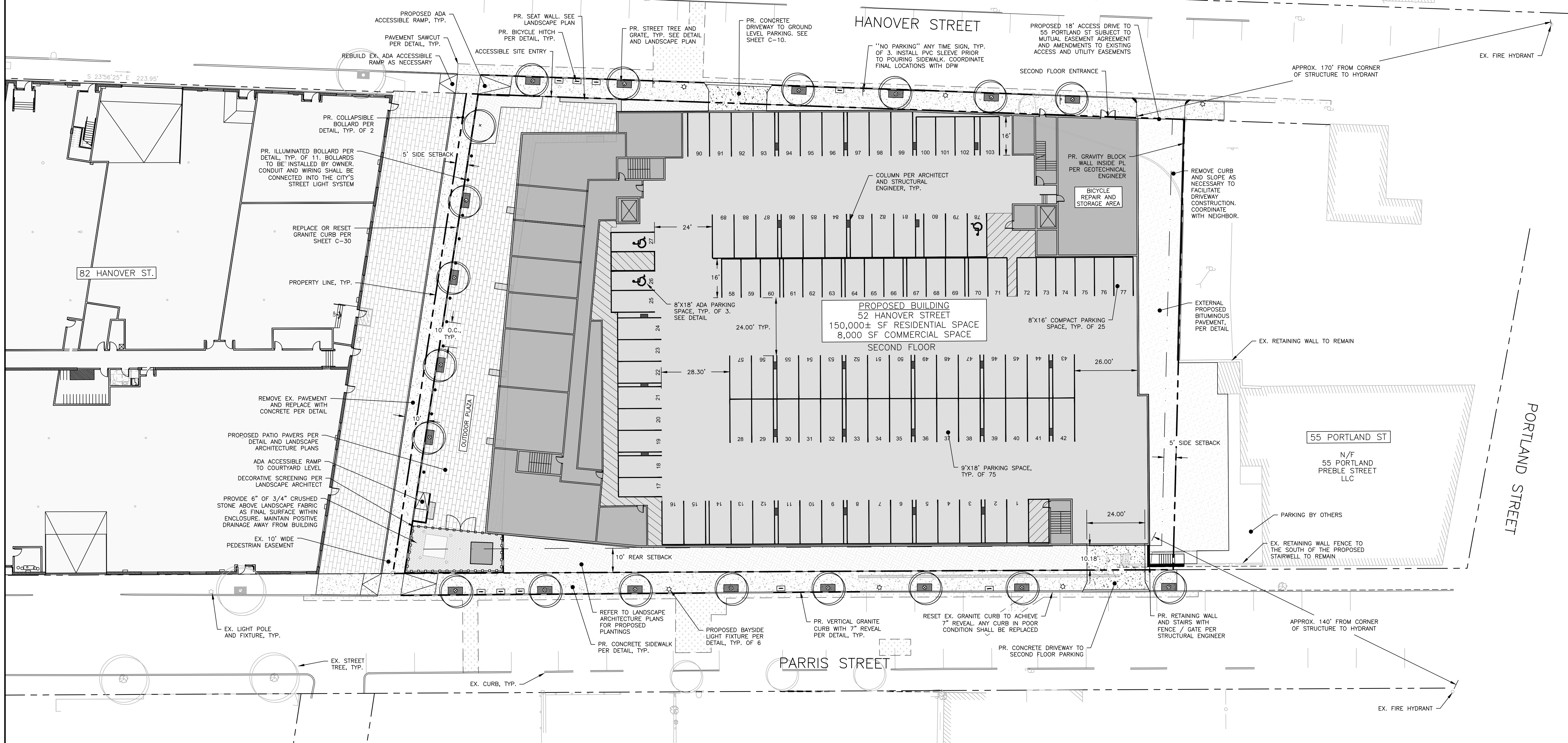
1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CUTO TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.

PARKING SUMMARY: 2ND FLOOR	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	75
COMPACT (8'X16')	25
ADA (8'X18')	3
TOTAL SPACES	103

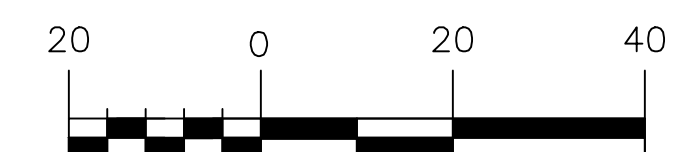
SPACE AND BULK STANDARDS		
ZONE: B--2b	REQUIRED	PROPOSED
MINIMUM LOT SIZE	NONE	59,625 SF
MINIMUM STREET FRONTAGE	NONE	250 FT.
MINIMUM FRONT YARD SETBACK	NONE	0 FT
MINIMUM REAR YARD SETBACK	10 FT	10.18 FT
MINIMUM SIDE YARD SETBACK	5 FT	9.95 FT
MAXIMUM LOT COVERAGE	100%	95%
MAXIMUM RESIDENTIAL DENSITY	435 SF PER D.U.	331 SF PER D.U. *
MAXIMUM BUILDING HEIGHT	85 FT	85 FT
VEHICLE PARKING	194**	194
BICYCLE PARKING	78	80

* REFER TO SEC. 14-487(G) FOR ALLOWABLE 25% DENSITY INCREASE FOR ON-SITE WORKFORCE UNITS

** REFER TO PARKING ANALYSIS



PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION



SCALE: 1"=20'

[illegible]

SITE PLAN – SECOND FLOOR

52 HANOVER REDEVELOPMENT

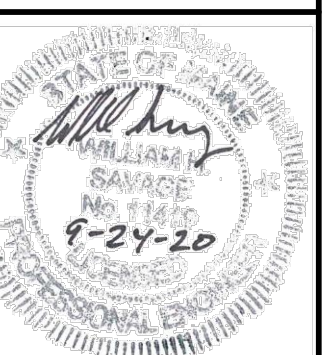
TOM WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

PROJECT NAME: _____

CLIENT: _____

	A C O R N	E N G I N E E R I N G, I N C.
PO BOX 3372, PORTLAND MAINE (207) 775-2655	THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF THE ENGINEER. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION OF ACORN ENGINEERING, INC. WITHOUT LIABILITY TO ACORN ENGINEERING, INC.	

FILE:	1093.2_CIVIL
NO:	1093.2
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	KRB
CHECKED BY:	WHS



DRAWING NO.
C-11

N/F
Bopo, LLC
32354/176

GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. 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.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.

65 Hanover Street

N/F
HAL LLC

N/F
53 HANOVER LLC

N/F
AVESTA
HOUSING
DEVELOPMENT
CORPORATION

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
TREES				
AR	ACER RUBRUM	RED MAPLE	5	3" CAL
TO	THUJA OCCIDENTALIS	WHITE CEDAR	10	10"-12'
QR	QUERUS RUBRA	RED OAK	14	3" CAL.
SHRUBS / PERENNIALS / GROUNDCOVER / VINES				
ASP	ALLIUM SPS.	GLOBEMASTER	500	BULB
IV	CORNUS SERICEA 'KELSEY'	RED TWIG DOGWOOD	70	5 GAL.
IV	ILEX VERTICILLATA	WINTERBERRY HOLLY	40	7 GAL.
SA	SESLERIA AUTUMNALIS	AUUMN MOOR GRASS	1,270	1 GAL.

SYMBOLS LEGEND

HARDSCAPE

- MASONRY UNIT PAVER
- P.I.P. CONCRETE PAVING CITY STANDARD DETAIL
- CRUSHED STONE
- DECORATIVE UTILITY SCREEN DESIGN TBD

PLANTS

- LOW GROW GROUND COVER OR PERENNIAL GRASSES
- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUB / PERENNIAL
- PROPOSED 10' EVERGREEN TREE
- EXISTING STREET TREE

Soren deNiord Design Studio
43 Wellwood Road
Portland, ME
04103
T: 207-400-2450
E: soren@sorendeniord.com

52 HANOVER STREET
PORTLAND MAINE

No: Revision Date:

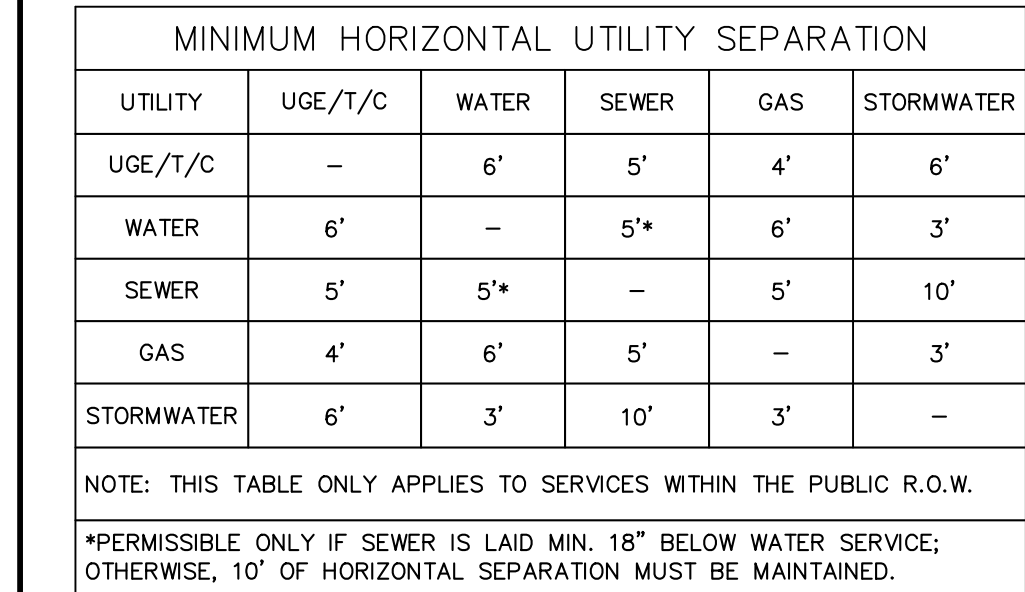
revisions:
date: SEPTEMBER 28, 2020
scale: As Noted
drawn: XX
checked: XX

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LANDSCAPE PLAN

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 DISAPPROVE NO LESS THAN 72 HOURS PRIOR TO EXCAVATION. EXCAVATION OF FIELD LOCATION OF ALL UTILITIES 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 INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY 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. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. **WATER UTILITIES:** FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION AND PRESSURE REDUCERS TO BE 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.

- 6.1. APPROXIMATE LOCATION OF EXISTING WATER MAIN & SERVICE OBTAINED FROM "EXISTING CONDITIONS SURVEY" BY TITCOMB ASSOCIATES, DATED .
- 6.2. WATER SERVICES TO COMPLY WITH THE FOLLOWING MINIMUM SEPARATION DISTANCES:
 - 6.2.1. 10' FROM PROPERTY LINES
 - 6.2.2. 10' FROM STREET TREES
 - 6.2.3. 10' FROM STREET LIGHTWY
 - 6.2.4. 5' FROM EDGE OF DRIVEWAY APRON
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 UNTIL.
8. ELECTRIC UTILITIES: DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF 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 FEEDING LATERALS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.
10. UNLESS THE EXISTING SEWER LATERAL SERVING .55 PORTLAND STREET CONSISTS OF 6" PVC PIPE IN GOOD CONDITION, REMOVE EXISTING LATERAL IN FULL AND UTILIZE TRENCH TO INSTALL NEW 6" PVC SDR 35 SEWER LATERAL FROM PROPOSED SMH TO EXISTING SMH CONNECTION IN PARRIS STREET. TEST PITS FOR INVERTS AND ALIGNMENT SHALL OCCUR PRIOR TO ORDERING STRUCTURES



	ACORN ENGINEERING, INC. P.O. BOX 3372, PORTLAND, MAINE 04104 (207) 775-2855		THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR NOT, SHALL BE THE RESPONSIBILITY OF THE USER, WITHOUT LIABILITY TO ACORN ENGINEERING, INC.	
	DRAWING NAME: UTILITY PLAN			
	PROJECT NAME: 52 HANOVER REDEVELOPMENT			
	CLIENT: TOM WATSON & CO., LLC 82 HANOVER ST., PORTLAND, MAINE 04101			
	ISSUED FOR: ATS			
	BY: WHS DATE: 9/25/2020			
	SITE PLAN: WHS DATE: 9/25/2020			
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JN: 1093.2

SCALE: AS NOTED

DESIGNED BY: SJL

DRAWN BY: KRB

CHECKED BY: WHS

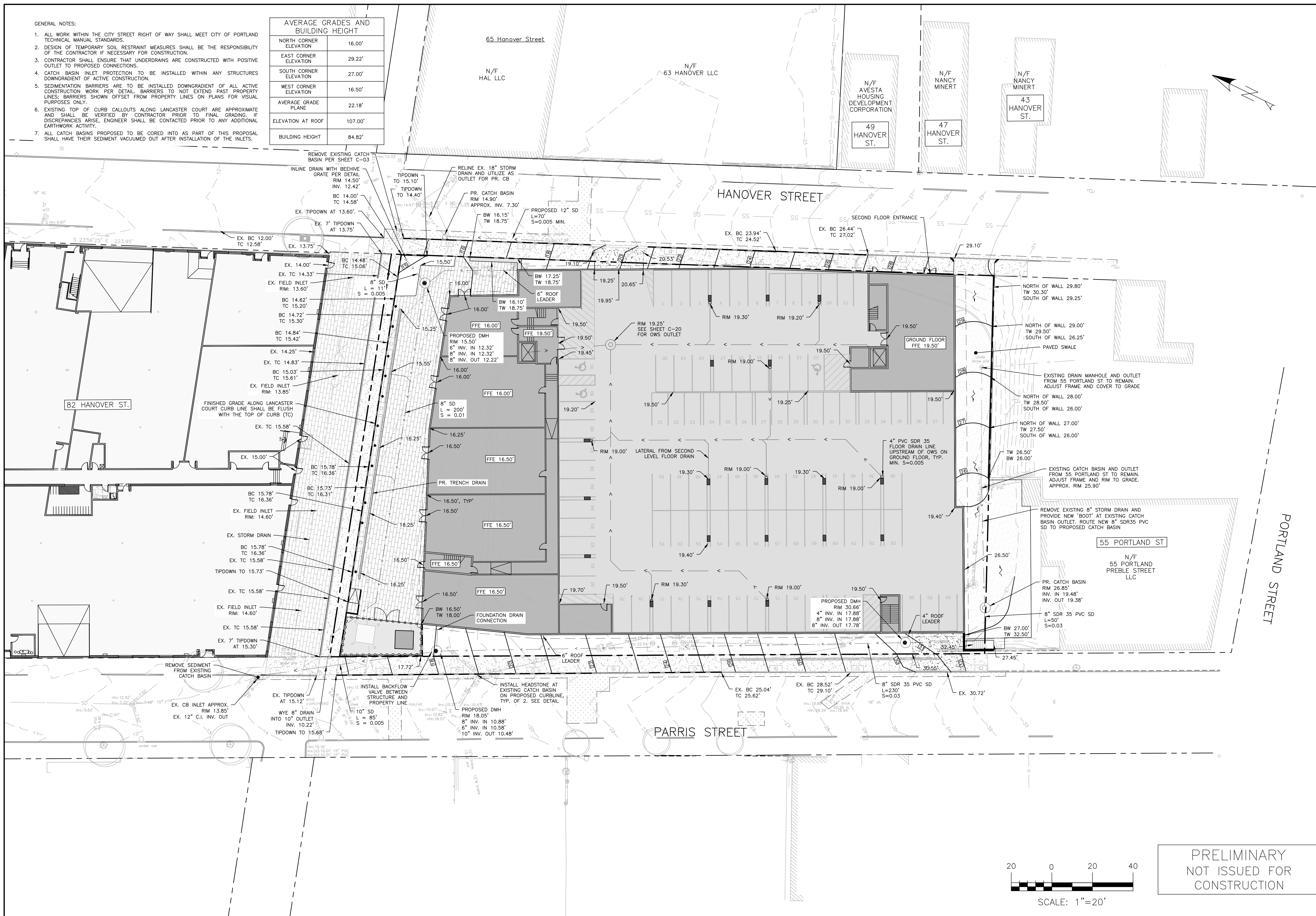


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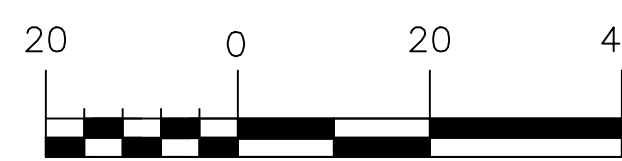
C-20

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF REQUIRED FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITH ANY STRUCTURES DOWNGRADDED OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS TO BE INSTALLED DOWNGRADDED OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. EXISTING CURB OF CURB CALLOUTS ALONG LANCASTER COURT ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO FINAL GRADING. IF DISCREPANCIES ARISE, ENGINEER SHALL BE CONTACTED PRIOR TO ANY ADDITIONAL CONSTRUCTION ACTIVITY.
7. ALL CATCH BASINS PROPOSED TO BE CORED INTO AS PART OF THIS PROPOSAL SHALL HAVE THEIR SEDIMENT VACUUMED OUT AFTER INSTALLATION OF THE INLETS.

AVERAGE GRADES AND BUILDING HEIGHT	
NORTH CORNER ELEVATION	16.00'
EAST CORNER ELEVATION	29.22'
SOUTH CORNER ELEVATION	27.00'
WEST CORNER ELEVATION	16.50'
AVERAGE GRADE PLANE	22.18'
ELEVATION AT ROOF	107.00'
BUILDING HEIGHT	84.82'

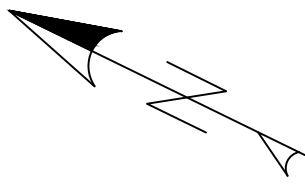


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CONSTRUCTION



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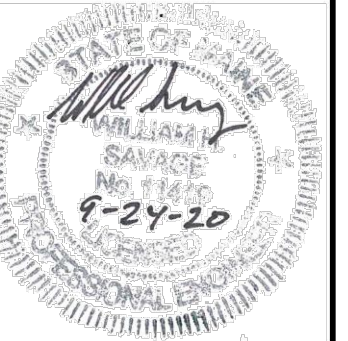
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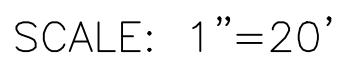
PROJECT NAME: **52 HANOVER REDEVELOPMENT**

CLIENT: **TOM WATSON & CO., LLC**
82 HANOVER ST., PORTLAND, MAINE 04101

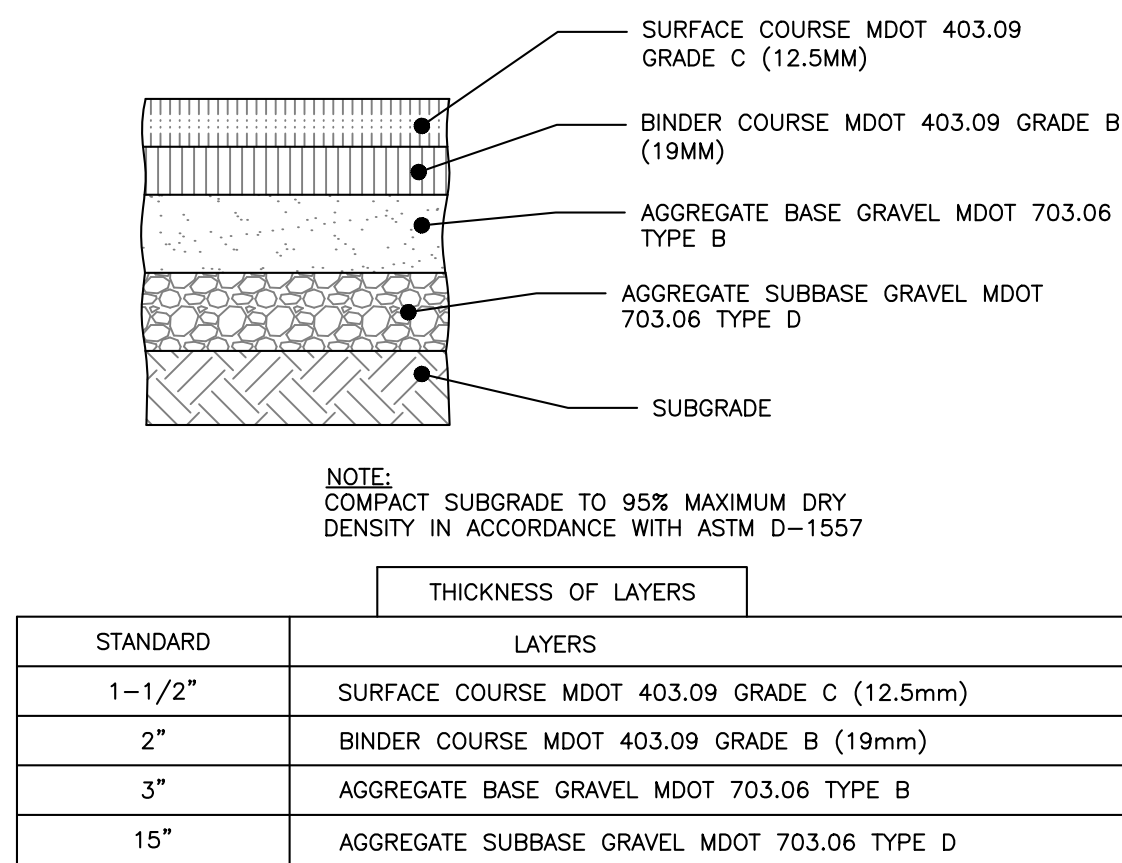
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DRAWN BY:	KRB
CHECKED BY:	WHS



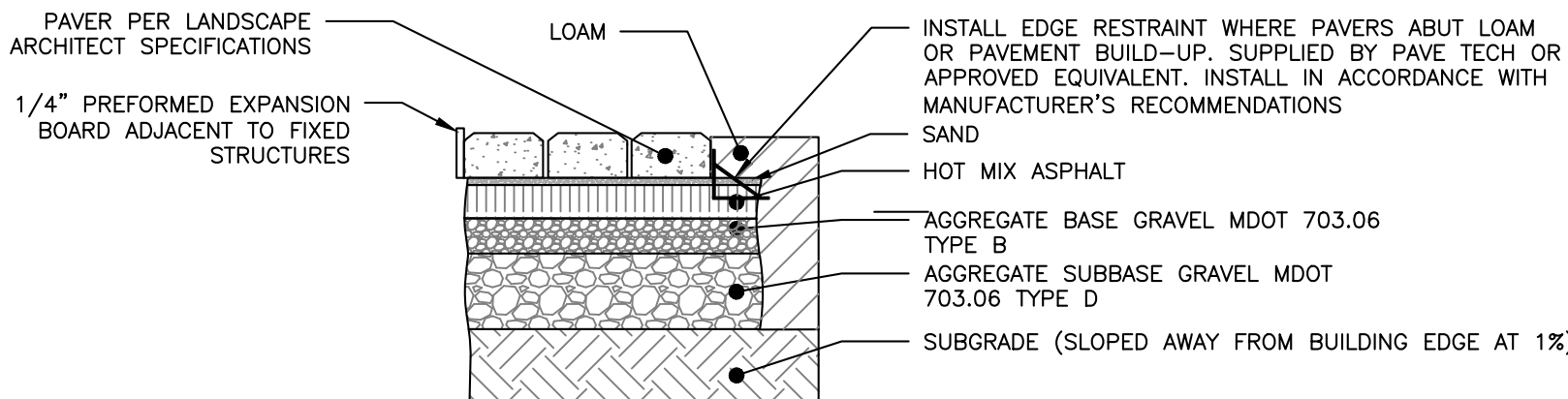
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BITUMINOUS PAVEMENT PROFILE: PARRIS AND HANOVER
NOT TO SCALE

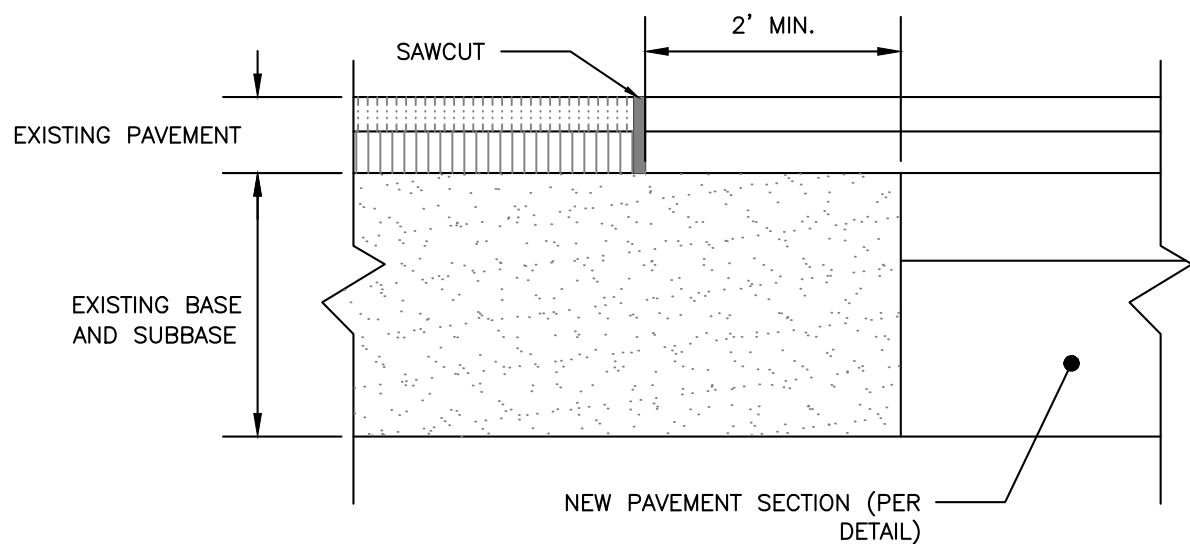


NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. SURFACE AND AGGREGATE MATERIALS SHALL MEET THE CITY OF PORTLAND STANDARDS IN ADDITION TO MDOT STANDARDS.
3. SAND BED AS NECESSARY TO FINISH GRADE

THICKNESS OF LAYERS	
STANDARD	LAYERS
1.5"	HOT MIX ASPHALT
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
10"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

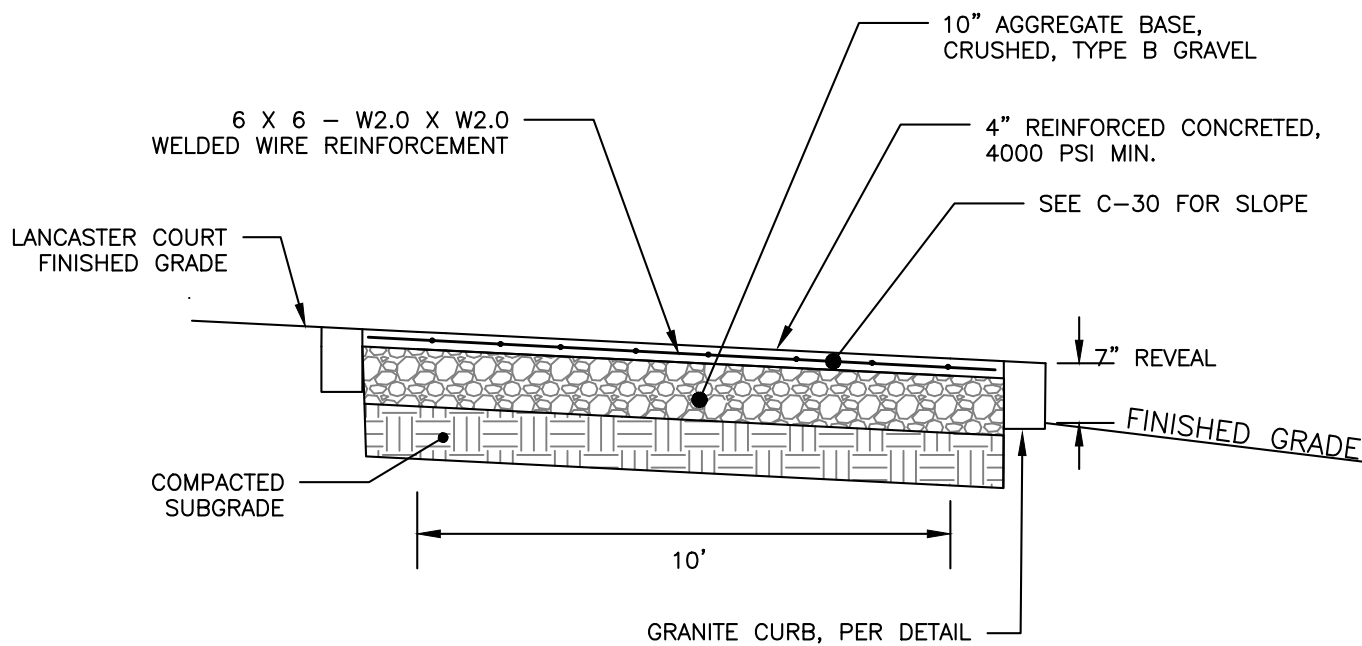
PAVER PROFILE
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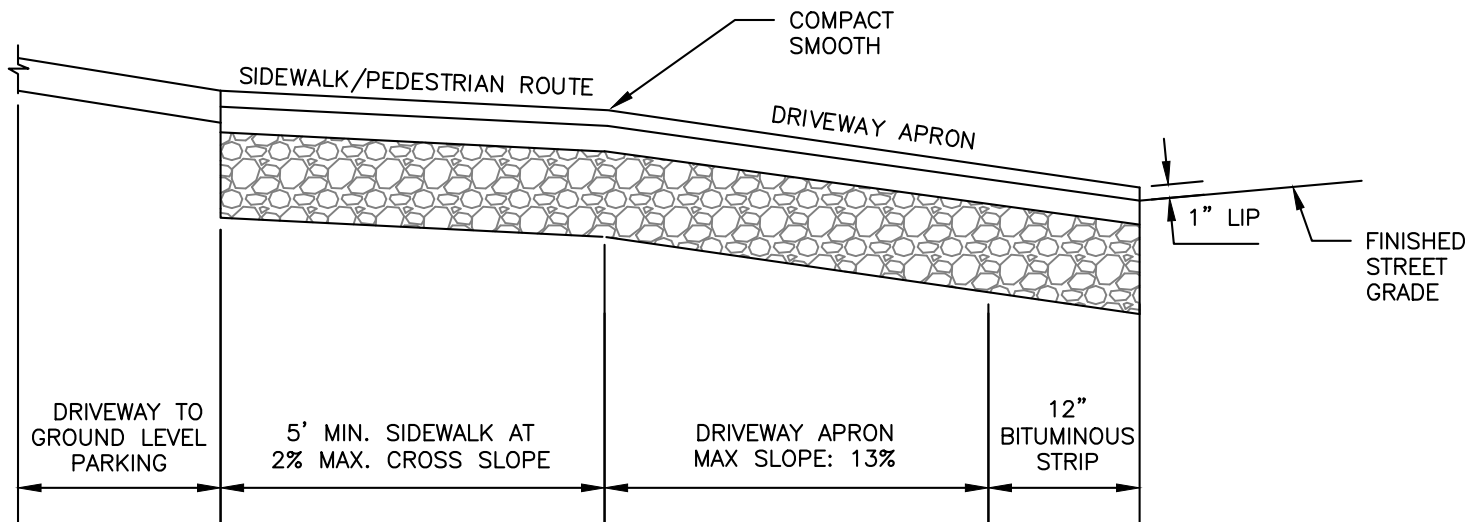
NOTES:

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 BITUMINOUS PAVEMENT, INTERNAL PARKING LOT DETAIL AT A MINIMUM OR THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.

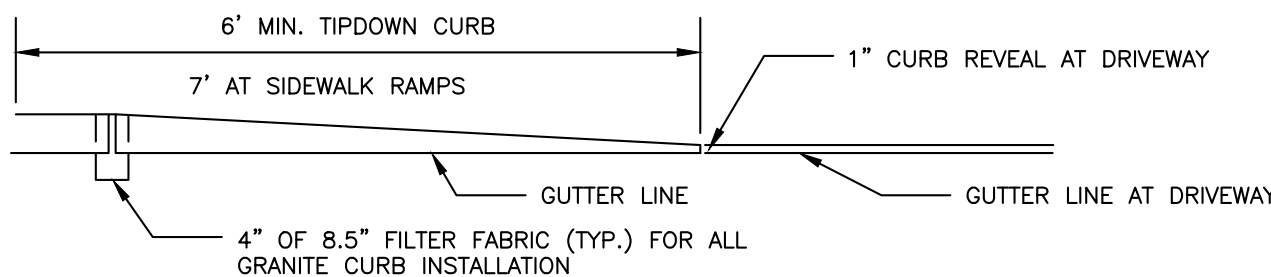
PAVEMENT SAWCUT DETAIL
NOT TO SCALE



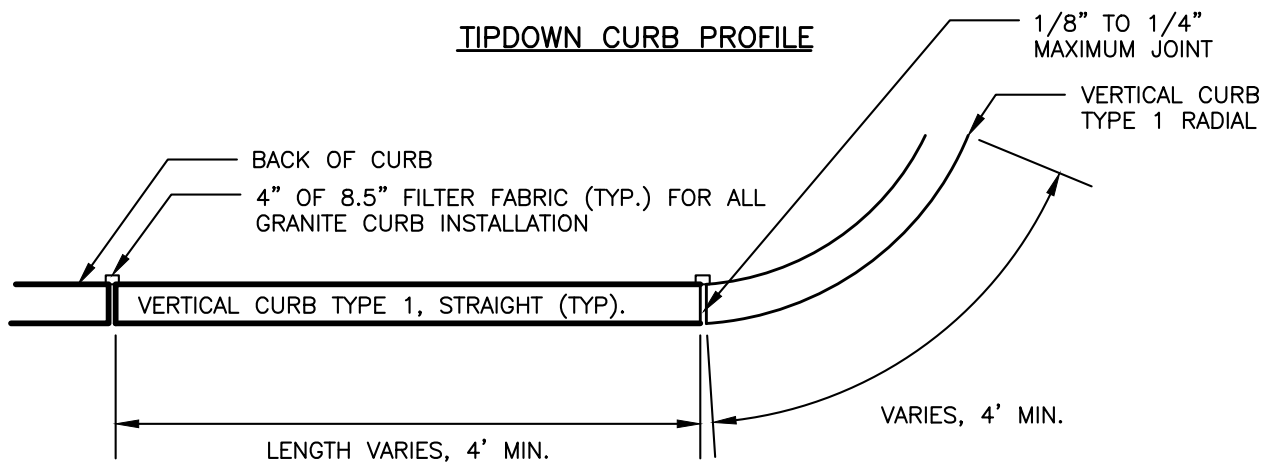
REINFORCED CONCRETE SIDEWALK
NOT TO SCALE



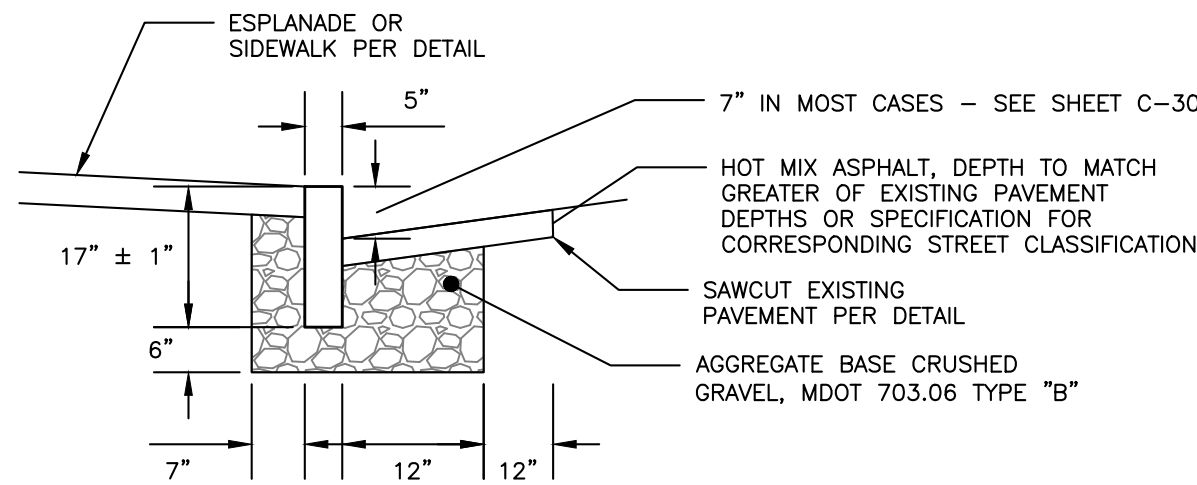
DRIVEWAY APRON SECTION
NOT TO SCALE



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

NOTES:

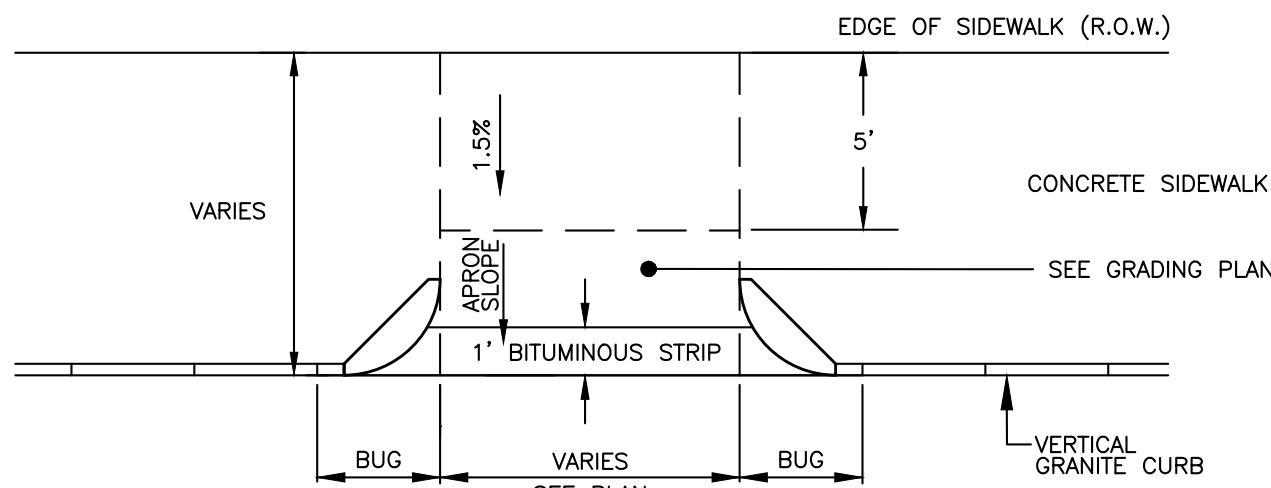
1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION
IN EXISTING STREETS DETAIL
NOT TO SCALE

1. AT A MINIMUM, TESTING SHALL CONSIST OF ENTRAINED AIR AND SLUMP TESTS ON SITE PRIOR TO POURING THE SIDEWALKS. ENTRAINED AIR TESTS SHALL BE DONE IN ACCORDANCE WITH AASHTO T152. TEST FIRST TWO LOADS AND EVERY THIRD LOAD THEREAFTER PROVIDED CONSISTENT RESULTS ARE ACHIEVED.
2. WELDED WIRE FABRIC SHALL BE PLACED 2 INCHES ABOVE THE CRUSHED GRAVEL, AND 2 INCHES FROM ALL FINISHED EDGES, EXPANSION JOINTS AND CURBS. ALL FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 1 FOOT AND BE PROPERLY TIED. IF THE CONTRACTOR ELECTS TO USE REBAR, ONLY 4-GAUGE WILL BE ACCEPTABLE. IF THE CONTRACTOR ELECTS TO USE A PRE-MIXED FIBER MESH, A SPECIFICATION SHEET MUST BE SUBMITTED AND PRE-APPROVED BY THE ENGINEER PRIOR TO ITS APPLICATION.
3. SLABS SHALL BE PLACED ALTERNATELY IN LENGTHS NOT TO EXCEED 30 FEET OR AS DIRECTED AND SHALL BE SEPARATED BY AN EXPANSION JOINT OF PREFORMED EXPANSION FILLER 1/2 INCH IN THICKNESS.
4. WHEN CONSTRUCTED ADJACENT TO A BUILDING, RETAINING WALL OR OTHER FIXED STRUCTURE, A 1/4 INCH THICK PREFORMED JOINT FILLER SHALL BE USED BETWEEN THE SLAB AND THE STRUCTURE.
5. THE SIDEWALK SURFACE SHALL BE SCORED INTO BLOCK UNITS NO GREATER THAN 40 SQUARE FEET AS DIRECTED. THE DEPTH OF THE SCORING SHALL BE AT LEAST ONE QUARTER OF THE THICKNESS OF THE SLAB.
6. ANY MATCHING INTO EXISTING SIDEWALKS SHALL BE DONE SO WITH A CLEAN VERTICAL FACE CONNECTION.
7. THE SURFACE SHALL BE FINISHED TO PRODUCE A BROOMLIKE "BRUSHED" PATTERN. NO PLASTERING OF THE SURFACE WITH MORTAR WILL BE PERMITTED. THE FINISH SHALL RESULT IN A SURFACE OF UNIFORM TEXTURE AND COLOR. ALL OUTSIDE EDGES OF THE SLAB AND ALL JOINTS SHALL BE ROUNDED WITH A 1/4 INCH RADIUS EDGING TOOL.
8. CONCRETE SHALL BE CURED FOR 72 HOURS. CURING SHALL BE BY MEANS OF THOMPSON'S WATER SEAL AS MANUFACTURED BY E.A. THOMPSON CO., INC. OF MEMPHIS, TENNESSEE, BOILED LINSEED OIL, WHITE PIGMENTED CURING COMPOUND, OR BY OTHER APPROVED METHODS. CONCRETE SIDEWALK TO BE SEALED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL 28 DAYS AFTER PLACEMENT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
9. GENERAL CONTRACTOR TO COLLECT DELIVERY SLIPS AND TRANSFER TO THE OWNER.
10. REFER TO CITY OF PORTLAND CONCRETE SPECIFICATIONS SECTION 608 FOR MORE INFORMATION.

NOTES:

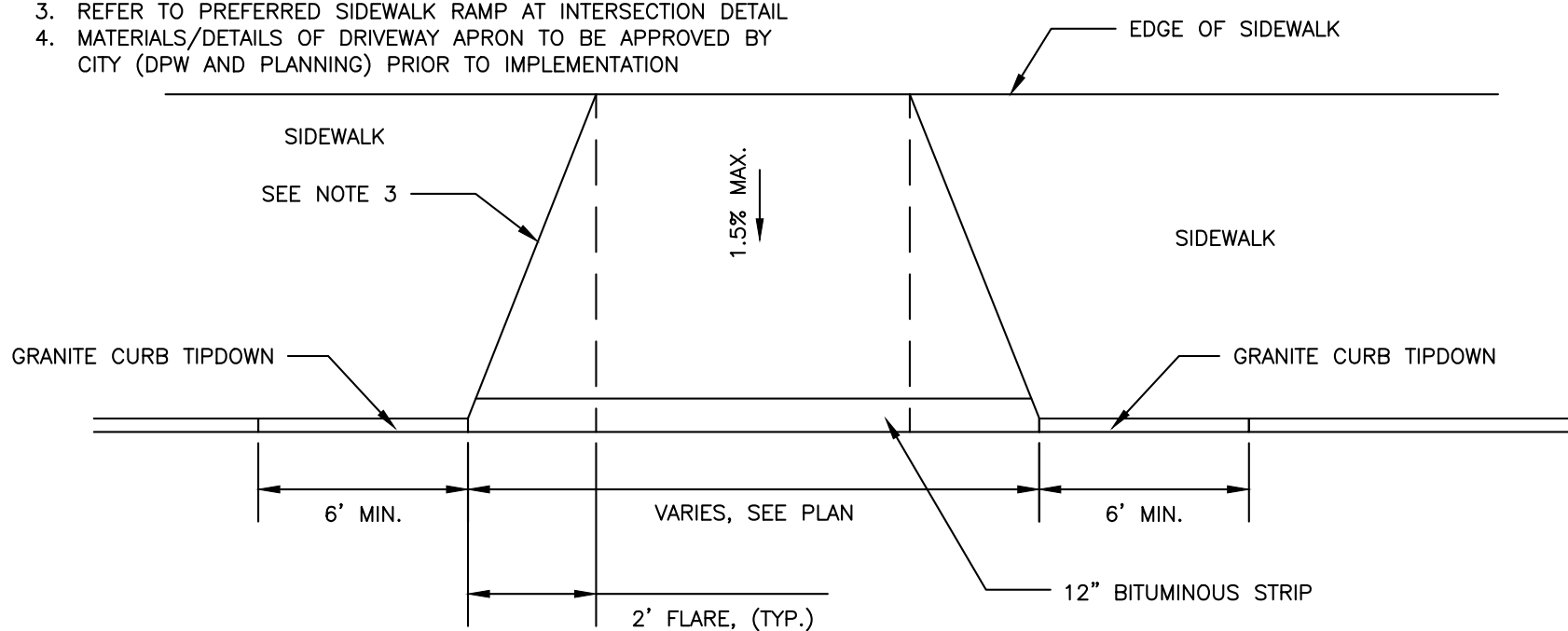
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO DRIVEWAY APRON SECTION DETAIL FOR APRON CROSS-SECTION
3. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO IMPLEMENTATION



DRIVEWAY APRON LAYOUT DETAIL: 55 PORTLAND STREET DRIVEWAY
NOT TO SCALE

NOTES:

1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO DRIVEWAY APRON SECTION DETAIL FOR APRON CROSS-SECTION
3. REFER TO PREFERRED SIDEWALK RAMP AT INTERSECTION DETAIL
4. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO IMPLEMENTATION



PARKING GARAGE DRIVEWAYS DETAIL
NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY
SITE PLAN	WHS
	9/25/20

SITE DETAILS - 1	
52 HANOVER STREET REDEVELOPMENT	
TOM WATSON & CO., LLC	
82 HANOVER ST., PORTLAND, MAINE 04101	

DRAWING NAME:	
52 HANOVER STREET REDEVELOPMENT	

PROJECT NAME:	
52 HANOVER STREET REDEVELOPMENT	

CLIENT:	
TOM WATSON & CO., LLC	
82 HANOVER ST., PORTLAND, MAINE 04101	

ENGINEERING, INC.	
ACORN ENGINEERING, INC.	
PO BOX 3372, PORTLAND MAINE 04104	
(207) 775-2655	

FILE:
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SCALE:
AS NOTED

DESIGNED BY:
SJL

DRAWN BY:
KRB

CHECKED BY:
WHS

DRAWING NO.
C-40

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
3. BOLLARD COLOR TO BE BLACK

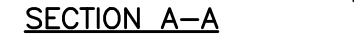


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NOT TO SCALE

1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION. FINISH COLOR AND TECHNICAL STANDARDS ALL BICYCLE RACKS WITHIN THE RIGHT-OF-WAY SHALL BE IDENTICAL. THE FUTURE COLOR AND TECHNICAL STANDARDS AT THAT LOCATION AS DESCRIBED IN THE MUNICIPAL LIGHTING STANDARDS; IF NO DESIGNATED COLOR FOR THAT AREA EXISTS, BICYCLE RACKS SHALL BE BLACK.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 36".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APPROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINTAINED 70.036 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.

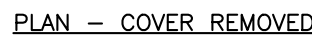


NOT TO SCALE

1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



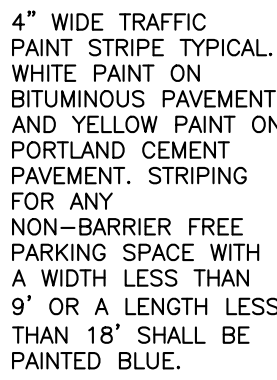
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NOT TO SCALE

- NOTES:**
1. ALL MONUMENTS SHALL BE HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE AND NO VISIBLE SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY.
 2. ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7 TO 8 SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREPARED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER CONSTRUCTION.
 3. ALL MONUMENTS SHALL BE A FULL 5" - 3" IN LENGTH PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE.
 4. THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN THE SURVEY MONUMENT OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT

DETAIL PROVIDED FOR INFORMATION ONLY FOR WORK
CONDUCTED IN VICINITY OF EXISTING MONUMENTS



NOT TO SCALE

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.

NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

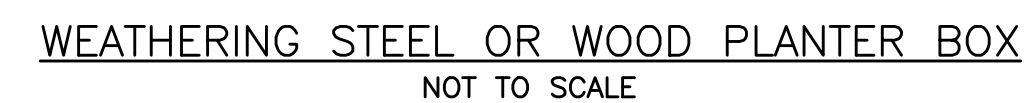
1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. 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.



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. VALVE OF ROOT BALL TO BE PLANTED FRAGMENTED. THE FRAGMENTED ROOT BALL SHOULD BE PLANTED WITH 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 OF 6.5 TO 7.5.
3. LIFT ROOT BALL FROM CONTAINER, REMOVE EXCESS TOPSOIL FROM THE ROOT BALL. THERE SHOULD BE A CONTAINER GROWN STOCK - REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE TOPSOIL FROM THE ROOT BALL.
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 PLANTING SAUCER. PLANTING SAUCERS SHALL BE PLANTED IN THE PLANTING SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY-FOUR HOURS OF PLANTING.



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.



- SECTION AA – LANCASTER COURT
NOT TO SCALE



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CONSTRUCTION

TOM WATSON & CO., LLC
82 HANOVER ST., PORTLAND, MAINE 04101

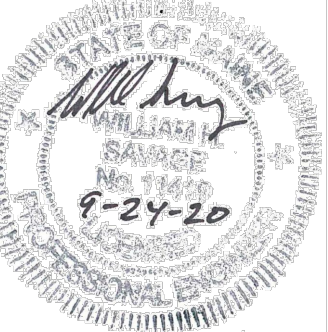
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CLIENT:



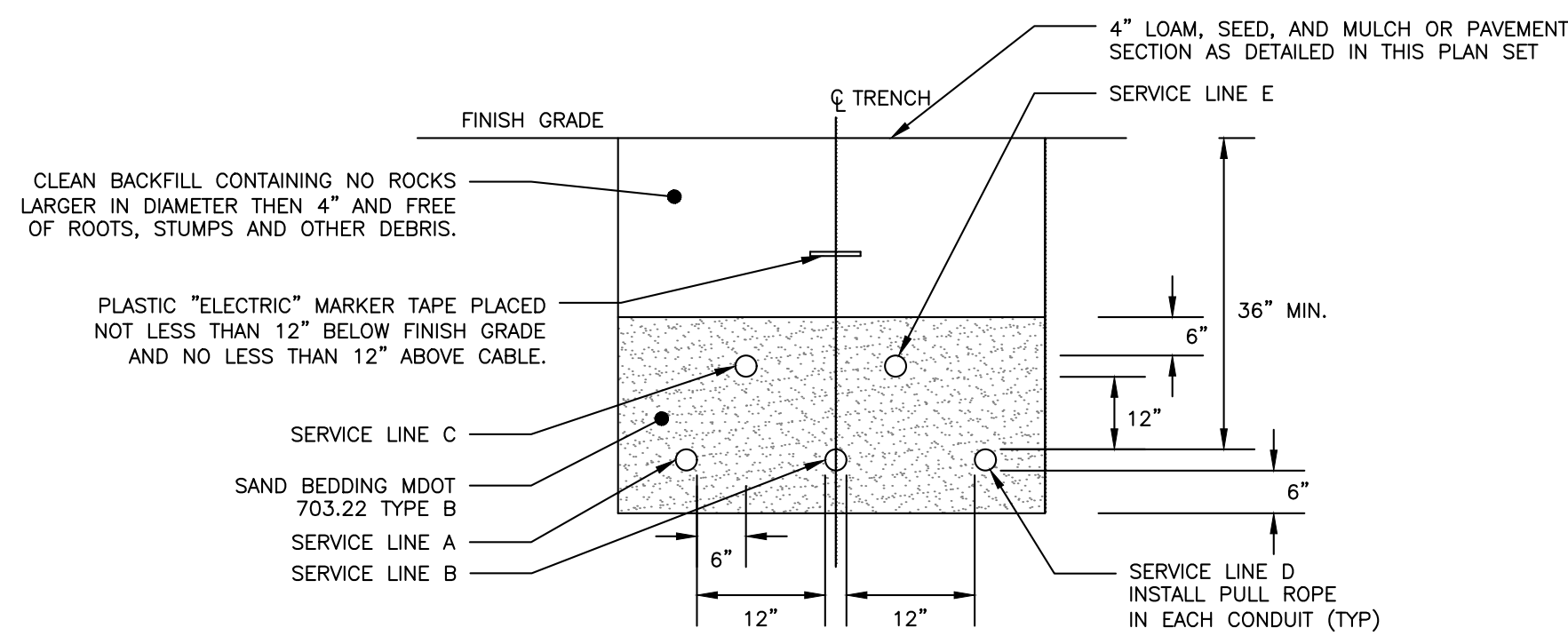
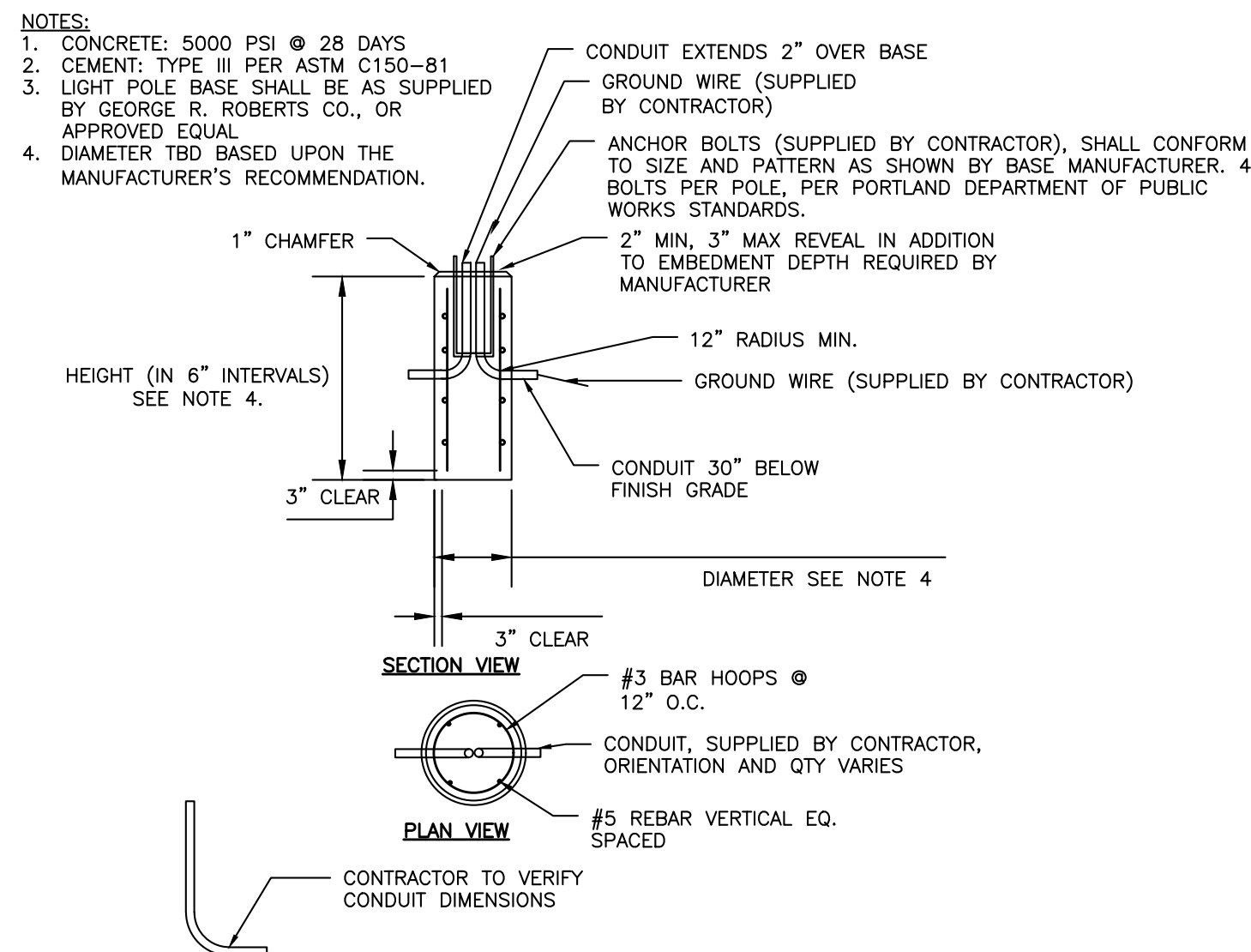
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ENGINEERING, INC.

HECKED BY: WHS

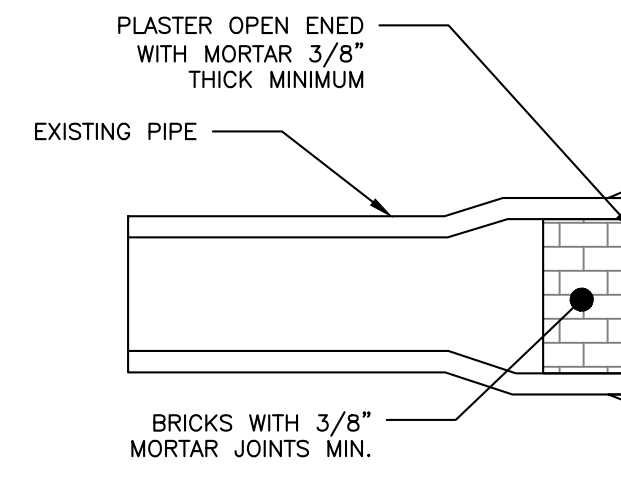
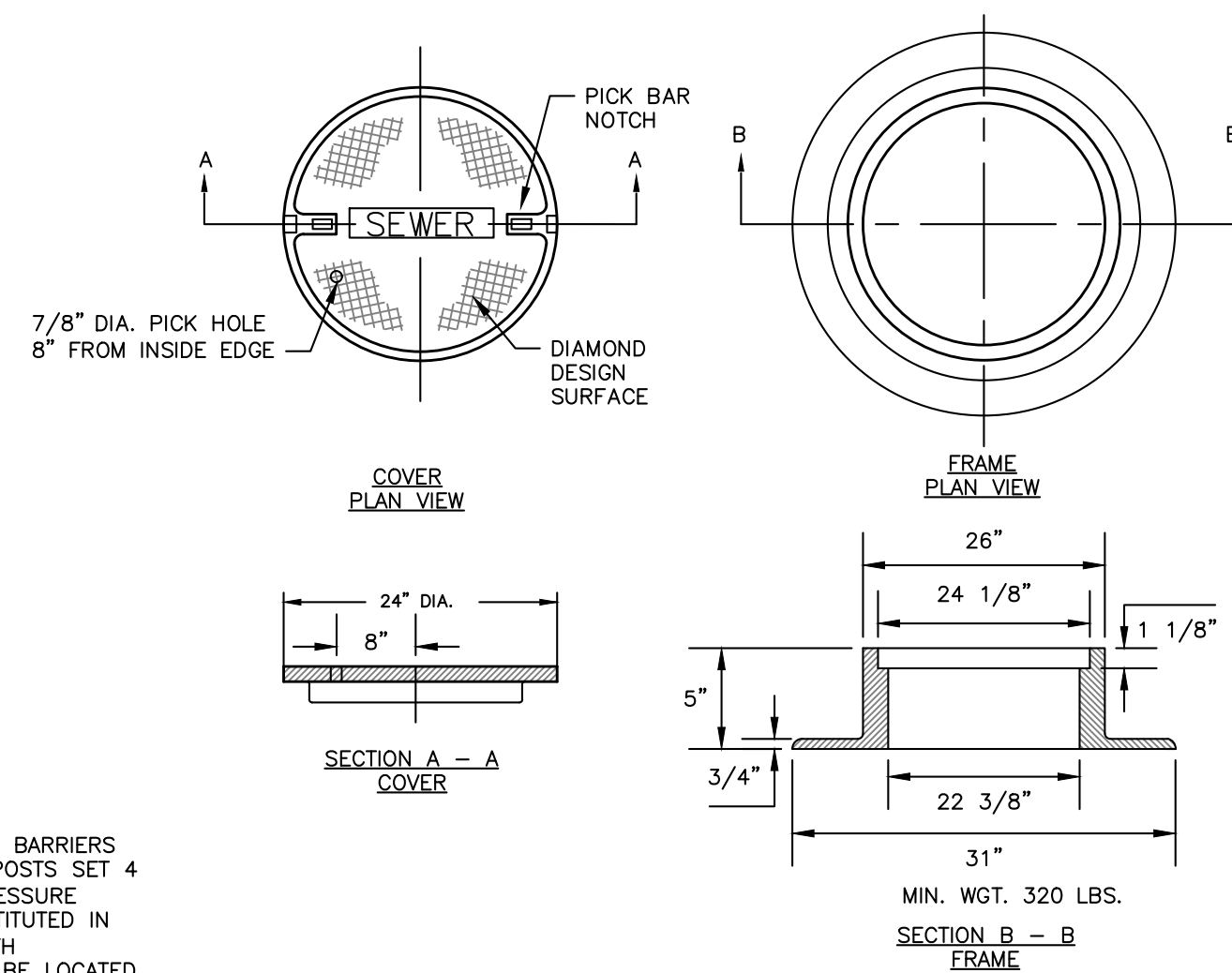
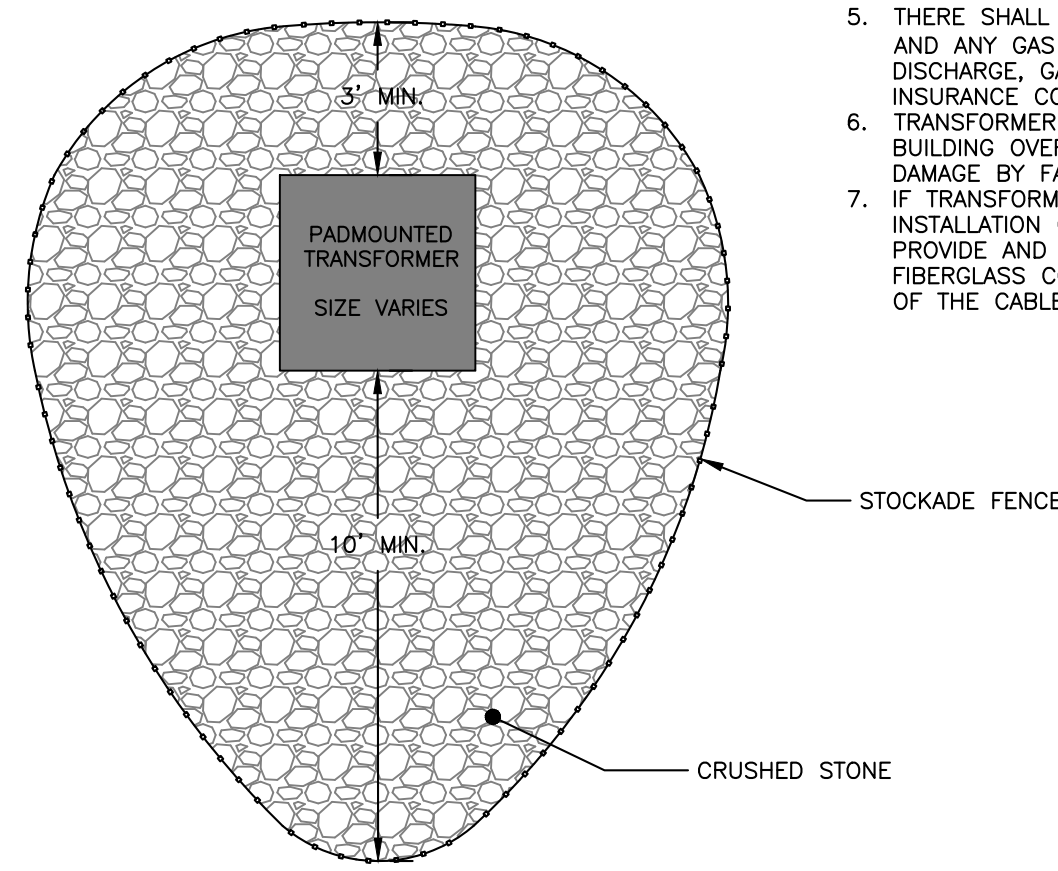
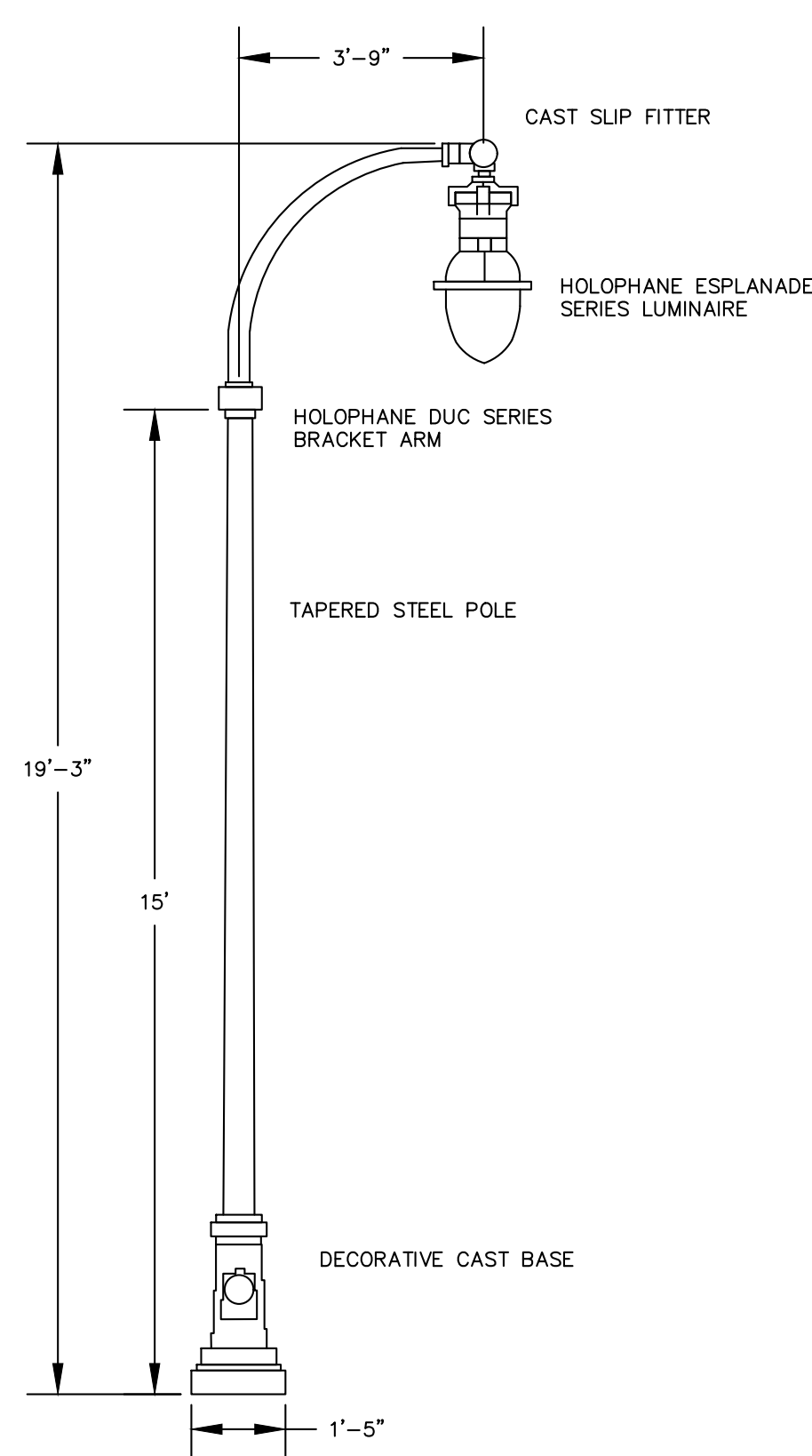
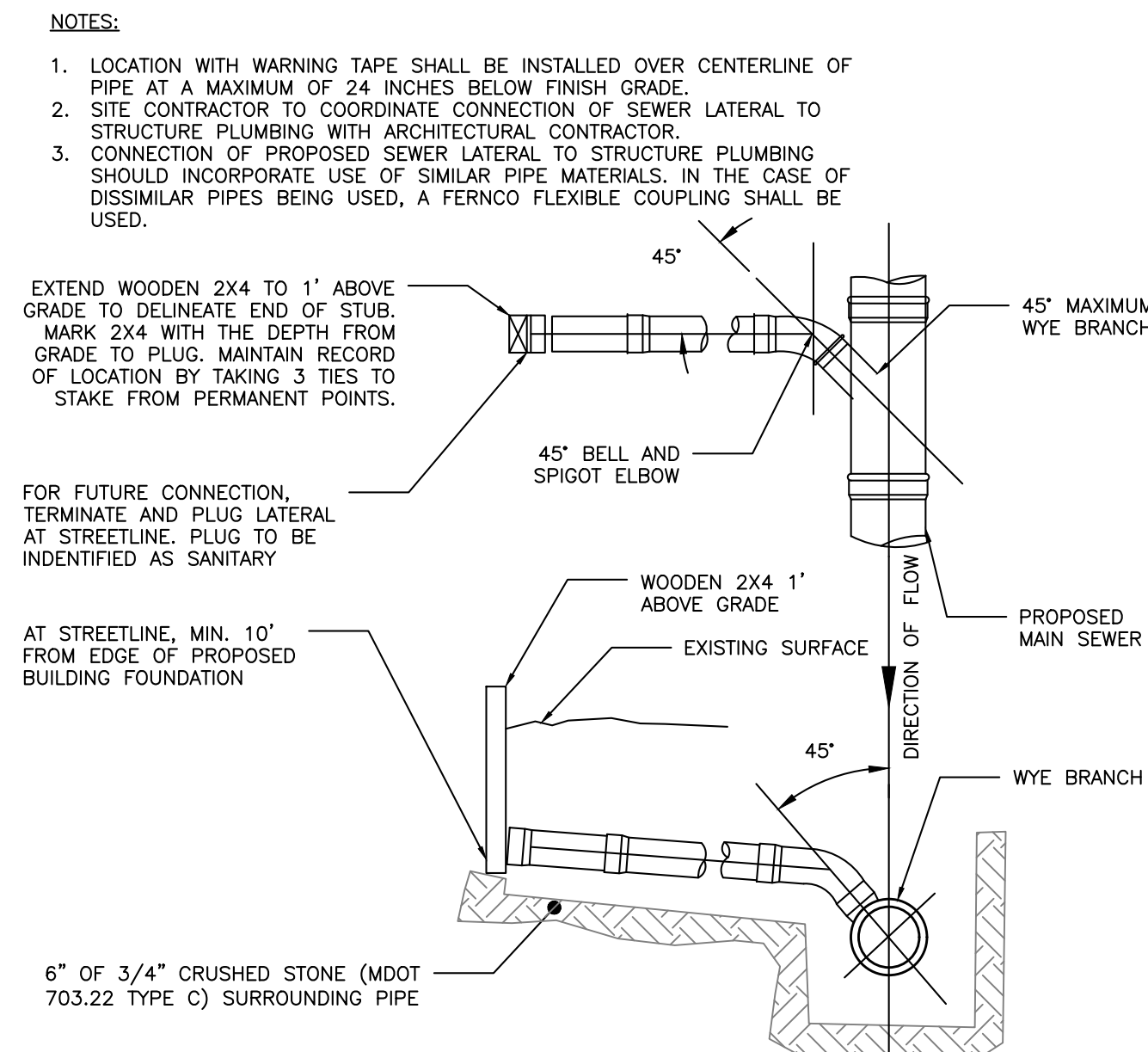


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C-42



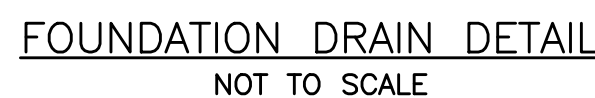
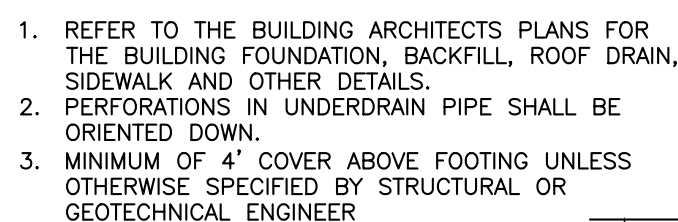
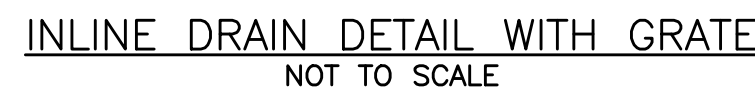
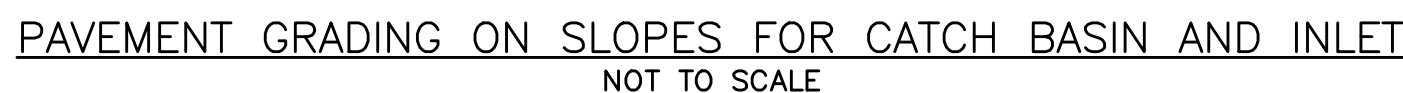
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
C	2-4"	SCHEDULE 40 PVC	COMMUNICATION	-
D	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	SEE NOTE 1
E	2-4"	SCHEDULE 40 PVC	CABLE	-



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1. BACKFLOW VALVE TO BE PROVIDED BY AGRICULTURAL DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE "SEWER" ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.



1. APPROVED CATCH BASIN FRAMES:
 - 1.1. EAST JORDAN = 7375Z
 - 1.2. NEENAH = R-3248
 - 1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
 - 2.1. EAST JORDAN = 2440M
 - 2.2. NEENAH = R-3248
 - 2.3. OR APPROVED EQUAL



- CATCH BASIN FRAME & GRATE
NOT TO SCALE



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.

8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF MARSHFIELD SECTION 2.0 SATURATED 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.
10. ALL PIPES TO HAVE A WATERTIGHT SEAL.
11. 12" THICK 3/4" CRUSHED STONE BASE.
12. COMPACTED SUBGRADE.



1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER, GUTTERS, AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.

PRELIMINARY
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CONSTRUCTION

[illegible]

DRAINAGE DETAILS

2 HANOVER STREET REDEVELOPMENT

TOM WATSON & CO., LLC

CLIENT:

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACON ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACON ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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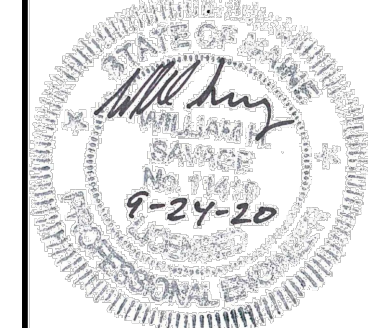
JN:	1093.2
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SCALE: AS NOTED

DESIGNED BY: SJL

DRAWN BY: KRB

CHECKED BY: WHS



DRAWING NO.

C-46

1. FOR INFORMATION REGARDING PROPOSED SECOND LEVEL LAYOUT, REFER TO SITE PLAN – SECOND FLOOR, SHEET C-11, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLANS, SHEET C-30 AND C-31, MOST RECENT VERSION.
4. R.O.W. WIDTH FOR EXISTING SUNSET AVENUE IS 40 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY SEBAGO TECHINCS DATED 10-19-15. R.O.W. WIDTH FOR PROPOSED EXTENSION OF SUNSET AVENUE IS 30 FEET.
5. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS PROVIDED BY SEBAGO TECHINCS ON A PLAN ENTITLED EXISTING CONDITIONS SURVEY DATED 10-19-15.
6. AS OF 9/5/2019, THE SITE IS BOUNDED BY THE INR ZONE ON EAST AND SOUTH SIDES OF THE PROPERTY, BY THE A ZONE ON THE WEST SIDE OF THE PROPERTY, AND BY THE G ZONE ON THE NORTH SIDE OF THE PROPERTY PER CITY OF SOUTH PORTLAND GIS WEBSITE.
7. LOCAL PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300SC0806F, INDEX DATED 4/14/2017.
8. 4" SQUARE, 4' LONG GRANITE OR CONCRETE MONUMENTS SHALL BE PLACED AT ALL PROPERTY CORNERS THAT ABUT THE PUBLIC RIGHT-OF-WAY. AT ANGLE POINTS AND POINTS OF CURVATURE AS WELL AS ALL OTHER LOT CORNERS SHALL BE MARKED WITH MINIMUM 3/4" IRON PIPE OR 5/8" STEEL REBAR A MINIMUM OF TWENTY-FOUR (24) INCHES LONG. ALL SUCH MARKERS SHALL BE SET 6" ABOVE GROUND, EXCEPT IN LAWNS, DRIVES AND PARKING AREAS WHERE THEY SHALL BE SET AT GRADE. LOCATION AND ELEVATION OF ALL SUCH MARKERS SHALL BE CONDUCTED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF MAINE.
9. EXISTING CONDITIONS AS PROVIDED BY SEBAGO TECHINCS INC. PLAN ENTITLED "EXISTING CONDITIONS PLAN" FOR STJ, INC. PROJECT NO. 14148, DATED 10/19/15.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING THE EXISTING CONDITIONS INFORMATION.

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NBD433, WEST ZONE BASED ON A DIGITAL DRAWING FILE PROVIDED BY THE CITY OF PORTLAND.
3. ELEVATIONS ARE BASED THE CITY OF PORTLAND DATUM, TIED TO CITY TBM #59, TOP OF GRANITE MONUMENT @ DRILL HOLE, BELOW IRON DRIP COX, IN CONCRETE CURB AND AT SOUTHWEST CORNER ALDER/KENNEBEC, EL. = 101.45'
4. UTILITY INFORMATION ON THIS PLAN IS APPROXIMATE, BASED ON LOCATION OF VISIBLE FEATURES AND INFORMATION CONTAINED ON PLANS AND DRAWINGS PROVIDED BY OTHERS. DISGAGE AND/OR THE APPROPRIATE UTILITIES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
5. PROPERTIES LIE WITHIN ZONE C BASED ON FIRM COMMUNITY #230051 PANEL #0013-B, DATED JULY 17, 1988. THEY DO NOTE LIE WITHIN A SPECIAL FLOOD HAZARD AREA.
6. BOUNDARY AND RIGHT OF WAY INFORMATION SHOWN PER PLAN REFERENCES 1, 2, & 3.
7. PROJECT AREA WAS COVERED BY SNOW AND ICE AT THE TIME OF THE SURVEY AND SOME FEATURES MAY HAVE BEEN OBTURED AND NOT SHOWN ON THIS PLAN.
8. RIGHT OF WAY LINES SHOWN PER ELECTRONIC DRAWING FILE PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF ENGINEERING. SEE PLAN REFERENCE #4.
9. THE CITY OF LANCASTER DISCONTINUED JUNE 15, 1981. CITY OF PORTLAND RECORDS, VOLUME 98, PAGE 187. THIS DISCONTINUANCE DOES NOT EXPRESSLY EXCLUDE PUBLIC RIGHTS OVER THE DISCONTINUED STREET, ACCORDING TO 23 M.R.S.A. 3026(1) A STREET DISCONTINUANCE ADOPTED SEPTEMBER 3, 1965, LEAVES AN AUTOMATIC PUBLIC EASEMENT UNLESS SPECIFIC LANGUAGE STATES OTHERWISE, AS SET FORTH IN A CERTIFICATE OF DISCONTINUANCE DATED JULY 20, 2018 RECORDED IN BOOK _____, PAGE _____. THE PORTLAND CITY COUNCIL VOTED TO EXTINGUISH THE PUBLIC EASEMENT WITHIN THE FORMER LOCATION OF LANCASTER STREET AS PART OF THIS SUBDIVISION.
10. THE PORTION OF THE PROPERTY DESCRIBED IN BOOK 23202, PAGE 38 WAS CONVEYED TO PORTLAND AND ROCHESTER RAILROAD COMPANY (PORTLAND TERMINAL COMPANY) BY N.L. WOODBURY IN BOOK 392, PAGE 253, APRIL 3, 1872. THIS CONVEYANCE IS A QUIT CLAIM DEED THAT CONVEYS A "THE RIGHT OF THE WAY AND USE OF THIS (P&RR) RAILROAD", THIS DEED ENDS WITH THE STATEMENT "MEANING AND INTENDING TO CONVEY THE RIGHT ONLY TO OCCUPY THE FORESAID PREMISES FOR THE PURPOSE OF THE ROADS AND RAILROADS CONCERNING". THIS PORTION OF THE PROPERTY IS RECOMMENDED.
11. A SEWER EASEMENT IS RESERVED BY THE CITY OF PORTLAND OVER THE DISCONTINUED PORTION OF LANCASTER STREET PER THE JUNE 15, 1981 DISCONTINUANCE FOUND IN THE CITY OF PORTLAND RECORDS VOLUME 98, PAGE 187.
12. PARCEL A (62 HANOVER STREET) IS SUBJECT TO A RESTRICTIVE COVENANT PERTAINING TO THE USE OF THE FORMER LANCASTER STREET RIGHT-OF-WAY AS SET FORTH IN A DEED FOR PARCEL A RECORDED IN BOOK _____, PAGE _____.
PLAN REFERENCES:
13.1. PLAN OF STANDARD BOUNDARY SURVEY, 62 HANOVER STREET, MADE FOR CITY OF PORTLAND BY TITCOMB ASSOCIATES DATED NOVEMBER 1, 2017.
13.2. SUBDIVISION PROPERTY PLAN #6, CITY OF PORTLAND, MADE FOR CITY OF PORTLAND BY TITCOMB ASSOCIATES DATED NOVEMBER 2, 2017.
13.3. PLAN OF SUBDIVISION PLAN MADE FOR CITY OF PORTLAND BY TITCOMB ASSOCIATES, DATED NOVEMBER 29, 2017 AS REVISED THROUGH JULY 24, 2018, RECORDED IN PLAN BOOK 218, PAGE 342.
13.4. DIGITAL DRAWING FILE OF KENNEBEC STREET AND SURROUNDING STREETS PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF ENGINEERING.
13.5. CITY OF PORTLAND PROPERTY PLAN #6.
13.6. CITY OF PORTLAND VAULT PLAN #195/11.
13.7. CITY OF PORTLAND VAULT PLAN #210/13.

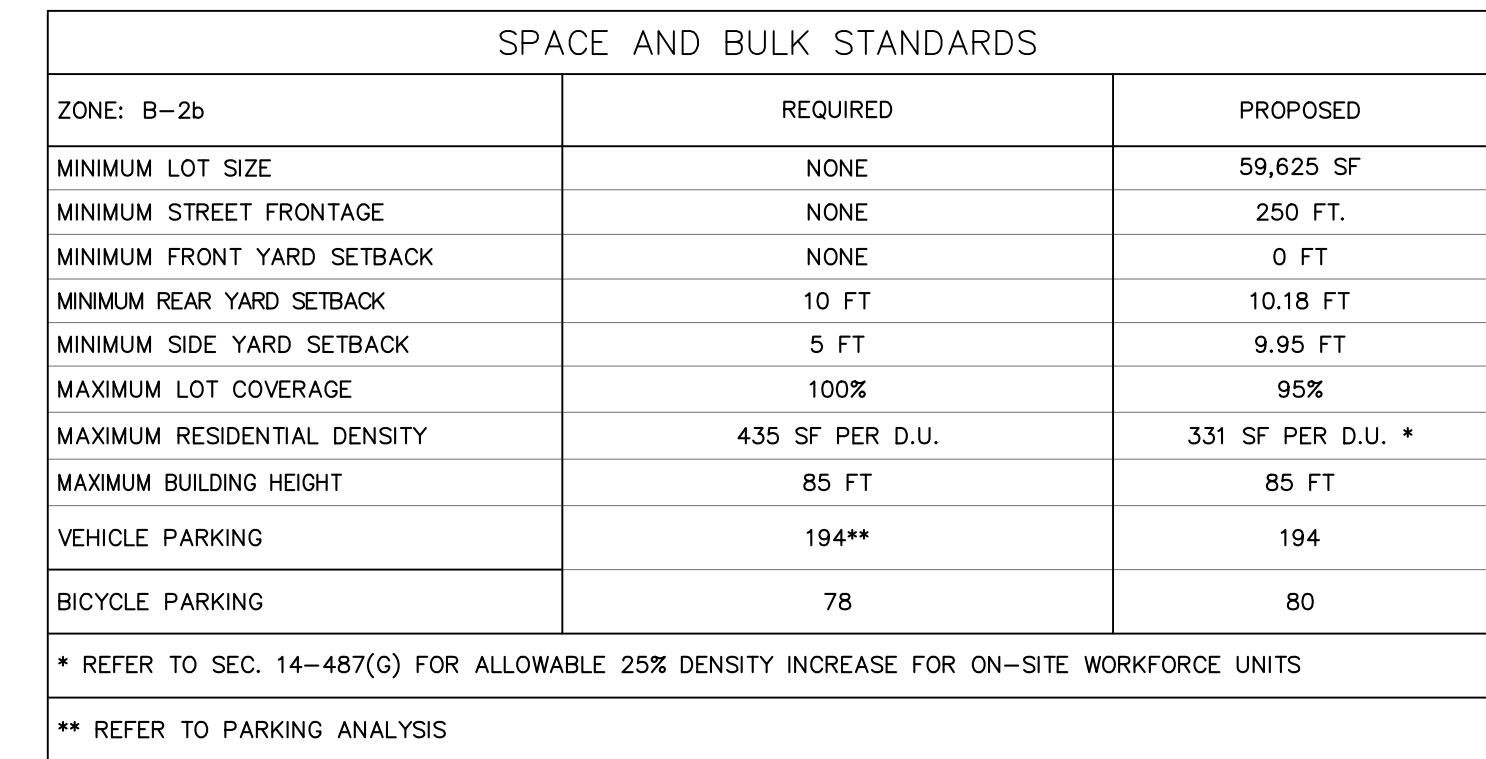
EXISTING:

1. THE FORMER LOCATION OF LANCASTER STREET IS SUBJECT TO A UTILITY EASEMENT RETAINED BY THE CITY AS SET FORTH IN A CERTIFICATE OF DISCONTINUANCE DATED JULY 20, 2018 RECORDED IN BOOK 35151, PAGE 132.
2. THE APPROXIMATELY 5 FOOT WIDE PEDESTRIAN AND BICYCLE EASEMENT RETAINED BY THE CITY OF PORTLAND AS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 38689, PAGE 133.
3. USE RESTRICTIONS AS SET FORTH IN CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 16707, PAGE 206 AND MODIFIED IN BOOK 29610, PAGE 223.
4. EASEMENT DEED FROM 52 HANOVER, LLC TO CITY OF PORTLAND AND AGREEMENT DATED AS OF DECEMBER 13, 2018 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 35353, PAGE 239.
- 4.1. AMENDED SEWER/STORM DRAIN AND ACCESS EASEMENTS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK _____, PAGE _____.

THERE ARE NO PROPOSED EASEMENTS

TBD

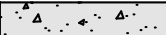
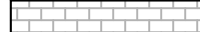
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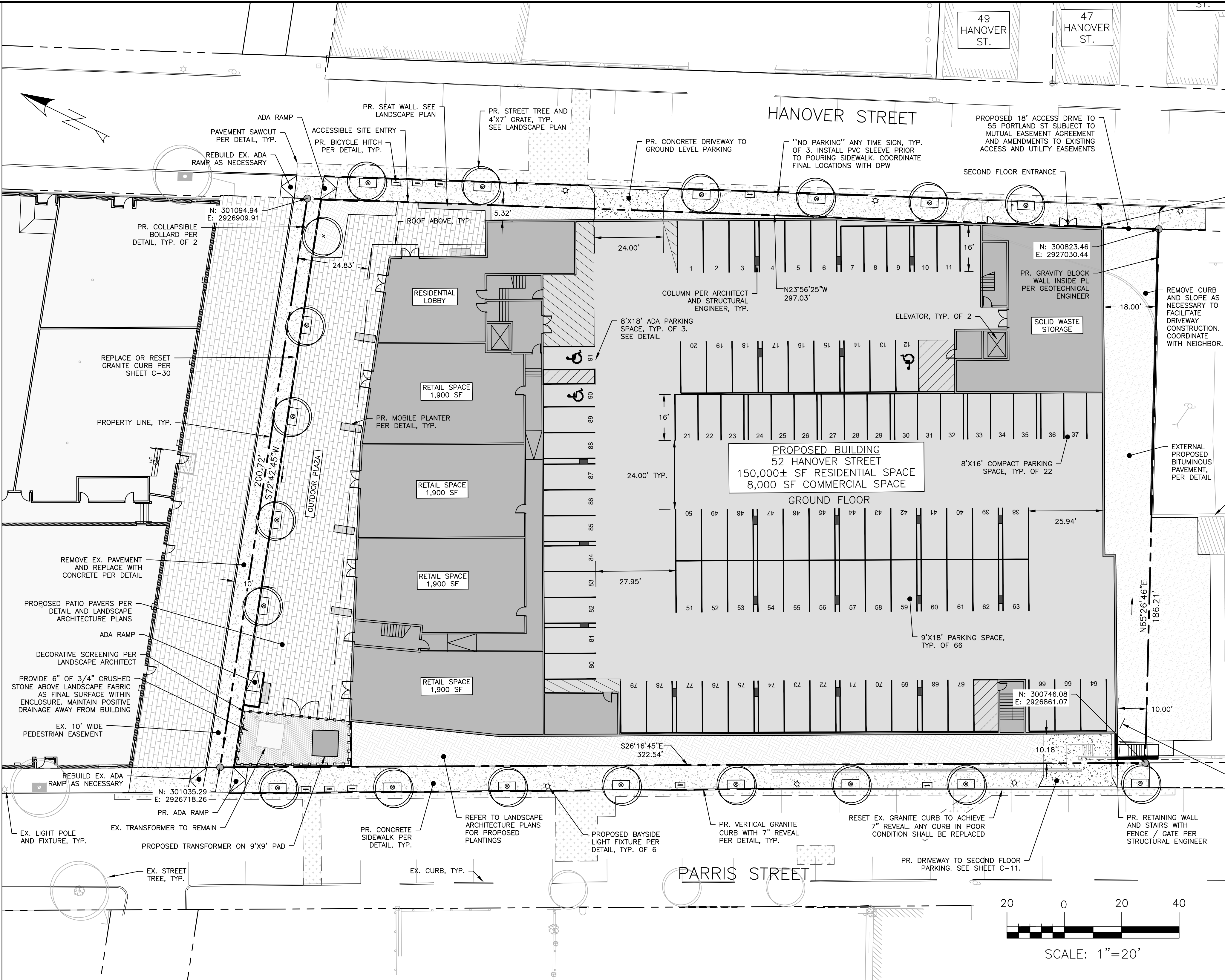
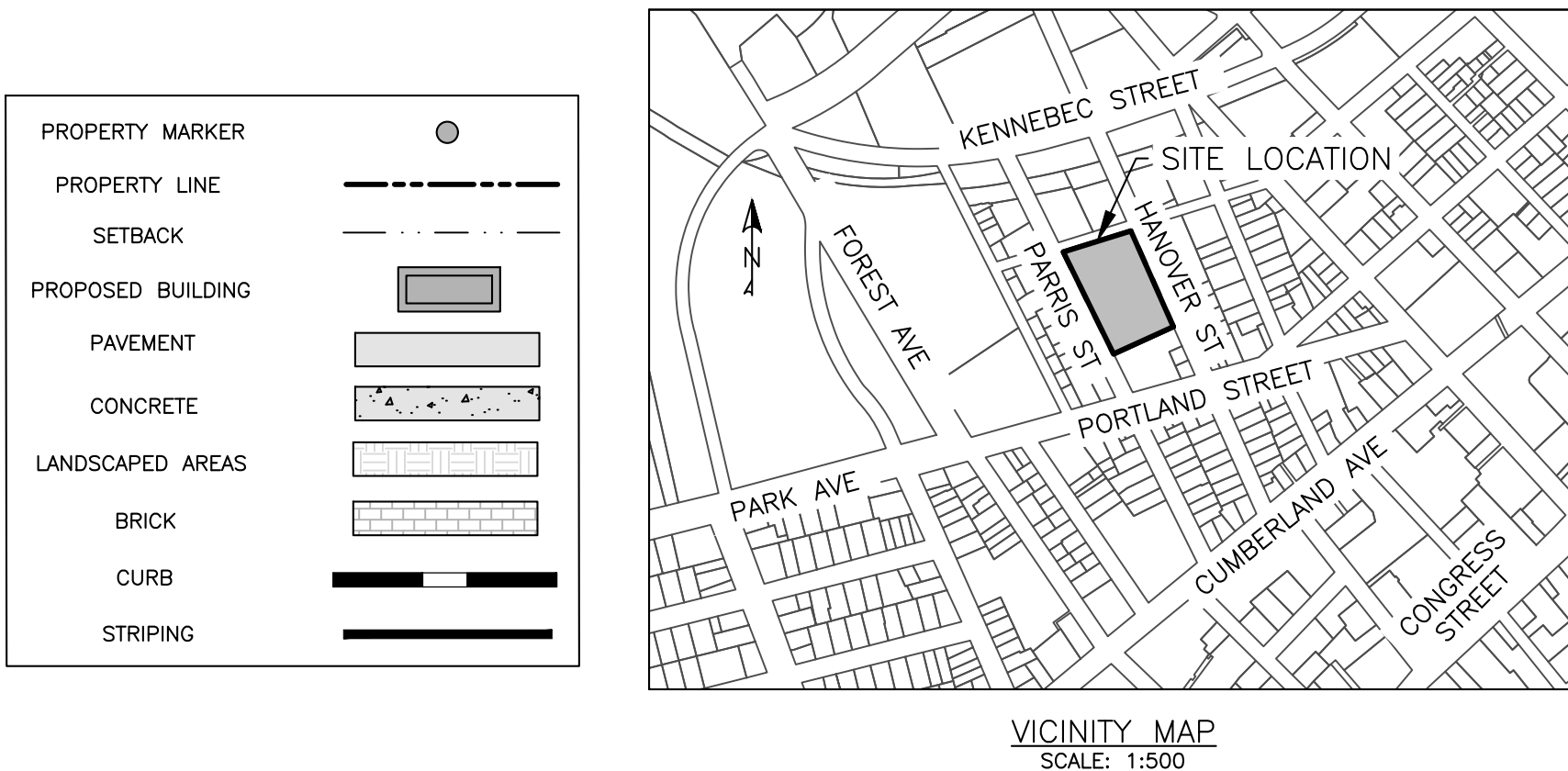


UNIT TABULATION	
UNIT NUMBER	SIZE (SF)*
TBD	

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'x18')	141
COMPACT (8'x16')	47
ADA (9'x18')	6
TOTAL SPACES	194

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	141
COMPACT (8'X16')	47
ADA (9'X18')	6
TOTAL SPACES	194

PROPERTY MARKER	
PROPERTY LINE	
SETBACK	
PROPOSED BUILDING	
PAVEMENT	
CONCRETE	
LANDSCAPED AREAS	
BRICK	
CURB	
STRIPING	



TOM WATSON & CO., LLC
82 HANOVER STREET
PORTLAND, MAINE
CONTACT: TOM WATSON

ACORN ENGINEERING, INC.
65 HANOVER ST.
PORTLAND, MAINE
CONTACT: WILLIAM SAVAGE, P.E.

SURVEYOR:
TITCOMB ASSOCIATES
133 GRAY ROAD
FALMOUTH, MAINE
CONTACT: REX CROTEAU, P.L.S.

RECORDING INFORMATION
STATE OF MAINE,
CUMBERLAND COUNTY
REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____

REGISTRAR

THIS SURVEY CONFORMS TO THE CURRENT STANDARDS OF PRACTICE SET FORTH BY THE MAINE STATE BOARD OF LICENSURE FOR LAND SURVEYORS.

REX J. CROTEAU, MAINE P.L.S. #2273 DATE:
TITCOMB ASSOCIATES

APPROVED: PORTLAND PLANNING BOARD

[illegible][illegible]

UBDIVISION PLAT - 52 HANOVER STREET

52 HANOVER REDEVELOPMENT

TOM WATSON & CO., LLC

32 HANOVER ST., PORTLAND, MAINE 04101

DRAWING NAME

PROJECT NAME:

CLIENT:

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACON ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACON ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND, MAINE 04104
(207) 775-2655

A C O R N
ENGINEERING, INC.

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JN:	1093.2
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SCALE: AS NOTED

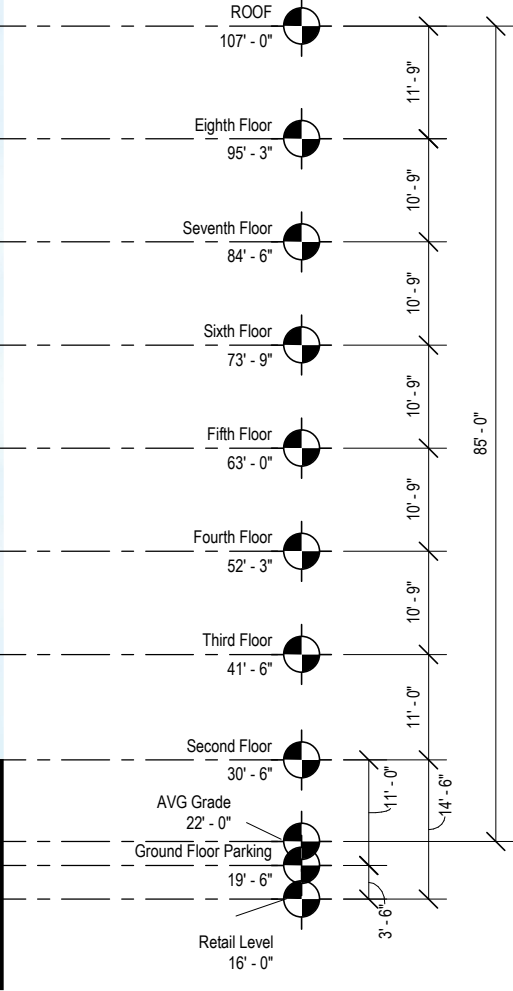
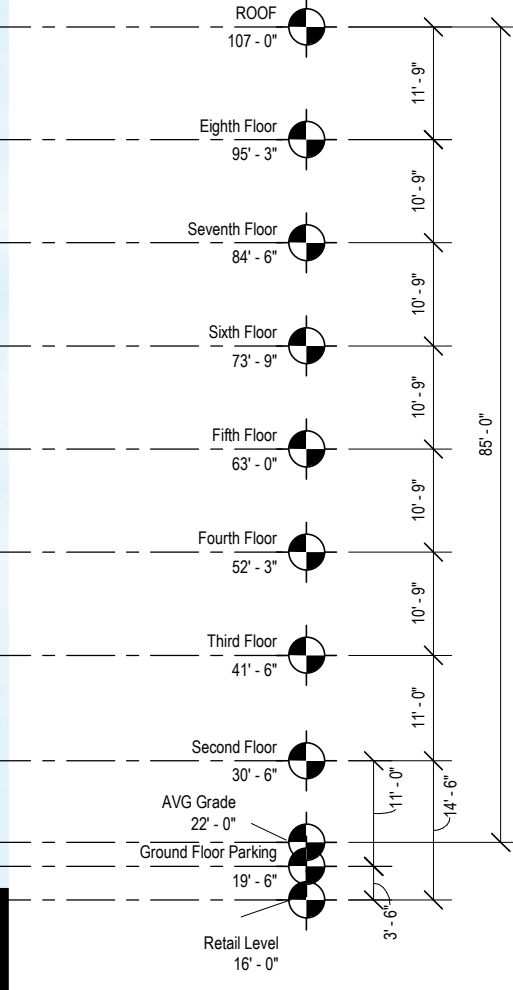
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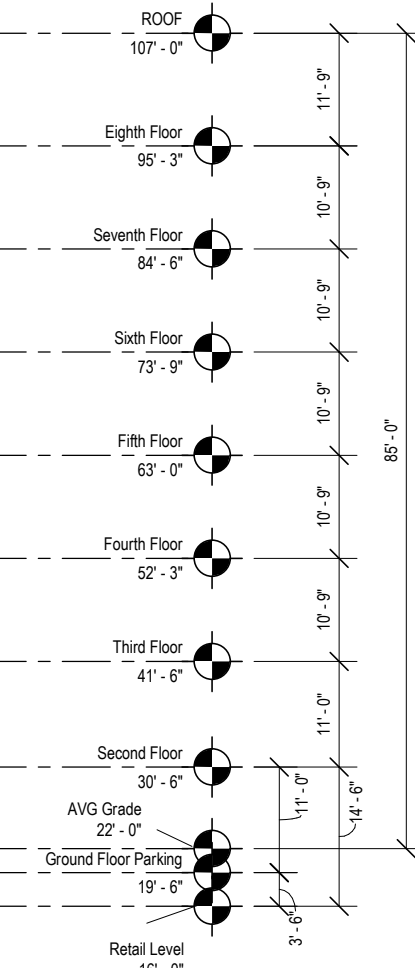
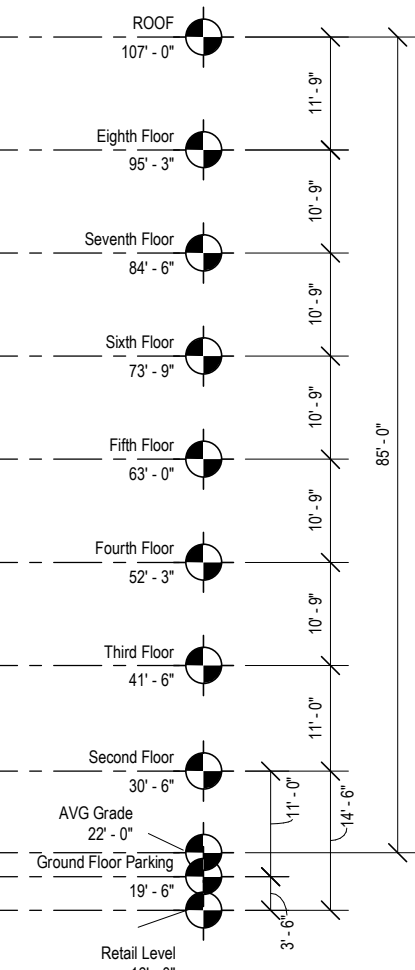
DRAWN BY: KRB

CHECKED BY: WHS



DRAWING NO.
PLAT


$$1'' = 20'-0''$$

$$1'' = 20'-0''$$


$$1^{\circ} = 20'-0''$$

$$1^{\circ} = 20' - 0''$$


52 Hanover

52 Hanover Street
Portland, ME

Tom Watson &
Co., LLC

82 Hanover St.,
Portland, Maine 04101

Preliminary

NOT FOR
CONSTRUCTION

drawing by:	ST
drawing checked by:	NG
drawing scale:	1" = 20'-0"
drawing date:	09.16.20
project number:	19255.00

[illegible]

DRAFT

Exterior Elevations

A-201



Memorandum

Planning and Urban Development Department

Planning Division

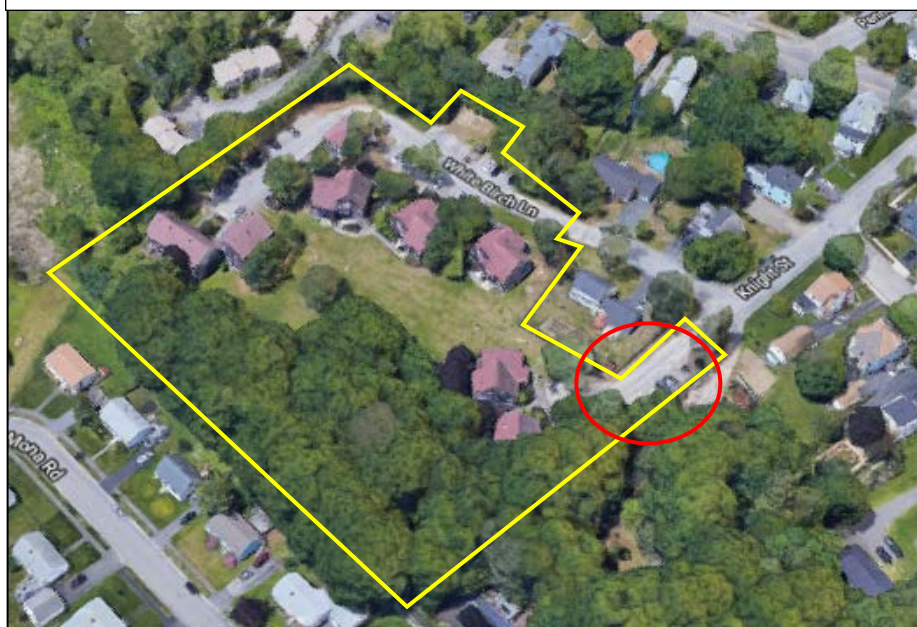
To: Brandon Mazer, Chair and Members of the Portland Planning Board
 From: Shukria Wiar, Planner
 Date: October 23, 2020
 Re: Birch Meadow Apartments, 12 White Birch Lane, Birchlane, LLC
 Project #: PL-001101-2020 CBL: 437 AO46, 343 DO16
 Meeting Date: October 27, 2020

I. INTRODUCTION

Birchlane, LLC has submitted a Level III Site Plan and Subdivision application for a new three-story, three-unit residential building at 12 White Birch Lane. The project is located within an existing Planned Unit Residential Development (PRUD) in North Deering called Birch Meadow Apartments. The site is accessed through Knight Street from Allen Avenue. The proposed additional building will expand the existing multi-unit residential development from thirty (30) residential units to thirty-three (33) residential units. All other remaining buildings and access onsite will stay unchanged.

As a Level III Site Plan and Subdivision application, this proposal is subject to review under Portland's Site Plan and Subdivision Ordinances and the Design Standard for PRUDs in the R-5 Residential Zone.

Fig. 1: Site of the Birch Meadow Apartments development and the proposed project



Property Owner: Birchlane, LLC
Applicant: King Real Estate
Agent and Engineer: Craig Burgess of Sebago Technics
Architect: Richard Pellerin
Surveyor: Sebago Technics

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Subdivision (creation of 3 or more lots)	<i>Section 14-497</i>
Design Review of PRUD	<i>Planned Residential Unit Developments (PRUDs) in the R-3, R-5, and R-5A Residential Zones and Manufactured Housing Parks in Any Zone.</i>

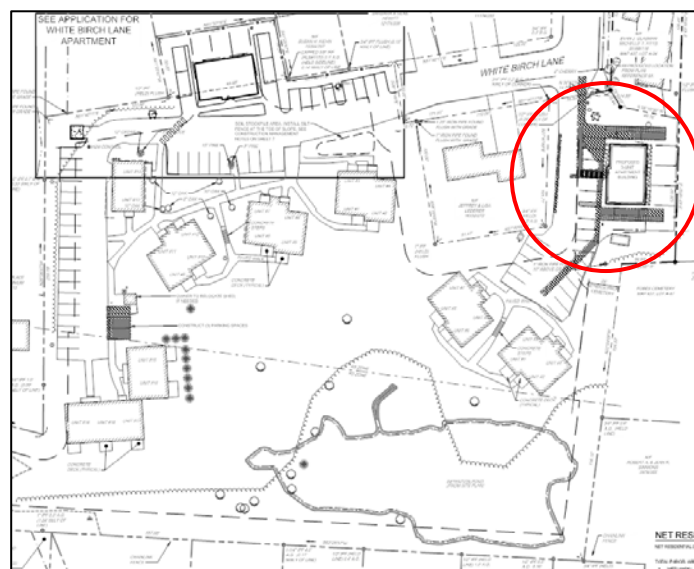
III. PROJECT DATA

Existing Zoning	R-3 and R-5 (Proposed building on the R-5 portion)		
Existing Use	PRUD		
Proposed Use	PRUD		
Parcel Size	170,079 SF (3.90 acres)		
	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Impervious Surface Area	1,539 SF	3,845 SF	+ 2,306 SF
Building Footprint	13,136 SF	14,576 SF	+ 1,440 SF
Number of Residential Units	30	33	+ 3
Estimated Cost of Project	\$300,000		

IV. PROPOSED DEVELOPMENT

The existing development of which the proposed project is part was constructed as a PRUD and is approximately 3.90 acres in size. The property has frontage along White Birch Lane. The applicant proposes to develop a 10,159 square foot portion of the site for an additional three Planned Residential Units. The proposed new building will be located on an area which is currently utilized for parking and for a trash receptacle. Five of the existing parking spaces will be displaced, and the dumpster will be relocated to another location onsite with a screened enclosure. The removal of these existing parking spaces will not impact the overall parking count since seven new parking spaces will be provided to fulfill parking requirements. The road serving the PRUD development is a private road maintained by the owner and will also provide access to the proposed new building site. The existing internal drive will not be affected by the proposed new building beyond trenching for infrastructure connections and subsequent pavement repair. The new building will be adjacent to the existing residential building and parking.

Fig. 2: The overall development with the proposed building and improvements



V. PUBLIC COMMENT

Notices were sent to one hundred and thirty-four (134) residents and the interested citizen list. The notice also appeared in the Portland Press Herald on October 17th and 18th, 2020, as well as being posted on the City's web page. No written public comments have been received by the Planning Office.

The applicant did not hold a neighborhood meeting since the subdivision is for three units only; proposed developments that have five or greater units or lots are required to hold a neighborhood meeting.

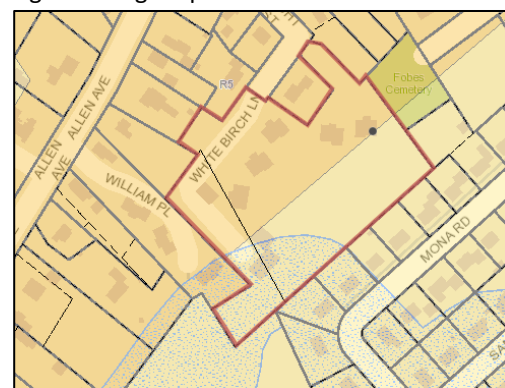
VI. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

- The owner of the property is Birchlane LLC. The applicant has provided a copy of a short form deed of sale, recorded at the Cumberland County Registry of Deeds (Book 19897 Page 001), which demonstrates their right, title and interest in the property.
- The estimated cost of the development is \$300,000. The applicant will need to submit a financial capacity letter from a financial institution as demonstration of their financial and technical capacity to complete the proposed development.

VII. ZONING ASSESSMENT

The subject parcel is located in the R-5 and R-3 Residential zones with an area of Shoreland Zone overlay in the R-3 portion of the site. The proposed development area (the new 3-unit dwelling) is in the R-5 residential zone. The project meets relevant minimum lot size, lot area per dwelling unit, maximum lot coverage, setbacks, and open space requirements. Division 20 of the Land Use Code dictates parking requirements. The proposed development requires two spaces per dwelling unit. With the addition of seven new parking spaces for the proposed three dwelling units, the proposed project meets this requirement. The overall PRUD has a total of thirty-three (33) residential units and sixty-six (66) parking spaces, including these three new units, and therefore meets this requirement.

Fig 3: Zoning Map of Site



VIII. 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 draft subdivision plat. Staff feedback has been provided to the applicant and revision is expected. A final subdivision plat must be revised to reflect any waivers and conditions of approval that relate to the subdivision application. The final plat will be reviewed and found acceptable by the Department of Public Works, Corporation Counsel, and Planning Authority prior to being signed by the Planning Board.

B. SUBDIVISION

Staff reviewed the proposed development for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are summarized below:

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1)

The project is not anticipated to result in any water or air pollution. A final Sedimentation and Erosion Plan has been submitted and has been found to be acceptable by consulting civil engineer Lauren Swett, P.E. with Woodard and Curran Engineering.

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

The existing service line at this site will provide domestic water to the building. A confirmation of ability to serve letter from Portland Water District will need to be submitted prior to public hearing.

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

An assessment of the expected traffic generation and a report from Sebago Technics have been submitted for review. The applicant is proposing to utilize the existing access to the site off of White Birch Lane. Tom Errico, P.E. of TY Lin, consulting traffic engineer, reviewed the proposal's details including the access, parking, and vehicle circulation and states that he finds the conditions to meet this standard.

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 will be utilizing the existing utilities that tie into the Birch Meadow development. A wastewater capacity application has been submitted to the Water Resources Division; the review of the application is pending.

The site will be graded to maintain the existing drainage patterns, however there will be several swales graded in order to guide runoff into proposed catch basins, eventually ending up in the existing storm drain system. The stormwater management best management practices (BMP) that the applicant proposes consists of two stone roof drip edges and porous pavement for water quality and quantity control. Lauren Swett, P.E., consultant civil engineer with Woodard and Curran, has reviewed the drainage plan and finds it acceptable.

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

Several local goals identified in the Housing section of the City's Comprehensive Plan are relevant to the proposed project, including the following:

"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 REVIEW

The site plan ordinance contains specific standards for PRUDs. These standards relate to the proposed design's relationship to the site, internal design character and relationship to surrounding neighborhoods, and recreation and open space. 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

Please see Section VIII, Development Review, Subsection (B), Subdivision, Paragraph (3), above.

b. Sidewalks

As the site is located within an existing PRUD, there are existing walkways available to access units. No new sidewalk is proposed as part of this project. A new internal walkway made of permeable pavers is proposed adjacent to the new building. Other existing internal walks on the site will remain as they exist currently without modification.

c. Parking

To construct the new building, five parking spaces will be displaced. The proposed development requires two spaces per dwelling unit and the applicant is proposing seven parking spaces for three dwelling units. The overall PRUD has a total of thirty-three (33) residential units and sixty-six (66) parking spaces, including these three new units, and therefore meets this requirement.

d. Bicycle Parking

The applicant is proposing one new Dero bike rack that will accommodate two bicycles. The rack satisfies the bicycle parking standard 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 street tree requirement for PRUDs is two trees per unit in or near the ROW. The applicant is proposing trees and shrubs along the rear and shrubs along the sides and front of the proposed building. Street trees have not been proposed, therefore the applicant will also need to provide six trees along the street frontage. The street tree standard for PRUD is the following section from the Technical Manual:

Section 4.6.2. Planned Residential Unit Developments (PRUDs): Where a manufactured housing park or subdivision is also a planned residential unit development (PRUD), the development shall provide a

minimum of two (2) street trees per unit, planted within 8-10 ft of the City right of way and/or private roadway proposed as part of the development.

c. Water Quality, Storm Water Management and Erosion Control

Under Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. Lauren Swett, P.E., consulting civil engineer with Woodard and Curran, has reviewed the drainage plan and stormwater report and finds the plans meet these standards.

3. *Public Infrastructure and Community Safety Standards*

a. Consistency with Master Plans

Please see Section VIII, Development Review, Subsection (B), Subdivision, Paragraph 5, above.

b. Public Safety and Fire Prevention

The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The site has been designed to promote safe and inviting public access. Adequate emergency access will be provided. The turning radii of the driveway are large enough to allow for emergency vehicles to enter and exit the proposed street. A fire hydrant is located along White Birch Lane. The applicant is also proposing wall packs on the façade at all the building entrances for enhance safety.

c. Availability and Adequate Capacity of Public Utilities

The development will be serviced by the existing municipal water and sewer within the overall development supplied by the Portland Water District. Confirmation of ability to serve water and from Portland Water District and sewer from the City's Department of Public Works needs to be submitted prior to public hearing.

4. *Site Design Standards*

a. Snow and Ice Loading

The applicant is proposing on-site snow storage. Snow within the PRUD lot is to be stored along the side slopes of the driveway. It is anticipated that snow will be stored along the roadway and within the esplanade.

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 and is at a distance greater than 100 feet from the nearest district; therefore, the project does not require Historic Preservation review.

d. Exterior Lighting

According to the applicant, there will be no new street lighting provided. All exterior site lighting including lighting of building entrances will have to be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties or streets. The catalogue cuts for the building entrances do not meet the City's technical standards since they are not full cutoff fixtures, and thus this standard has not been met. The applicant will need to propose lighting fixtures that meet the lighting standards (Technical Manual, Section 12)

e. Noise and Vibration

All new heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment will have to be shown on the plans and meet state and federal emissions requirements. This 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.

f. Signage and Wayfinding

This standard does not apply to the proposal.

g. Zoning Related Design Standards

The planned residential unit development project at 12 White Birch Lane was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Christian Roadman, Planner against the standards of the *Planned Residential Unit Developments in the R-5 Residential Zones* (Section (h) of the Design Manual) and the design does not pass the criteria around character and massing variation, and external buffers.; please see Attachment 2 for Ms. Cameron's complete analysis and recommendations..

IX. NEXT STEPS

1. Address staff and Planning Board comments
2. Revise application materials as needed and resubmit for staff review
3. Schedule a public hearing

ATTACHMENTS:

Staff Review Comments and Background Information

1. Zoning Review, Christina Stacey, dated 10.21.2020
2. Urban Design Review, Caitlin Cameron, dated 06.01.2020
3. City Engineer Review, Mike Trembly, dated 10.16.2020

Public Comments

- PC 1. Michelle Fitts 8-13-2020

Applicant's Submittal

- A. 01-Cover Letter_PB_18519
- B. 02-Level II III Checklist+Sig Page
- C. 03-Right, Title, Interest
- D. 04-State.Federal Approvals
- E. 05-Zoning Assessment
- F. 06-Exist.Prop Easements
- G. 07-Waivers
- H. 08-Financial
- I. 09-Technical
- J. 10-Transportation Analysis-Traffic Impact
- K. 11-Access & Circulation
- L. 12 White Birch Lane Stormwater Maintenance Agreement
- M. 12-Loading+Servicing
- N. 13-Sidewalks
- O. 14-Public Transit
- P. 15-Off-street Parking
- Q. 16-Bicycle Parking
- R. 17-Snow Storage

- S. 18-Traffic Demand Mngmt
- T. 19-Pres of Sig Natural Features
- U. 20-Landscaping+Preservation
- V. 21-Site Landscaping
- W. 22-Parking Lot Landscaping
- X. 23-Street Trees
- Y. 24-Wtr Qual, Stormwater, ESC
- Z. 25-Consistency with City MstrPlan
- AA. 26-Public Safety and Fire Prevention
- BB. 27-Avail+Adequacy Public Utilities
- CC. 28-Mass, Ventilation, Wind Impact
- DD. 29-Shadows
- EE. 30-Snow Ice Loading
- FF. 31-View Corridor
- GG. 32-Historic Resource
- HH. 33-Exterior Lighting
- II. 34-Noise+Vibration
- JJ. 35-Signage Wayfinding
- KK. 36-ZoneRelated Design Stds
- LL. 37-Construction Management Plan

Plans

- Plan 1 Cover Sheet
- Plan 2 Overall Site Plan
- Plan 3 Site Plan
- Plan 4 Grading Plan
- Plan 5 Utility Plan
- Plan 6 Erosion Control Notes
- Plan 7 Details
- Plan 8 Details
- Plan 9 Existing Conditions
- Plan 10 Existing Conditions Watershed Plan- Pre
- Plan 11 Proposed Conditions Watershed Plan- Post
- Plan 12 Arch-1st Floor Plan-White Birch Ln
- Plan 13 Arch-2nd Floor Plan-White Birch Ln
- Plan 14 Arch-3rd Floor Plan-White Birch Ln
- Plan 15 Arch-Front Elevation-White Birch Ln
- Plan 16 Arch-Rear Elevation-White Birch Ln
- Plan 17 Arch-Side Elevations-White Birch Ln
- Plan 18 FenceBufferLter-Birchlane 3-unit apt
- Plan 19 Landscape Plan
- Plan 20 Photometric Plan
- Plan 21 Second Amended Subdivision Plan



Shukria Wiar <shukriaw@portlandmaine.gov>

Tomorrow Dev Rev - please respond

Christina Stacey <cstacey@portlandmaine.gov>
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Wed, Oct 21, 2020 at 10:57 AM

Shukria,

This is what I wrote with regards to lot area per DU PRUD standard back in July:

"Based on the figures presented on Sheet 2, it appears they are meeting the minimum lot size and minimum land area per DU, for PRUD's in the R-5. The minimum gross lot size requirement is 2 acres, and the sheet says that the net lot area in the R-5 zone is 2.2 acres (96,965 sf), so they seem to easily be meeting that. The minimum land area per DU for a PRUD in the R-5 zone is 3,000 square feet of net land area. With 96,965 of net land area, they can have 32 units within the R-5 portion of the lot. With the new building, they will be at 25 units within the R-5 portion of the lot."

I assume the proposed number of DU's has not changed since I wrote that, so it should be correct.

It appears the building is meeting the 25' setback from external lot lines required under a PRUD.

If there are any other standards I am missing please let me know.

Chris
[Quoted text hidden]

Planning and Urban Development Department Planning Division



Subject: R-5 PRUD Design Review – 12 White Birch Lane
Written by: Caitlin Cameron, Urban Designer
Date of Review: Thursday, June 11 2020

The planned residential unit development project at 12 White Birch Lane was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner against the standards of the *Planned Residential Unit Developments in the R5 Residential Zones* (Section (h) of the Design Manual).

Design Review Comments:

(h) Planned Residential Unit Development (PRUDs) in the R-5 Residential Zones

Standard (1) a. Design Relationship to the Site

Building placement is responsive to the site conditions of the previously established PRUD. The building is closer to the street than the other building placement nearby. This building is set apart from the rest of the PRUD development and the communal open space.

Standard (1) b. Internal Design Character and Relationship to the Surrounding Neighborhood

Context – The existing PRUD development is considered to be the neighborhood context – these are small-scale homes with natural finish clapboard, gable roofs, vestibules, and simple windows.

- Character: The overall design character should be cohesive with the existing PRUD development. The characteristics of these buildings include a single siding material – clapboard, projecting vestibule massing with recessed entry, double-hung windows. The building uses one cladding material – clapboard, a gable/pitched roof, vertical oriented windows in a regular rhythm.
- Height, scale, and massing: The roof corresponds to the proposal at 6 White Birch and is somewhat referential of the existing buildings. This building is taller by one story than those around it and the cross-gable form, though providing some variation in the massing. **Massing variation at the entrance or adding bays similar to those found nearby will be effective in creating that cohesive design character as required by this standard. Label the materials on the elevation drawings.**
- Massing/Roof Variation: Because the building contains more than 2 units, the project must provide variation in roof and façade character through changes in façade setback, roof configuration, and projecting or recessed building elements. The building includes a cross-gable roof to provide some of this variation. **The standard should then be met through façade variation drawing from the existing building character – vestibule/entrance projections, bay windows, etc.**

Standard (1) c. Recreation and Open Space

1. External buffers: The project includes a fence as external buffer to the rear of the property.
No screening on one side yard adjacent to neighboring residential.
2. Internal buffers: Some parking provided directly in front of building – screening not possible in this scenario.
3. Passive recreational open space: Lawn is provided.
4. Active recreational open space: n/a
5. Private open spaces: Yard space is designated for each unit at the rear of the property with privacy fences.



Shukria Wiar <shukriaw@portlandmaine.gov>

12 White Birch Lane

Mike Tremblay <mtremblay@portlandmaine.gov>

Fri, Oct 16, 2020 at 1:59 PM

To: Shukria Wiar <shukriaw@portlandmaine.gov>

Cc: Lauren Swett <lszett@woodardcurran.com>, Thomas Errico <thomas.errico@tylin.com>, Jeff Tarling <jst@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>, Jason Grant <jgrant@portlandmaine.gov>

Shukria,

There is a construction management plan but no narrative. Otherwise, DPW doesn't have any additional comments on this project.

Thanks,
Mike

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
mtremblay@portlandmaine.gov
P. 207.874.8881 F. 207.874.8852



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April 30, 2020
18519-01

City of Portland Planning Board
Mr. Sean Dundon, Chair
389 Congress Street, 4th Floor
Portland, Maine 04101

**Level III Site Plan Application Submittal, New 3-Unit Dwelling Birch Meadow Apartments
Knight Street/White Birch Lane, Portland, Maine 04103**
Applicant: Birchlane, LLC
City Parcels: 437-A-35 (Reference 437-A-34, 52 Maplewood Street)

Dear Chair Dundon and Planning Board Members:

On behalf of Birchlane, LLC, we have assembled the following Level III Site Plan Submittal for a new three-story, three-unit residential building. The proposed new development will be incorporated into the existing Planned Unit Residential Development (PRUD) known as Birch Meadow Apartments in North Deering that was approved in 1985. The site is accessed from the intersection of Knight Street and White Birch Lane.

Per Portland City Land Use Code Chapter 14, Section 14-117 - Permitted Uses the proposed project area is located in the R-5 (Residential 5) Zone. The overall PRUD development area parcel is located in both the R-5 and R-3 (Residential 3) zones. Zoning specifics are located in Section 5 of this application. No portion of the proposed project site is located in the a Shoreland Overlay Zone or FEMA flood zone. The proposed three-unit residential structure is an allowed use per 14-117: pr: 3. *Planned residential unit development (PRUD)*. PRUD developments are subject to the City Design Standards and are addressed in this application package.

Since the pre-application meeting with City staff, the applicant has continued the planning and design of the facility and site and would like to move forward with the City Planning Board review process. The following narrative provides an overview of the project team and design/facility components.

Project Team:

Applicant: King Real Estate

Record Owner: Birchlane, LLC

Building Design: Applicant to utilize the same design as approved by the City for the recently approved 6 White Birch Lane project.

Civil Engineering/Survey/Traffic/Landscape Architecture: Sebago Technics, Inc.

Project Site/Use:

The project site is located in the City of Portland's North Deering neighborhood and identified by the City assessor as lot 437-A-35 that is adjacent to 437-A-34 under the same ownership. The applicant has a Purchase and Sale Agreement for the new building parcel. There are existing residential structures on

the overall Birch Meadow Apartments site and this application is for continued improvement by the addition of a single 4,500± SF (gross), 1,500± SF (footprint), 3-unit residential structure, parking, utilities and other associated site improvements. We note that there is an existing 120 SF storage shed on the site that will remain as it exists.

This location is ideal for the residential project given its size, location and compatibility with adjacent multi-unit residential uses at Birch Meadow. The proposed expansion area is approximately 7,172 SF in size and the disturbance for this project will be 5,772 ± SF. The area of the site to be developed has flat topography and no protected natural resources such as watercourses, wetlands, animal or plant habitat areas identified within the proposed new development area. The site is located adjacent to the Fobes cemetery subject to a 25'-foot no-disturbance setback as shown on the appended plans.

Development Program:

The development program includes continued access over the existing drive at the intersection of Knight Street and White Birch Lane. The proposed new building will be located adjacent to an area that is currently utilized for parking. The existing parking spaces will be restriped and parking will be expanded to accommodate the additional parking required for the three new units. The existing internal drive will be widened slightly to maintain the required lane width. Pavement will be cut for infrastructure trenching and connections with subsequent pavement repair.

State and Federal Permits:

Additional permits for the expanded site development are not anticipated. The proposed work area is less than one acre in size and does not include impact to protected natural resources requiring Maine Department of Environmental Protection or U.S. Army Corps of Engineers review.

Utilities:

The project will be served by public water and sewer. Sebago Technics has requested confirmation of water service with the Portland Water District, and has submitted a City of Portland Wastewater Application. Discussion regarding gas and electrical/communication services have been initiated between STI and providers. Final utilities design and connections will be coordinated with respective companies in accordance with their individual standards. See [Section 27](#) for utilities correspondence.

Exterior Lighting:

The proposed lighting is limited to the installation of wall-mounted residential-scale fixtures. The placement will direct illumination toward the building entry and at the rear face of the building at the unit privacy areas. The selected fixture, due to the low level of illumination will prevent light spill onto neighboring properties. Additional site lighting is not proposed. We respectfully request a waiver from providing a photometrics plan per waiver request, [Section 7](#).

Landscaping and Screening:

The site is screened from view by neighboring properties by fencing and mature vegetation. Fencing will be relocated and expanded as shown on the site plan. We note that the existing PRUD development has mature vegetation surrounding the dwelling units. The site is not located along a public way therefore street trees are not required or proposed.

Stormwater Management and Erosion Control:

The stormwater management plan was designed to meet City and Maine Department of Environmental Protection Chapter 500 standards. See [Section 24](#) for the Stormwater Management Report. The existing and proposed watershed plans are part of the plan set.

Traffic:

Sebago Technics, Inc. has completed an assessment of expected traffic generation and a Trip Generation Analysis memorandum dated April 28, 2020 by STI is included in this submittal package. Per the memorandum in Section 10, based on the existing and proposed trip generation numbers, the site does not require additional traffic analysis.

Waiver Requests:

A waiver from submittal of a photometrics plan is formally request. See Section 7.

Schedule:

The applicant is hopeful to complete the permitting process through the City by late summer to allow for late summer 2020 commencement and completion within one year.

Closure:

We look forward to working with the City and Planning/Engineering staff through the permitting process for the proposed property new building residential building at street address. Please feel free to contact me if you have any questions or require further information.

Sincerely,
SEBAGO TECHNICS, INC.



Craig A. Burgess, P.E.
Project Manager

CAB/skn

enc.

cc: K. Weinstein, Birchlane, LLC

CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN GENERAL DOCUMENT AND DRAWINGS CHECKLIST		
* Please upload each document <u>and</u> drawing as a separate PDF file * Please upload all drawings in a <u>24 x 36 sheet size</u> * Please confirm each item by electronically checking the boxes to the left for each document/drawing * Please fill out and upload separately the <u>zoning assessment table and waiver table</u> (At the time of application submission, please contact the Department of Public Works regarding E-911 addressing of your project)		
GENERAL APPLICATION DOCUMENTS		
Yes ☒	NA ☐	Project Description Cover Letter with detailed project description 01
Yes ☒	NA ☐	Completed Checklist – Level II and Level III Site Plan (this document) 02
Yes ☒	NA ☐	Right, Title and Interest Deeds, leases, or purchase and sales agreements 03
Yes ☐	NA ☒	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable 04
Yes ☒	NA ☐	Zoning Assessment Table listing required and proposed uses and dimensional standards Zoning Assessment Table 05
Yes ☐	NA ☒	Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements 06
Yes ☐	NA ☒	Waiver Requests Written request for waiver describing request and reason Waiver Table 07
Yes ☒	NA ☐	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project 08
Yes ☒	NA ☐	Technical Capability Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects 09

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

* Please provide assessment of compliance with standards and include supplemental documentation, as applicable

* Please upload each document as a separate PDF file

TRANSPORTATION

Yes ☐	NA ☒	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	10
Yes ☒	NA ☐	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	11
Yes ☐	NA ☒	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	12
Yes ☐	NA ☒	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)	13
Yes ☐	NA ☒	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter	14
Yes ☒	NA ☐	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	15
Yes ☒	NA ☐	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)	16
Yes ☒	NA ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan	17
Yes ☐	NA ☒	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies	18

ENVIRONMENTAL AND LANDSCAPE FEATURES		
Yes ☒	NA ☒	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 19
Yes ☒	NA ☐	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 20
Yes ☒	NA ☐	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) 21
Yes ☐	NA ☒	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4) 22
Yes ☐	NA ☒	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 23
ENVIRONMENTAL AND STORMWATER		
Yes ☒	NA ☐	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 24

PUBLIC INFRASTRUCTURE AND SAFETY		
Yes ☐	NA ☒	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 25
Yes ☒	NA ☐	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 26
Yes ☒	NA ☐	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 27
SITE DESIGN		
Yes ☐	NA ☒	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 28
Yes ☐	NA ☒	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11) 29
Yes ☐	NA ☒	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 30
Yes ☐	NA ☒	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appen. 1) 31

Yes ☐	NA ☒	Historic Resources (14-526 (d) 5), if applicable 32 - 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 ☐	Exterior Lighting (14-526 (d) 6) 33 - 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 ☒	Noise and Vibration (14-526 (d) 7) 34 Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes ☐	NA ☒	Signage and Wayfinding (14-526 (d) 8), if applicable 35 - 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 ☐	Zone Related Design Standards (14-526 (d) 5) 36 - Address Historic Preservation Design Review, if applicable - Address any applicable design review standards by zone - Address submission requirements from Design Manual, page 1, addressing neighborhood context - Description of exterior materials, color, finish, and samples
Construction Management Plan		
Yes ☒	NA ☐	Construction Management Plan 37 Construction Management Document and Plan

LEVEL II AND LEVEL III SITE PLAN DRAWINGS CHECKLIST

* Please upload the following drawings with the listed details as separate pdfs

(ALL drawings must be uploaded in a 24 x 36 sheet size)

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 AND RENDERINGS including:
☒ Exterior building elevations, color renderings, illustrations of all sides
☐ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☐ Provide context drawings, if applicable (Design Manual, page 1)
☒ Floor plans



If Subdivision, must be in compliance with requirements of Section 14-496 (b)

ARCHITECTURAL PLANS AND RENDERINGS including:
☒ Exterior building elevations, color renderings, illustrations of all sides
☐ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☐ Provide context drawings, if applicable (Design Manual, page 1)
☒ Floor plans



Exterior building elevations, color renderings, illustrations of all sides



Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening



Provide context drawings, if applicable (Design Manual, page 1)



Floor plans

03: RIGHT, TITLE, INTEREST

The record owner of the parcel is Evan and Michele Glassman by the following deeds recorded at the Cumberland County Registry of Deeds (CCRD):

- 35188/118, 06/11/2018
- 35188/116, 06/11/2018
- 35188/114, 06/11/2018
- 34591/61, 01/08/2018

Reference is made to the attached Purchase and Sale Agreement included in this section.

PURCHASE AND SALE AGREEMENT - LAND ONLY
("days" means business days unless otherwise noted, see paragraph 20)

September 9, 2019
Offer Date

OCTOBER 31, 2019 Effective Date
Effective Date is defined in Paragraph 20 of this Agreement.

1. PARTIES: This Agreement is made between **Birchlane, LLC**

Glassman ("Buyer") and
Evan Glassman, Michelle Fitts ("Seller").

2. DESCRIPTION: Subject to the terms and conditions hereinafter set forth, Seller agrees to sell and Buyer agrees to buy ☐ all ☒ part of (if "part of" see para. 22 for explanation) the property situated in municipality of **Portland**, County of **Cumberland**, State of Maine, located at **50-52 Maplewood Street** and described in deed(s) recorded at said County's Registry of Deeds Book(s) **31788**, Page(s) **118 Etc**.

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

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

4. ESCROW AGENT/ACCEPTANCE: **Buyers Attorney** ("Agency") shall hold said earnest money and act as escrow agent until closing; this offer shall be valid until **10/30/19** (date) **11:00** ☒ AM ☐ PM; and, in the event of non-acceptance, this earnest money shall be returned promptly to Buyer.

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

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

7. POSSESSION: Possession of premises shall be given to Buyer immediately at closing unless otherwise agreed in writing.

8. RISK OF LOSS: Until the closing, the risk of loss or damage to said premises by fire or otherwise, is assumed by Seller. Buyer shall have the right to view the property within 24 hours prior to closing for the purpose of determining that the premises are in substantially the same condition as on the date of this Agreement.

9. PRORATIONS: The following items, where applicable, shall be prorated as of the date of closing: rent, association fees, (other) **██████████**. Real estate taxes shall be prorated as of the date of closing (based on municipality's fiscal year). Seller is responsible for any unpaid taxes for prior years. If the amount of said taxes is not known at the time of closing, they shall be apportioned on the basis of the taxes assessed for the preceding year with a reapportionment as soon as the new tax rate and valuation can be ascertained, which latter provision shall survive closing. Buyer and Seller will each pay their transfer tax as required by State of Maine.

10. DUE DILIGENCE: Buyer is encouraged to seek information from professionals regarding any specific issue or concern. Neither Seller nor Licensee makes any warranties regarding the condition, permitted use or value of Sellers' real property. This Agreement is subject to the following contingencies, with results being satisfactory to Buyer:

CONTINGENCY	YES	NO	FULL RESOLUTION	OBTAINED BY	TO BE PAID FOR BY
1. SURVEY Purpose: <u>Subdivision and approvals</u>	☒	☐	within <u>120</u> days	<u>Buyer</u>	<u>Buyer</u>
2. SOILS TEST Purpose: _____	☒	☐	within <u>120</u> days	<u>Buyer</u>	<u>Buyer</u>
3. SEPTIC SYSTEM DESIGN Purpose: _____	☒	☐	within <u>120</u> days	<u>Buyer</u>	<u>Buyer</u>
4. LOCAL PERMITS Purpose: _____	☒	☐	within <u>150</u> days	<u>Buyer</u>	<u>Buyer</u>
5. HAZARDOUS WASTE REPORTS Purpose: _____	☐	☒	within _____ days	_____	_____
6. UTILITIES Purpose: _____	☒	☐	within <u>150</u> days	<u>Buyer</u>	<u>Buyer</u>
7. WATER Purpose: _____	☒	☐	within <u>150</u> days	<u>Buyer</u>	<u>Buyer</u>
8. SUB-DIVISION APPROVAL Purpose: _____	☒	☐	within <u>150</u> days	<u>Buyer</u>	<u>Buyer</u>
9. DEP/LUPC/ACOE APPROVALS Purpose: _____	☐	☒	within _____ days	_____	_____
10. ZONING VARIANCE Purpose: _____	☐	☒	within _____ days	_____	_____
11. HABITAT REVIEW/WATERFOWL Purpose: _____	☐	☒	within _____ days	_____	_____
12. REGISTERED FARMLAND Purpose: _____	☐	☒	within _____ days	_____	_____
13. MDOT DRIVEWAY/ENTRANCE PERMIT Purpose: _____	☐	☒	within _____ days	_____	_____
14. DEED RESTRICTION Purpose: _____	☐	☒	within _____ days	_____	_____
15. TAX STATUS* Purpose: _____	☐	☒	within _____ days	_____	_____
16. BUILD PACKAGE Purpose: _____	☐	☐	within _____ days	_____	_____
17. OTHER [REDACTED]	☒	☐	within <u>180</u> days	<u>Buyer</u>	<u>Buyer</u>

* If the land is enrolled in the Maine Tree Growth Tax program, Seller agrees to provide Buyer with the current Forest Management and Harvest Plan within _____ days. ☐ Yes ☐ No

Further specifications regarding any of the above: **Seller and Buyer to work together to subdivide lot and obtain approvals from mortgage holder for release.**

Unless otherwise specified above, all of the above will be obtained and paid for by Buyer. Seller agrees to cooperate with Buyer and shall give Buyer and Buyer's agents and consultants reasonable access to the property in order to undertake the above investigations. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, Buyer will declare the Agreement null and void by notifying Seller in writing within the specified number of days, and any earnest money shall be returned to Buyer. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, and Buyer wishes to pursue remedies other than voiding the Agreement, Buyer must do so to full resolution within the time period set forth above; otherwise this contingency is waived. If Buyer does not notify Seller that an investigation is unsatisfactory within the time period set forth above, this contingency is waived by Buyer. In the absence of inspection(s) mentioned above, Buyer is relying completely upon Buyer's own opinion as to the condition of the property.

11. FINANCING: Buyer's obligation to close:

- ☒ is not subject to a financing contingency. Buyer has provided Seller with acceptable proof of the funds.
- ☐ is not subject to a financing contingency. Buyer shall provide proof of the funds acceptable to Seller within _____ days. If such proof is unacceptable to Seller, Seller may terminate this Agreement no later than _____ days from receipt. If proof of funds is not provided within such time period, Seller may terminate this Agreement which right shall end once such proof is received, however Seller retains the agreed upon time period to terminate if such proof is unacceptable. If Seller terminates in either case, the earnest money shall be returned to Buyer.
- ☐ is subject to financing as follows:
- a. Buyer's obligation to close is subject to Buyer obtaining a _____ loan of _____ % of the purchase price, at an interest rate not to exceed _____ % and amortized over a period of _____ years. Buyer is under a good faith obligation to seek and obtain financing on these terms. If such financing is not available to Buyer as of the closing date, Buyer is not obligated to close and may terminate this Agreement in which case the earnest money shall be returned to Buyer.
- b. Buyer to provide Seller with letter from lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested within _____ days from the Effective Date of the Agreement. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.
- c. Buyer hereby authorizes, instructs and directs its lender to communicate the status of the Buyer's loan application to Seller, Seller's licensee and Buyer's licensee.
- d. After (b) is met, if the lender notifies Buyer that it is unable or unwilling to provide said financing, Buyer is obligated to provide Seller with written documentation of the loan denial within two days of receipt. After notifying Seller, Buyer shall have _____ days to provide Seller with a letter from another lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.
- e. Buyer agrees to pay no more than _____ points. Seller agrees to pay up to \$ _____ toward Buyer's actual pre-pays, points and/or closing costs, but no more than allowable by Buyer's lender.
- f. Buyer's ability to obtain financing ☐ is ☐ is not subject to the sale of another property. See addendum ☐ Yes ☐ No.
- g. Buyer may choose to pay cash instead of obtaining financing. If so, Buyer shall notify Seller in writing including providing proof of funds and the Agreement shall no longer be subject to financing, and Seller's right to terminate pursuant to the provisions of this paragraph shall be void and Seller's obligations pursuant to 11e shall remain in full force and effect.

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

_____ of _____
None _____ of _____
Licensee _____ Agency _____
MLS ID _____ MLS ID _____
is a ☐ Seller Agent ☐ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker
King Weinstein _____ of **King Real Estate** _____
Licensee _____ Agency _____
MLS ID _____ MLS ID _____
is a ☐ Seller Agent ☒ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

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

13. PROPERTY DISCLOSURE FORM: Buyer acknowledges receipt of Property Disclosure Form.

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

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

16. PRIOR STATEMENTS: Any representations, statements and agreements are not valid unless contained herein. This Agreement completely expresses the obligations of the parties and may only be amended in writing, signed by both parties.

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

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

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

20. EFFECTIVE DATE/BUSINESS DAYS: This Agreement is a binding contract when the last party signing has caused a paper or electronic copy of the fully executed agreement to be delivered to the other party which shall be the Effective Date. Licensee is authorized to fill in the Effective Date on Page 1 hereof. Except as expressly set forth to the contrary, the use of the term "days" in this

Agreement, including all addenda made a part hereof, shall mean business days defined as excluding Saturdays, Sundays and any observed Maine State/Federal holidays. Deadlines in this Agreement, including all addenda, expressed as "within x days" shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 p.m. Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 5:00 p.m. Eastern Time on such date.

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

22. OTHER CONDITIONS:

23. GENERAL PROVISIONS:

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

24. ADDENDA: ☒ Yes ☐ No Explain: Land Disclosure

25. ELECTRONIC SIGNATURES: Pursuant to the Maine Uniform Electronic Transactions Act and Digital Signature Act, the parties authorize and agree to the use of electronic signatures as a method of signing/initialing this Agreement, including all addenda. The parties hereby agree that either party may sign electronically by utilizing an electronic signature service.

Buyer's Mailing address is 198 Saco Ave, Old Orchard Beach, ME 04064-1334

BUYER
Birchlane, LLC

DATE

BUYER

DATE

King Weinstein
11/27/11
Member

BUYER

DATE

BUYER

DATE

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

Seller's Mailing address is 52 Maplewood St, Portland, ME 04103-3604

SELLER
Evan Glassman

DATE

SELLER *Michelle Glassman*
Michelle Pitts

DATE

SELLER

DATE

SELLER

DATE

Michelle Glassman 10/14/19
Michelle Pitts 10/14/19

PROPERTY DISCLOSURE – LAND ONLY

Under Maine Law, certain information must be made available to buyers prior to or during preparation of an offer. This statement has been prepared to assist prospective buyers in evaluating this property. This disclosure is not a warranty of the condition of the property and is not part of any contract between Seller and any Buyer. Seller authorizes the disclosure of the information in this statement to real estate licensees and to prospective buyers of this property. The Seller agrees to provide prompt notice of any changes in the information and this form will be appropriately changed with an amendment date. Inspections are highly recommended.

DO NOT LEAVE ANY QUESTIONS BLANK. STRIKE, WRITE N/A OR UNKNOWN IF NEEDED.

SECTION I – HAZARDOUS MATERIAL

The licensee is disclosing that the Seller is making representations contained herein.

A. UNDERGROUND STORAGE TANKS - Are there now, or have there ever been, any underground storage tanks on your property? ☐ Yes ☐ No ☒ Unknown

If Yes: Are tanks in current use?..... ☐ Yes ☐ No ☐ Unknown

If no longer in use, how long have they been out of service? _____

If tanks are no longer in use, have tanks been abandoned according to DEP?..... ☐ Yes ☐ No ☐ Unknown

Are tanks registered with DEP?..... ☐ Yes ☐ No ☐ Unknown

Age of tank(s): _____ Size of tank(s): _____

Location: _____

What materials are, or were, stored in the tank(s): _____

Have you experienced any problems such as leakage: ☐ Yes ☐ No ☐ Unknown

Comments: _____

Source of information: Seller

B. OTHER HAZARDOUS MATERIALS - Current or previously existing:

TOXIC MATERIAL: ☐ Yes ☐ No ☒ Unknown

LAND FILL:..... ☐ Yes ☐ No ☒ Unknown

RADIOACTIVE MATERIAL:..... ☐ Yes ☐ No ☒ Unknown

METHAMPHETAMINE:..... ☐ Yes ☐ No ☒ Unknown

Comments: _____

Source of information: Seller

Buyers are encouraged to seek information from professionals regarding any specific issue or concern.

Buyer Initials @ _____

Page 1 of 3

Seller Initials SC mtg _____

COUNTER-OFFER

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

_____ purchase price. Buyer will plant privacy trees. _____
Seller to allow portion of their fencing to be used as town required privacy fencing. Seller to pay or
reimburse for relocation of said fencing. No constructions on weekends (Sat & Sun). All exterior
construction must commence by end of Business day Mon-Fri. All interior or exterior work that is noise
disruptive and infringes on the quiet enjoyment policy is not permitted. Buyer agrees to 4'-6' (tbd) setback
beyond the back property line this is ideally equal to one (1) panel worth of fencing that currently extends
off the back of the garage. Interior work may be performed as needed provided it does not
cause a disturbance

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer
will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) 10/30/19
(time) 12 ☐ AM ☒ PM.

Muriel Glassman 10/14/19
SELLER DATE

SELLER DATE

[Signature] 10/15/19
SELLER DATE

SELLER DATE

The Buyer hereby accepts the counter offer set forth above.

[Signature] 10/14/19
BUYER DATE

BUYER DATE

BUYER DATE

BUYER DATE

EXTENSION

The closing date of this Agreement is extended until _____

DATE

SELLER DATE

SELLER DATE

SELLER DATE

SELLER DATE

BUYER DATE

BUYER DATE

BUYER DATE

BUYER DATE



SECTION II — GENERAL INFORMATION

Is the property subject to or have the benefit of any encroachments, easements, rights-of-way, leases, rights of first refusal, life estates, private ways, trails, homeowner associations (including condominiums and PUD's) or restrictive covenants? ☒ Yes ☐ No ☐ Unknown

If Yes, explain: **final location of fence line may dictate an easement**

Source of information: _____

Is access by means of a way owned and maintained by the State, a county, or a municipality over which the public has a right to pass?..... ☐ Yes ☒ No ☐ Unknown

If No, who is responsible for maintenance? _____

Road Association Name (if known): _____

Are there any shoreland zoning, resource protection or other overlay zone requirements on the property?..... ☐ Yes ☒ No ☐ Unknown

If Yes, explain: _____

Source of information: _____

Is the property the result of a division within the last 5 years (i.e. subdivision)? ☐ Yes ☒ No ☐ Unknown

If Yes, explain: _____

Source of information: _____

Are there any tax exemptions or reductions for this property for any reason including but not limited to:

Tree Growth, Open Space and Farmland, Blind, Working Waterfront?..... ☐ Yes ☒ No ☐ Unknown

If Yes, explain: _____

Is a Forest Management and Harvest Plan available?..... ☐ Yes ☒ No ☐ Unknown

Has all or a portion of the property been surveyed?..... ☐ Yes ☐ No ☒ Unknown

If Yes, is the survey available?..... ☐ Yes ☐ No ☐ Unknown

Has the property ever been soil tested?..... ☐ Yes ☐ No ☒ Unknown

If Yes, are the results available?..... ☐ Yes ☐ No ☐ Unknown

Are mobile/manufactured homes allowed?..... ☐ Yes ☒ No ☐ Unknown

Are modular homes allowed?..... ☐ Yes ☒ No ☐ Unknown

Source of information: **seller**

Additional Information: _____

Buyer Initials _____

Page 2 of 3

Seller Initials SG mlg

PROPERTY LOCATED AT: 50-52 Maplewood St, Portland, ME

ATTACHMENTS CONTAINING ADDITIONAL INFORMATION:..... ☐ Yes ☒ No

Seller shall be responsible and liable for any failure to provide known information about property defects to Buyer. As Seller, I/we have provided the above information and represent that all information is correct.

Michelle Glassman 10/5/19
SELLER DATE

Michelle Glassman

Evan Glassman 10/5/19
SELLER DATE

SELLER DATE
Evan Glassman

SELLER DATE

I/We have read and received a copy of this disclosure and understand that I/we should seek information from qualified professionals if I/we have questions or concerns.

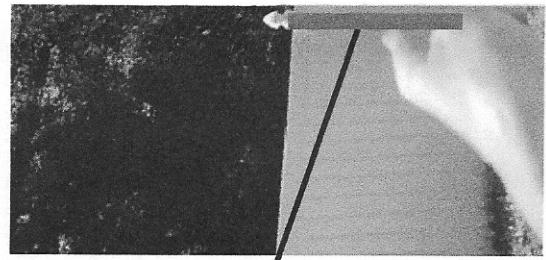
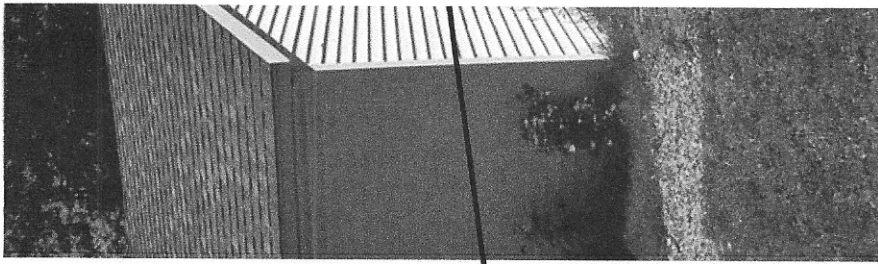
[Signature] 10/5/19
BUYER DATE

[Signature] 10/5/19
BUYER DATE

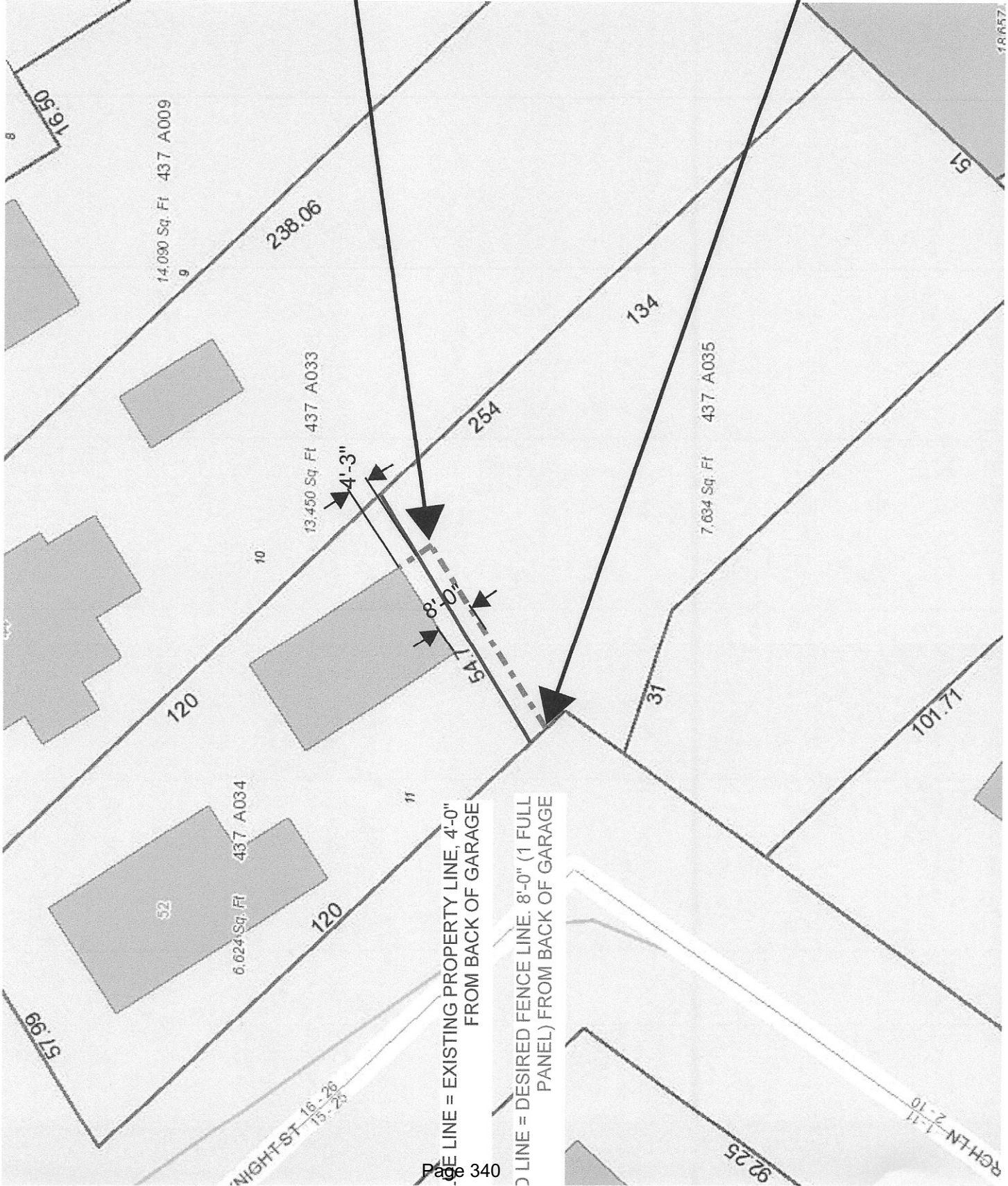
BUYER DATE

BUYER DATE





Q10/81



DEED OF SALE BY PERSONAL REPRESENTATIVE

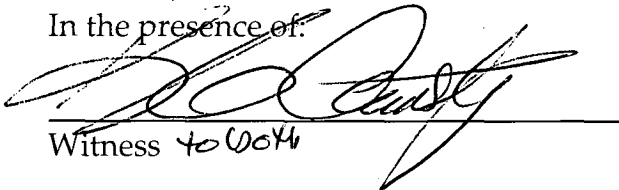
KNOW ALL PERSONS BY THESE PRESENTS, That we, **Cynthia Doiron** of the Town of Windham, County of Cumberland and State of Maine and **Richard W. Cail**, of the City of Portland, County of Cumberland and State of Maine, duly appointed and acting Co-Personal Representatives of the **ESTATE OF RICHARD DOUGLAS CAIL** (testate), as shown by the Probate records of the County of Cumberland, Maine, Docket No. 2017-0234 (and having given notice to each person succeeding to an interest in the real property described below at least ten days prior to the sale), by the power conferred by the Probate Code and every other power, for consideration paid, **GRANT to EVAN J. GLASSMAN and MICHELLE T. FITTS** of the Town of Kennebunk, County of York and State of Maine, as **joint tenants** and not as tenants-in-common, the real property in the City of Portland, County of Cumberland and State of Maine, being more particularly described as follows:

See Exhibit A, attached hereto and incorporated herein.

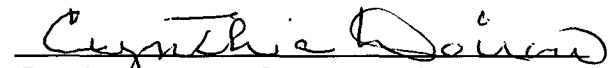
WITNESS our hands and seals this 25th day of June, 2018.

SIGNED, SEALED AND DELIVERED

In the presence of:


Witness to Doiron

Witness


Cynthia Doiron, Co-Personal
Representative of the Estate of Richard
Douglas Cail


Richard W. Cail, Co-Personal
Representative of the Estate of Richard
Douglas Cail

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

Then personally appeared this 25th day of June 2018, the above-named Cynthia Doiron and Richard W. Cail, individually and in their said capacity and acknowledged the foregoing instrument to be their free act and deed.

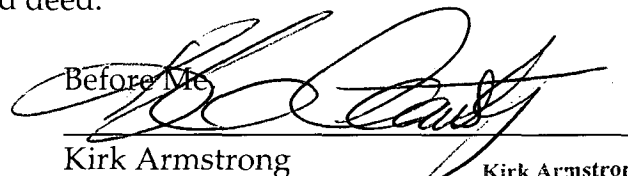

Before Me
Kirk Armstrong
Notary Public
My Commission Expires: 12/2/2018

EXHIBIT A

(52 Maplewood Street-Portland, Maine)

A certain lot or parcel of land with the buildings thereon situated in said Portland, that part formerly called Deering, near Allen's Corner, so called, on the southerly side of Maplewood Street, Formerly called Orchard Street, and being part of lot numbered eleven (11) as shown on plan recorded in Cumberland County Registry of Deeds in Plan Book 8, Page 115, said lot being more fully described as follows:

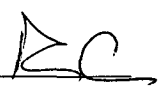
Beginning at a point on said southerly Side of Maplewood Street at the most westerly corner of lot numbered ten (10) as shown on said plan; thence southerly by the westerly line of said lot number ten (10) one hundred twenty (120) feet to an iron pipe; thence westerly by land now or formerly of Almon S. Bisbee and parallel with the southerly line of Maplewood Street fifty-eight (58) feet, more or less, to the most westerly side of lot eleven (11) as shown on said plan; thence northerly by said westerly side line of lot number eleven (11) one hundred twenty (120) feet to said Maplewood Street; thence easterly by said Maplewood Street fifty-seven and ninety-nine one hundredths (57.99) feet to the point of beginning.

Further reference may be made to a Warranty Deed from Richard D. Cail to Richard D. Cail and Mary Susan Cail dated October 6, 2000 and recorded in Book 15828, Page 178. Mary Susan Cail predeceased Richard D. Cail on August 21, 2016 leaving Richard D. Cail the surviving joint tenant and upon his passing January 30, 2017, title passed to his Estate (Cumberland County Probate Docket No. 2017-234, Testate, an Abstract of Will is recorded in Book 33922, Page 84) all in the Cumberland County Registry of Deeds.

* * * * *



Reviewed and Approved



Received
Recorded Register of Deeds
Oct 02, 2018 02:57:14P
Cumberland County
Nancy A. Lane

DEED OF SALE BY PERSONAL REPRESENTATIVE

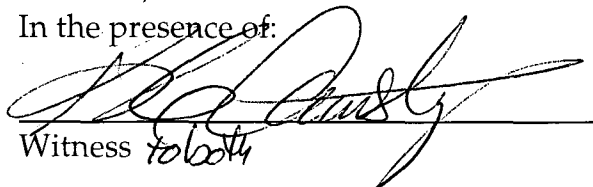
KNOW ALL PERSONS BY THESE PRESENTS, That we, **Cynthia Doiron** of the Town of Windham, County of Cumberland and State of Maine and **Richard W. Cail**, of the City of Portland, County of Cumberland and State of Maine, duly appointed and acting Co-Personal Representatives of the **ESTATE OF RICHARD DOUGLAS CAIL** (testate), as shown by the Probate records of the County of Cumberland, Maine, Docket No. 2017-0234 (and having given notice to each person succeeding to an interest in the real property described below at least ten days prior to the sale), by the power conferred by the Probate Code and every other power, for consideration paid, **GRANT to EVAN J. GLASSMAN and MICHELLE T. FITTS** of the Town of Kennebunk, County of York and State of Maine, as **joint tenants** and not as tenants-in-common, the real property in the City of Portland, County of Cumberland and State of Maine, being more particularly described as follows:

See Exhibit A, attached hereto and incorporated herein.

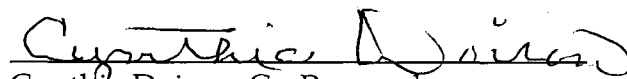
WITNESS our hands and seals this 25th day of June, 2018.

SIGNED, SEALED AND DELIVERED

In the presence of:


Witness Robert

Witness


Cynthia Doiron, Co-Personal
Representative of the Estate of Richard
Douglas Cail


Richard W. Cail, Co-Personal
Representative of the Estate of Richard
Douglas Cail

STATE OF MAINE
COUNTY OF CUMBERLAND, ss

Then personally appeared this 25th day of June 2018, the above-named Cynthia Doiron and Richard W. Cail, individually and in their said capacity and acknowledged the foregoing instrument to be their free act and deed.

Before Me,



Kirk Armstrong
Notary Public

My Commission Expires: My Commission Expires 12/2/2018

Kirk Armstrong
Notary Public
State of Maine

EXHIBIT A

(52 Maplewood Street-Portland, Maine)

Certain lots or parcels of land and buildings and improvements situated thereupon, located in the City of Portland, County of Cumberland and State of Maine on the S. side Maplewood Street, more particularly described as lots Nos. 50-52, bounded W. by land of Edward Knight, S. by city gravel pit and cemetery, lot #11, Rec. Plan Littlefield & Wells, City Assessors' Revaluation Plan 437, Block A. Area 13,956 square feet.

Further reference may be made to a Quitclaim Deed from Richard D. Cail to Richard D. Cail and Mary S. Cail dated October 6, 2000 and recorded in Book 15828, Page 180. Mary Susan Cail predeceased Richard D. Cail on August 21, 2016 leaving Richard D. Cail the surviving joint tenant and upon his passing January 30, 2017, title passed to his Estate (Cumberland County Probate Docket No. 2017-234, Testate, an Abstract of Will is recorded in Book 33922, Page 84) all in the Cumberland County Registry of Deeds.

* * * * *

Reviewed and Approved



Received
Recorded Register of Deeds
Oct 02, 2018 02:58:52P
Cumberland County
Nancy A. Lane

04: STATE AND FEDERAL PERMITS

The proposed site development does not require state or federal permits. Stormwater will be reviewed under the provisions of delegated review authority by the City of Portland. The site disturbance does not exceed the one-acre threshold requiring a Maine Construction General Permit Notice of Intent from the Maine Department of Environmental Protection.

05: ZONING ASSESSMENT

The proposed development area (new 3-unit dwelling and parking) is in the R-5 Zoning District. The new development will be incorporated into the existing Planned Residential Unit Development (PRUD). In accordance with the dimensional requirements defined in Chapter 14, Division 6, R-5 Residential Zone, of the City of Portland Land Use Ordinance, the proposed development meets or exceeds the requirements of R-5 Zoning. We have provided a *Zoning Assessment Table* for each of the zones within the existing PRUD. Reference is made to the plan set for additional space and bulk information.



ZONING ANALYSIS Relevant Zone(s) R5

All Projects:

	Required	Proposed
Lot Size	6,000	7,172
Area Per Dwelling Unit	3,000	3,463
Minimum Street Frontage	50	N/A
Front Yard Minimum	20	N/A
Front Yard Maximum	N/A	N/A
Rear Yard	20	26
Yard Right	15	26
Yard Left	15	48
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	40	10.54
Minimum Lot Coverage	N/A	N/A
Maximum Height	35	33.75
Open Space	300	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	2 per Unit	7
Loading Bays	N/A	N/A
Other 1	N/A	N/A
Other 2	N/A	N/A
Other 3	N/A	N/A

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	2.0	2.36
Minimum Lot Area per Dwelling	3,000	3,463
Maximum # Units per Building	12	3
Maximum Building Length	140	48
Maximum Accessory Building Length	60	N/A
Minimum Setbacks	25	26
Minimum Building Separation	N/A	N/A
Minimum Open Space	300	N/A

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):			



ZONING ANALYSIS Relevant Zone(s) R3

All Projects:

	Required	Proposed
Lot Size	6,500	N/A
Area Per Dwelling Unit	6,500	N/A
Minimum Street Frontage	50	N/A
Front Yard Minimum	25	N/A
Front Yard Maximum	N/A	N/A
Rear Yard	25	N/A
Yard Right	8-16	N/A
Yard Left	8-16	N/A
Side Street Setback	20	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	35	N/A
Minimum Lot Coverage	N/A	N/A
Maximum Height	35	N/A
Open Space	300	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	2 per Unit	N/A
Loading Bays	N/A	N/A
Other 1	N/A	N/A
Other 2	N/A	N/A
Other 3	N/A	N/A

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	3.0	N/A
Minimum Lot Area per Dwelling	6,500	N/A
Maximum # Units per Building	5	N/A
Maximum Building Length	100	N/A
Maximum Accessory Building Length	N/A	N/A
Minimum Setbacks	25	N/A
Minimum Building Separation	16	N/A
Minimum Open Space	300	N/A

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):			

06: EXISTING AND/OR PROPOSED EASEMENTS OR COVENANTS

A. Existing Easements

Reference is made to the enclosed Existing Conditions and Site Plans. No easements are located within the proposed site improvement area.

B. New Easements

New easements are limited to those that are typically granted for utility access

C. Covenants

No restrictions or covenants are proposed at this time.

07: WAIVERS

The applicant formally requests a waiver from providing a photometrics plan. See attached form.

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 - Section 12 12.6 Submission Requirement, Photometric Plans:	12.6.2 A photometric plan shall be provided at 20 scale...which shall show the extent of the areas designed and intended for lighting,...and within those areas provide foot candle calculations of...	We are requesting that the applicant not provide a photometrics plan showing proposed site illumination levels.	The proposed residential-scale fixtures have a 60-Watt illumination/equivalent level. The four fixtures proposed represent a de minimis level of lighting that will not affect neighboring properties. See Section 33 for fixture cut sheet.

08: FINANCIAL CAPABILITY

A letter from Biddeford Savings is included in this section as demonstration of financial capability.



April 28, 2020

King Weinstein
Birchlane, LLC
198 Saco Avenue
Old Orchard Beach, ME 04064

RE Birch Meadow Apartments, 6 White Birch Lane, Portland

To whom it may concern:

Birchlane, LLC, and King Weinstein, as its owner, have the capacity through net worth and potential financing to expand and improve the property at 6 White Birch Lane, Portland, Maine. Birchlane, LLC is in good standing with the Bank handling business checking and borrowing activities as agreed.

This letter is based on my present understanding of your financial position. Any changes in circumstances relating to this transaction may require revisions to the Bank's assessment of Birchlane, LLC's and King Weinstein's capacity.

If you have any questions regarding this letter, please call me at 571-5673, or send an e-mail to djones@biddefordsavings.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Doug Jones".

Doug Jones
Senior Vice President

09: TECHNICAL CAPABILITY

Birchlane, LLC King Real Estate has previous development experience under the direction of owner Mr. King Weinstein. King Weinstein has been a contractor and developer for over 30 years and is the principal of Birchlane, LLC. Mr. Weinstein holds a bachelor's and master's degree from University of Southern Maine and is also a licensed real estate broker, contractor, electrician and plumber. King Real Estate owns numerous apartment complexes throughout southern Maine and is based out of Old Orchard Beach, Maine.

King has permitted and developed many residential and commercial projects in Portland including, but not limited to:

- 3-Unit Dwelling, 6 White Birch Lane, Recently Approved
- Flatbread Company/Ri Ra Irish Pub at 72 Commercial Street, Portland
- 904 Washington Avenue Condominiums
- Bancroft Street 7,000 SF single family home
- Stepping Stone Lane Subdivision off Washington Avenue

Other area residential projects include:

- 80 apartments, Sanford
- Colindale, 64 apartment complex, Old Orchard Beach
- Snow Goose Condominiums, Westbrook
- Sea Pointe Condominiums, Saco

Sebago Technics The applicant has retained Sebago Technics, Inc., a multi-disciplinary consulting engineering firm, to assist in all aspects of the proposed site development. A firm introduction and key personnel resumes are included in this section.



What Sets Us Apart?

Approach

Our approach to project delivery provides a single point of contact, responsive scheduling and cost efficiency.

Reputation

Sebago Technics is recognized as a firm that excels in the permitting of projects through experienced knowledge and excellent reputation.

Ownership

100% Employee ownership results in improved responsiveness, commitment and accountability throughout the organization.

Quality

Our designs, graphics and plans are subject to rigorous quality standards and review which results in clear, effective documents.

Innovation

Sebago Technics' design professionals employ the latest engineering and technological methods to develop practical, cost-effective solutions.

Results

Sebago Technics' resources and experience combined with our project team approach provide the capacity to meet client needs and deliver results.

Founded in 1981, Sebago Technics, Inc. is a consulting firm of more than forty design professionals and technical staff providing services throughout New England. From the start, our business plan was simple: "to provide quality, cost-effective civil engineering services that are responsive to a customer's goals, schedule and budget."

Our One Company capabilities and resources provide clients with experience and solutions to respond to their planning, permitting and design needs. Guided by integrity, experience and teamwork we understand that we can only succeed when quality, responsive and cost-effective service is provided to our customers.

General Services

- Land Surveying
- Site and Civil Engineering
- Transportation/Traffic Engineering
- Landscape Architecture
- Environmental Engineering
- Natural Resources and Soils Science
- Permitting (Local/State/Federal)
- Construction Services

Licensed & Certified Professionals

- Professional Engineers
- Certified Flood Plain Manager
- Certified Wetland Scientist
- DOT Project Administrators
- LEED Accredited Professionals
- Professional Land Surveyors

- Registered Landscape Architects
- Licensed Soil Scientist
- Subsurface Disposal Systems Designers
- Erosion Control, Sedimentation & Stormwater Inspectors
- Professional Traffic Operations Engineer

CRAIG A. BURGESS, PE

Senior Project Engineer



Mr. Burgess joined Sebago Technics, Inc., (STI) in June of 2012. Having over 10 years of civil engineering experience throughout Maine, Craig is involved in all aspects of project management, roadway and site design, permitting, plan preparation and stormwater analyses. He has been involved with a variety of institutional, municipal and private sector projects.

Craig routinely coordinates directly with clients, regulatory agencies and internal project managers on projects of diverse caliber. He excels at his communication skills and creative engineered solutions that work to create efficient, aesthetic and cost-effective projects for his clients. His engineered solutions were recognized in late 2013 for the Baxter Boulevard North CSO Storage conduit and Morse Street Sewer Separation Project with the City of Portland. The project won the 2013 Build Maine Award from AGC Maine, and also won the 2014 Maine ACEC Special Recognition Award for Engineering Excellence.

EXPERIENCE



- **Margaret Chase Elementary School - Sanford, ME:** Comprehensive building expansion involving design for complete overhaul of site amenities, including a new multi-purpose field. Served as the Lead Site Engineer to bring the project into compliance with State stormwater phosphorus standards.
- **Sanford High School and Regional Technical Center:** Site selection design, site engineering and permitting for a new 350,000 s.f. high school and regional technical campus in the City of Sanford. Served as lead site engineer for most expensive school construction project in state history.
- **Morse High School (RSU 1):** Led site engineering team for new high school and surrounding site amenities. Developed creative solutions to manage stormwater across site with a significant elevation differential and earthwork demands.
- **Colby College Athletic Fieldhouse Complex - Waterville, ME:** Lead site engineer of stormwater management design for new athletic facility and site amenities.
- **Wells School District - Wells, ME:** New athletic field and track expansion plan. The project was designed, permitted, and construction started within 3 months of authorization. The project features an internal underdrained sand filter that received immediate approval from DEP, allowing the project to meet treatment exemptions needs cost effectively.
- **Cabin in the Woods - Chelsea, ME:** Project Manager, site engineering and permitting for residential housing project serving homeless veterans in Maine.
- **Martin's Point Healthcare** - Lead site engineer for innovative new medical office facilities in Biddeford and Scarborough, Maine.
- **South Portland Municipal Facility, Westbrook Public Works Facility, & Orono Public Works Facility:** Served as lead site engineer for new public works facilities, both involving engineering of expansive spaces and involved permitting efforts.
- **Baxter Boulevard North Storage Conduit Storage Project - Portland, ME:** Lead site engineer for a 2 Million Gallon CSO Storage Project.
- **Central Maine Veterans Memorial Cemetery - Augusta, ME:** Engineering, permitting and construction administration for the new crypt construction. The first of its kind in the State of Maine. This new site will inturn over 950 Veterans serving our State and Country.

EDUCATION



Villanova University
Villanova, Pennsylvania
August 1999 – May 2003
B.S., Mechanical Engineering

CERTIFICATIONS

LEED Green Associate

State of Maine Certification for
Inspection and Maintenance of
Stormwater BMP

MEMBERSHIPS

American Society of Civil Engineers

RECOGNITION

Baxter Boulevard won Maine ACEC
Special Recognition Award for
Engineering Excellence

Baxter Boulevard won 2013 Build
Maine award for AGC Maine

REGISTRATIONS

Professional Engineer: Maine #12638



MATHEW K. ORR, EI

Civil Engineer



Mr. Orr joined Sebago Technics, Inc., (STI) in May of 2019. Mathew has a degree in Civil Engineering from the University of Maine and graduated in 2019 with a Master's in Business Administration also from UMaine. Matt earned his Intern Engineer certificate in NY, Engineer-Intern certificate in Maine, and materials testing certifications in Concrete and Nuclear Density. He enjoys sports and community service. He is from Rouses Point, NY and now resides in Gorham.

EXPERIENCE



South Portland Drainage Improvements - South Portland, Maine

As part of a larger team, Mr. Orr assisted in the cost estimate for multiple options. Checked pipe conflicts of the preliminary designs due to the proposed storm drainage being separated from existing sewer system.

Payne Road Crossing - Scarborough, Maine

Design engineer for the project, which included the layout of utilities, grading of the site, and analysis of stormwater for a small retail complex in Scarborough. As part of the project, Mr. Orr designed the gravel wetland for treatment and flooding control. He also assisted significantly in the preparation of various applications to the Town and State.

VIP Expansion - Windham, Maine

Design engineer for the expansion of a current structure and site to accommodate a new service bay and additional parking. Work included grading of site, stormwater improvements, and relocation of utilities.

Barry Mills Hall & The Center for Arctic Studies - Brunswick, Maine

Assisted as part of a larger team on various tasks for the development of new academic buildings for Bowdoin College. Work included analysis of stormwater treatment, coordination of utilities, and research on historical properties surrounding the project.

EDUCATION



University of Maine - Orono, ME
B.S., Civil Engineering
May 2018

University of Maine - Orono, ME
Master of Business Administration
August 2019

MEMBERSHIPS

American Society Of Civil Engineers
(ASCE), University of Maine Chapter:
Student Member 2015 - 2018,
Treasurer - 2017



DEREK H. CALDWELL, PE, PTOE

Transportation/Traffic Engineer



Mr. Caldwell joined Sebago Technics in 2016 as a Transportation/Traffic Engineer. He was previously employed by the Massachusetts Department of Transportation as a Traffic Engineer in the District Four office. Derek is a graduate of Worcester Polytechnic Institute with a B.S. in Civil Engineering and also has a M.S. in Transportation Engineering from the University of Massachusetts – Lowell.

He is proficient in the use of AutoCad, ArcGIS, Microstation, Synchro/SimTraffic and Vissim. Since joining the firm he has been actively involved in a variety of projects including traffic impact studies, traffic signal design, traffic signal operations, intersection design, and planning studies.

EXPERIENCE



Broadway at Evans Street and Lincoln Street – South Portland, ME: Design engineer for signal reconstruction project. Project involves two signalized intersections being modified from isolated to coordinated operation. Improvements are to address traffic operational efficiency as well as vehicle and pedestrian safety. Project completed under the MaineDOT Local Project Administration (LPA) program.

Route 108 Corridor Study – Dover, NH: Developed a VISSIM traffic simulation model to compare alternatives along an existing signalized corridor. The model contained multiple scenarios to include both signalized and roundabout traffic control.

Dirigo Plaza Off-Site Improvements – Portland/Westbrook, ME: Design of new traffic signals at five locations as part of mitigation for a major commercial development.

State of Maine Office Building – Augusta, ME: Traffic Impact Study for 125,000 square feet of new office space. Study including the analysis of an existing coordinated signal system.

383 Commercial Street – Portland, ME: Traffic Impact Study for hotel, residential and commercial mixed use development in Portland's Waterfront District. Study included alternatives analysis of proposed traffic signal configurations.

Municipal Peer Review Services– Portsmouth, Dover, Newington, and Somersworth, NH: Provide peer review of roadway plans and traffic studies for various municipalities.

CERTIFICATIONS

IMSA Work Zone Temporary Traffic Control Technician

ACI Concrete Field Testing Technician – Grade I

NETTCP Concrete Inspector

IMSA Traffic Signal Design/Engineering Technician Level II

IMSA Traffic Signal Construction Technician Level II

IMSA Traffic Signal Field Technician Level II

EDUCATION



Worcester Polytechnic Institute
Worcester, MA
B.S., Civil Engineering, 2008

University of Massachusetts - Lowell
Lowell, MA
M.S., Civil Engineering -
Transportation, 2013

MEMBERSHIPS

Institute of Transportation Engineers

REGISTRATIONS

Professional Engineer:

Maine #14400

Massachusetts #52626

New Hampshire #15272

Vermont #127175

Professional Traffic Operations
Engineer #4273



JACOB I. BARTLETT, PLS

Project Surveyor



Mr. Bartlett joined Sebago Technics, Inc. in 2016 as a Project Surveyor. Mr. Bartlett graduated with a Bachelor of Science in Surveying Engineering Technology from the University of Maine, and now holds registrations in multiple states with over seven years of experience. He has worked for New England based surveying firms on a wide variety of survey assignments, with the bulk of his experience in boundary retracement and resolution. Mr. Bartlett grew up in the White River Junction area in Vermont and currently lives in Limerick.

EXPERIENCE



109 Capitol Street DHHS & MePERS Office Buildings Complex — Augusta, Maine:

Performed topographic and existing conditions survey to prepare pre-construction and post-construction ALTA level surveys of a 10-acre property which required the compilation of 27 separate parcel deeds from various ownerships and the inclusion of the discontinuance of a public street.

Portsmouth Naval Shipyard DD#1 Refueling Complex Project — Kittery Maine

The Refueling Complex is made up of four building structure enclosures, of which the tallest is the M-140 Tower at 85' in height. Each tower includes a movable roof and a 5-ton SPS bridge crane which operates over a rail system. They serve as utility enclosures for radiological processing activities, and grapple changeout. Between the structures are modular passageways, which are used to access projects within the adjacent dry dock. Sebago Technics performed alignment services for all overhead crane and retracting roof rails guided by CMAA 70 Industry standards. Laser scanning services were provided to record locate and 3D model the tie points for the passageway assemblies.

Seaview Drive — Wells, Maine

The purpose of this survey was to re-establish the right-of-way limits of Seaview Drive in Wells. The right-of-way was created as an interior road in the 1950's by a subdivision. Careful research and field work revealed the original monumentation of the subdivision, and by using the original surveyor's field notes, the limits of Seaview Drive were able to be re-established.

Surfside Avenue — Cape Elizabeth, Maine

The purpose of this survey was to determine the limits of two "paper" streets in Cape Elizabeth. The roads were created in the early 1900's with minimal information on the original plan. Through diligent field reconnaissance, original monumentation was recovered and utilized in reproducing the limits of the paper streets in question.

State of Maine Department of Fisheries and Wildlife — Vernon Walker Wildlife Management Area:

The Vernon Walker Wildlife Management consists of approximately 5,600 acres of land situated in Newfield, Waterboro, and Shapleigh. Over the course of 4 years, the Department of Fisheries and Wildlife hired a surveyor to determine the boundary in specific portions of the management area, culminating in a completed survey consisting of 1,758 Acres. Mr. Bartlett was involved throughout the course of the entire project, with efforts ranging from field reconnaissance to boundary determination.

EDUCATION



Bachelor of Science,
Surveying Engineering Technology
Minors: Construction Management
Technology, Engineering
Entrepreneurship
University of Maine, Orono, ME
2009

REGISTRATIONS

Professional Land Surveyor
Maine #2513
New Hampshire #1003
Vermont #109448

CERTIFICATIONS

OSHA 10-hour Construction Safety



10: TRAFFIC IMPACT (14-526 (a) 1)**Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts.**

Additional vehicular traffic associated with this project will be limited to the residents of the three new units and periodic guests. Additional parking that in conformance with City requirements is included in the site design. The existing internal circulation pattern will not be altered by this project and the anticipated additional volume of traffic is de minimis. Please refer to the enclosed Site Plans for proposed new and restriped parking.

Traffic Impact Study (Technical Manual, Section 1), if applicable.

This project represents a small expansion to the existing PRUD development. Please see the attached April 28, 2020 Traffic Memorandum, this section, addressing trip generation prepared by Sebago Technics indicating that no additional traffic analysis of the site should be necessary.

Memorandum

18519-01

To: Craig Burgess, P.E., Sebago Technics

From: Derek Caldwell, P.E., PTOE, Sebago Technics

Date: April 28, 2020

Subject: Trip Generation Analysis
White Birch Lane Residential Development
Portland, Maine



Per your request, we have completed a trip generation analysis for the proposed addition of a residential building to an existing residential site on White Birch Lane in Portland, Maine. The existing site is made up of nine buildings consisting of 22 residential townhouse units, which includes the recently approved 3-unit townhouse. An additional building with three new units is currently proposed to be developed. As such, trip generation for the existing and proposed site are quantified in the following memorandum.

Existing Trip Generation

The 10th Edition of the Institute of Transportation Engineer's (ITE) Trip Generation Manual was utilized to estimate the existing trip generation of the site. Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise) was utilized on the basis of 19 units. It is important to note that Saturday was estimated on the basis of occupied dwelling units as there was more available data. The existing trip generation is shown in Table 1:

Table 1 – Trip Generation
Land Use Code 220 – Multifamily Housing (Low-Rise)
Based on 22 units

<i>Time Period</i>	<i>Average Trip Generation Rate/Dwelling Unit</i>	<i>Total Trips</i>	<i>Entering</i>	<i>Exiting</i>
Weekday	7.32	161	81 (50%)	80 (50%)
AM Peak Hour of Generator	0.56	12	3 (28%)	9 (72%)
AM Peak Hour of Adjacent Street, One Hour Between 7 and 9 AM	0.46	10	2 (23%)	8 (77%)
PM Peak Hour of Generator	0.67	14	8 (59%)	6 (41%)
PM Peak Hour of Adjacent Street, One Hour Between 4 and 6 PM	0.56	12	8 (63%)	4 (37%)
Saturday	6.68	147	74 (50%)	73 (50%)
Saturday Peak Hour of Generator	0.54	12	6 (50%)	6 (50%)

As demonstrated above, the existing site is generating based on ITE, 12 trips, 14 trips, and 12 trips during the AM, PM, and Saturday peak hour periods, respectively.

Proposed Trip Generation

The trips for the three townhouse units were estimated utilizing the same methodology detailed previously. These results are summarized in Table 2:

Table 2 – Trip Generation
Land Use Code 220 – Multifamily Housing (Low-Rise)
Based on 3 units

<i>Time Period</i>	<i>Average Trip Generation Rate/Dwelling Unit</i>	<i>Total Trips</i>	<i>Entering</i>	<i>Exiting</i>
Weekday	7.32	22	11 (50%)	11 (50%)
AM Peak Hour of Generator	0.56	2	0 (28%)	2 (72%)
AM Peak Hour of Adjacent Street, One Hour Between 7 and 9 AM	0.46	1	0 (23%)	1 (77%)
PM Peak Hour of Generator	0.67	2	1 (59%)	1 (41%)
PM Peak Hour of Adjacent Street, One Hour Between 4 and 6 PM	0.56	2	1 (63%)	1 (37%)
Saturday	6.68	20	10 (50%)	10 (50%)
Saturday Peak Hour of Generator	0.54	2	1 (50%)	1 (50%)

As shown in the previous table, the three new townhouse units are expected to generate based on ITE, 2 trips during each of the AM, PM, and Saturday peak hour periods. This brings total site trip generation

to 14 trips, 16 trips, and 14 trips during the AM, PM, and Saturday peak hour periods. Given this level of traffic, no additional traffic analysis of this site should be necessary.

11: ACCESS AND CIRCULATION (14-526 (a) 2a)

Access and internal circulation, addressing ADA access

- (i) The existing drive extending from the Knight Street/White Birch Lane intersection provides safe, reasonable site access and internal circulation. Changes to the internal circulation pattern are not planned. The new residential building is an expansion to an approved Planned Residential Unit Development.

Access and egress impacts on traffic flows

- (ii) The point of access and egress is existing and was approved by previous City Site Plan Review. The adding of three new dwelling units will have a de minimis impact on traffic flows.

Description and use of drive up features, if applicable.

- (iii) Not applicable.

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

For SUBDIVISIONS

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed 3-unit residential building at 12 White Birch Lane shown on the Subdivision Plat and associated Utility Plan, Revision A, Dated May 4, 2020 (Exhibit A) prepared by Sebago Technics, Inc. of South Portland, Maine dated and pursuant to a condition thereof, King Real Estate, a Maine limited liability company with a principal place of business in Old Orchard Beach, Maine, and having a mailing address of 198 Saco Avenue, Old Orchard Beach, Maine 04064, 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 roof drip edges, permeable pavers, catch basins, underdrain pipes, storm drain pipes, and shallow swales ,(hereinafter collectively referred to as the “stormwater system”), as shown on the Utility Plan in Exhibit A and in strict compliance with the approved Stormwater Maintenance and Inspection Agreement prepared for the Owner by Sebago Technics, Inc. (copy attached in Exhibit B) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. 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 said premises and abutters thereto; further, that the said City of Portland and 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 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 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 record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further 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 Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

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

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

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

Dated at Portland, Maine this ____ day of _____, 2020.

King Real Estate

King Weinstein

STATE OF MAINE
CUMBERLAND, ss.

Date: _____

Personally appeared the above-named King Weinstein, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

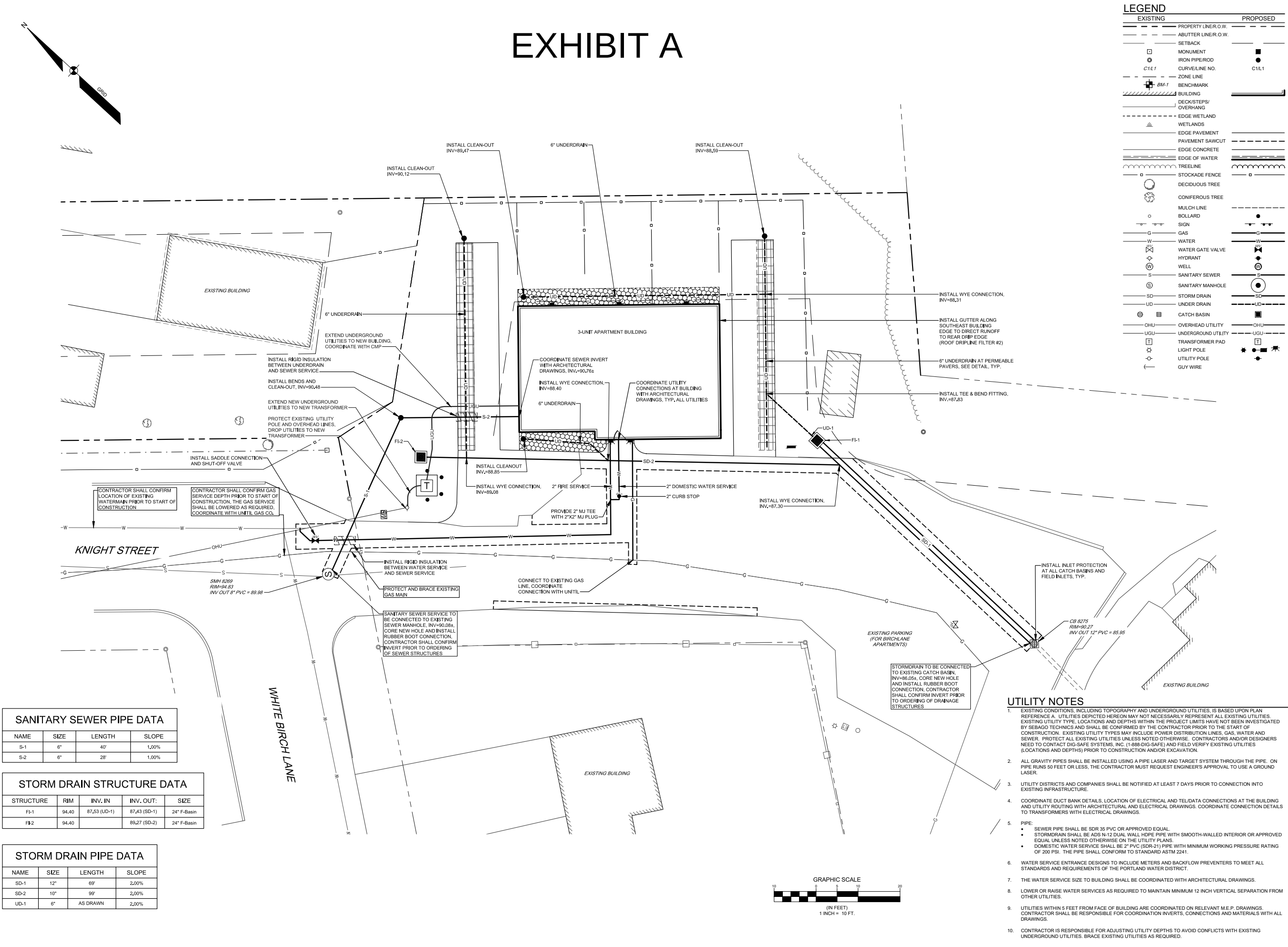
Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Grading and Utility Plan

Exhibit B: Approved Stormwater Maintenance and Inspection Report

EXHIBIT A

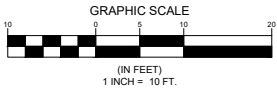


SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-1	6"	40'	1.00%
S-2	6"	28'	1.00%

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT	SIZE
FI-1	94.40	87.53 (UD-1)	87.43 (SD-1)	24" F-Basin
FI-2	94.40		89.27 (SD-2)	24" F-Basin

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-1	12"	69'	2.00%
SD-2	10"	99'	2.00%
UD-1	6"	AS DRAWN	2.00%

- UTILITY NOTES**
- EXISTING CONDITIONS, INCLUDING TOPOGRAPHY AND UNDERGROUND UTILITIES, IS BASED UPON PLAN REFERENCE A. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. EXISTING UTILITY TYPE, LOCATIONS AND DEPTHS WITHIN THE PROJECT LIMITS HAVE NOT BEEN INVESTIGATED BY SEBAGO TECHINCS AND SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. EXISTING UTILITY TYPES MAY INCLUDE POWER DISTRIBUTION LINES, GAS, WATER AND SEWER. PROTECT ALL EXISTING UTILITIES UNLESS NOTED OTHERWISE. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES (LOCATIONS AND DEPTHS) PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
 - ALL GRAVITY PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE CONTRACTOR MUST REQUEST ENGINEER'S APPROVAL TO USE A GROUND LASER.
 - UTILITY DISTRICTS AND COMPANIES SHALL BE NOTIFIED AT LEAST 7 DAYS PRIOR TO CONNECTION INTO EXISTING INFRASTRUCTURE.
 - COORDINATE DUCT BANK DETAILS, LOCATION OF ELECTRICAL AND TEL/DATA CONNECTIONS AT THE BUILDING AND UTILITY ROUTING WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS. COORDINATE CONNECTION DETAILS TO TRANSFORMERS WITH ELECTRICAL DRAWINGS.
 - PIPE:
 - SEWER PIPE SHALL BE SDR 35 PVC OR APPROVED EQUAL.
 - STORMRAIN SHALL BE ADS N-12 DUAL WALL HDPE PIPE WITH SMOOTH-WALLED INTERIOR OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE UTILITY PLANS.
 - DOMESTIC WATER SERVICE SHALL BE 2" PVC (SDR-21) PIPE WITH MINIMUM WORKING PRESSURE RATING OF 200 PSI. THE PIPE SHALL CONFORM TO STANDARD ASTM 2241.
 - WATER SERVICE ENTRANCE DESIGNS TO INCLUDE METERS AND BACKFLOW PREVENTERS TO MEET ALL STANDARDS AND REQUIREMENTS OF THE PORTLAND WATER DISTRICT.
 - THE WATER SERVICE SIZE TO BUILDING SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS.
 - LOWER OR RAISE WATER SERVICES AS REQUIRED TO MAINTAIN MINIMUM 12 INCH VERTICAL SEPARATION FROM OTHER UTILITIES.
 - UTILITIES WITHIN 5 FEET FROM FACE OF BUILDING ARE COORDINATED ON RELEVANT M.E.P. DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION INVERTS, CONNECTIONS AND MATERIALS WITH ALL DRAWINGS.
 - CONTRACTOR IS RESPONSIBLE FOR ADJUSTING UTILITY DEPTHS TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES. BRACE EXISTING UTILITIES AS REQUIRED.



LEGEND	
EXISTING	PROPOSED
PROPERTY LINE/O.W.	PROPERTY LINE/O.W.
ABUTTER LINE/O.W.	ABUTTER LINE/O.W.
SETBACK	SETBACK
MONUMENT	MONUMENT
IRON PIPE/ROD	IRON PIPE/ROD
CURVE/LINE NO.	CURVE/LINE NO.
ZONE LINE	ZONE LINE
BENCHMARK	BENCHMARK
BUILDING	BUILDING
DECK/STEPS/ OVERHANG	DECK/STEPS/ OVERHANG
EDGE WETLAND	EDGE WETLAND
WETLANDS	WETLANDS
EDGE PAVEMENT	EDGE PAVEMENT
PAVEMENT SAWCUT	PAVEMENT SAWCUT
EDGE CONCRETE	EDGE CONCRETE
EDGE OF WATER	EDGE OF WATER
TREELINE	TREELINE
STOCKADE FENCE	STOCKADE FENCE
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE
MULCH LINE	MULCH LINE
BOLLARD	BOLLARD
SIGN	SIGN
GAS	GAS
WATER	WATER
WATER GATE VALVE	WATER GATE VALVE
HYDRANT	HYDRANT
WELL	WELL
SANITARY SEWER	SANITARY SEWER
SANITARY MANHOLE	SANITARY MANHOLE
STORM DRAIN	STORM DRAIN
UNDER DRAIN	UNDER DRAIN
CATCH BASIN	CATCH BASIN
OVERHEAD UTILITY	OVERHEAD UTILITY
UNDERGROUND UTILITY	UNDERGROUND UTILITY
TRANSFORMER PAD	TRANSFORMER PAD
LIGHT POLE	LIGHT POLE
UTILITY POLE	UTILITY POLE
GUY WIRE	GUY WIRE

NOT FOR CONSTRUCTION

05/04/2020

CRAIG A. BURGESS, P.E. 12638

ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION

REV. BY: DATE: STATUS:

A. CAB 05-04-2020

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHINCS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHINCS, INC.

SEBAGO TECHINCS

75 John Roberts Rd., Suite 4A, South Portland, ME 04106

Tel. 207-260-2100

UTILITY PLAN

OF: BIRCHLANE 3- UNIT APARTMENT

KNIGHT STREET, PORTLAND, MAINE

FOR: KING REAL ESTATE

198 SACO AVENUE, OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 10'
PROJECT	18519-01

SHEET 5 OF 9

EXHIBIT B



INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

For:
Birchlane 3-Unit Apartment
Knight Street
Portland, Maine

By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation control measures as well as stormwater management facilities for the project. This plan also outlines several housekeeping requirements that shall be followed during and after construction. These procedures shall be followed in order to ensure the intended function of the designed measures and to prevent unreasonably 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 detail 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 Maine Department of Environmental Protection (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 (0.5" of rainfall), 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 7 calendar days and prior to any storm event (0.5" of 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 years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a 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 (0.5" of rainfall). They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

D. 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).

E. 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.

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 or foundation dewatering: Trench dewatering is the removal of water from

trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

Post-Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. The owner shall inspect and maintain the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the local municipality in the annual report.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains (>0.5") 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, level spreaders 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 (>0.5") 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. Removal of Winter Sand:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

E. Roof Drip Edges:

- These structures may not be paved over or altered in anyway. No gutter may be installed on the roof line.
- During the first year, the dripline shall be inspected semi-annually and following major storm events.
- Debris and sediment buildup shall be removed as needed. Any bare area or erosion rills shall be repaired with new stone.
- The dripline should be inspected after every major storm in the first year to be sure it is functioning properly. Thereafter, the dripline should be inspected at least once every six months to ensure that it is draining within 48 hours following a one-inch storm or greater.
- Sediment and plant debris should be removed at least annually.

F. Permeable Pavers:

- Check upslope face of stone layer to prevent clogging by eroded soil, road sand, debris and leaf litter.
- Check for standing water on the surface of the pavement after a precipitation event. If standing water remains within 30 minutes after rainfall had ended, cleaning of porous pavement is recommended.
- Vacuum sweeper shall be used regularly to remove sediment and organic debris on the pavement surface. The sweeper may be fitted with water jets.
- Pavement vacuuming should occur during spring cleanup following the last snow event to remove accumulated debris, at minimum.
- Pavement vacuuming should occur during fall cleanup to remove dead leaves, at minimum.
- Power washing can be an effective tool for cleaning clogged areas. This should

occur at mid pressure typically less than 500 psi and at an angle of 30 degrees or less.

- Check for debris accumulating on pavement, especially debris buildup in winter.
- For loose debris, a power/leaf blower or gutter broom can be used to remove leaves and trash.
- Check for damage to porous pavements from non-design loads.

3. Documentation:

- A. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, as required by the local municipality, provide a completed and signed certification on a form provided by the local municipality, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they required maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- B. 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. 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.

ATTACHMENT 1 – STORMWATER INSPECTION AND MAINTENANCE LOG

Birchlane 3-Unit Apartment Knight Street Portland, Maine

This log is intended to accompany the Inspection, Maintenance, and Housekeeping Plan for the proposed Birchlane 3-Unit Apartment in Portland, Maine. The following items shall be checked, cleaned, and maintained on a regular basis as specified in the Maintenance Plan and as described in the sections below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the City of Portland. Qualified personnel familiar with the drainage systems and soils shall perform all inspections. A copy of the construction and post-construction maintenance logs are provided.

General Site

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
Site Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Vegetated Areas	Inspect Slopes/Embankments for erosion (annually)		
	Replant bare areas or areas of sparse growth (annually)		
Ditches/Swales	Remove obstructions/debris/sediment (monthly)		
	Inspect for erosion/repair as needed (annually)		
	Remove woody vegetation (annually)		
	Mow vegetated ditches (annually)		
Culverts	Remove sediment/debris from inlet/outlet aprons (annually)		
	Inspect inlet/outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Pipe Outlets	Remove sediment/debris from outlet aprons (annually)		
	Inspect outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Additional Notes/Observations:			

Roof Drip Edge Filter

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Pretreatment	Sediment/Debris Removal (Annually)		
	Inspect for bare areas or rill erosion (Annually)		
Downstream Structure	Sediment Depth (Annually)		
	Floatables/Debris (Annually)		
Discharge Pipe	Ground Stabilized (>1" rain, Annually)		
Embankments	Review for signs of erosion (Twice Annually)		
Stone	Trim overgrown vegetation with string trimmer (annually)		
	Review trench for evidence of vehicular traffic or storage of snow within footprint (annually)		
	Confirm no excessive ponding of water (annually)		
Additional Notes/Observations:			

Permeable Pavers

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Forebay/Pretreatment	Sediment/Debris Removal (Annually)		
	Inspect for bare areas or rill erosion (Annually)		
Outlet Control Structure	Sediment Depth (Annually)		
	Floatables/Debris (Annually)		
Discharge Pipe	Ground Stabilized (>1" rain, Annually)		
Upgradient Drainage Areas	Review for signs of erosion (Twice Annually)		
Porous Surface	Remove fallen leaf debris (fall-annually)		
	Review surface for rutting or raffeling of pavement surface (annually)		
	Confirm pond drains in 24-48 hours for water quality volume (annually)		
Additional Notes/Observations:			

12: LOADING AND SERVICING (14-526 (a) 2 b)

Load and servicing needs, route and travel way geometrics for deliveries

Turning templates for delivery vehicles, if applicable

- (i) Not applicable. On-site circulation will not be altered as part of this project. The additional residential building will not affect the existing internal drive. No loading areas are required or proposed as part of the proposed site improvements.

13: SIDEWALKS (14-526 (a) 2 c)Sidewalks and condition along street frontages and internal walkways

Not applicable. The site is located within an existing PRUD. There are existing walkways to access units that were approved by previous City site reviews. No new public sidewalk is proposed. Proposed walk area is limited to building access as shown on the site plans. Existing walks on the site will remain as they exist without modification.

Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)

ADA ramps at public sidewalks are not proposed as part of this project.

14: PUBLIC TRANSIT - (14-526 (a) 3), if applicable

Existing available transit services

There are existing METRO bus stops along Routes 9A and 9B on Allen Avenue which is a short walk from the existing and proposed residential development.

Proposed site plan design details, such as easement, pad base, and shelter

Not applicable. There is existing bus service in relatively close proximity to Knight Street and White Birch Lane.

**15: 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

- a. The proposed parking is appropriate for the intended use/zone and the spaces meet the dimensional standard as detailed in Section 1 of the City Technical Standard. Please see the enclosed site plans.
- b. One new rack for two bicycles will be installed. The rack meets the standard requiring 2 bicycle spaces per five dwelling units.
- c. Motorcycle/scooter parking is available on the site within the designated vehicle parking spaces. Motorcycle specific parking is not included in the site design.

Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan

The new building is accessed from an existing drive. No additional curb cuts are proposed as part of the proposed residential building development. The reconfigured and proposed additional parking adjacent to the new building meets the zoning space/bulk requirements. Reference is made to the enclosed plans.

16: BICYCLE PARKING (14-526 (a) 4b)Address bicycle parking requirements and identify locations on-site

- a. One new *Dero* bike rack that accommodates two (2) bicycles is shown on the site plan and Details-Sheet 9. The rack satisfies the Bicycle Parking Standard of two (2) bicycle parking spaces for every five (5) dwelling units.

17: SNOW STORAGE (14-526 (a) 4 d)

Management plan for snow removal and locate snow storage areas on plan

- (i) The designated snow storage area is existing and is shown on the Site Plan.
- (ii) The snow storage areas do not adversely impact stormwater management features nor will they encroach on pedestrian, parking or accessways.

18: TRAFFIC DEMAND MANAGEMENT (TDM) (14-526 (a) 5)

Not applicable. The project does not meet the standard for types of development required to implement a TDM Plan.

19: PRESERVATION OF SIGNIFICANT NATURAL FEATURES
(14-526 (b) 1), if applicable

Trees, plants, habitats listed on State or Federal list of endangered or threatened

- (i) Per the State of Maine Department of Agriculture, Conservation and Forestry Natural Areas Program (MNAP) there is a low probability of rare or significant botanical features occurring within the project vicinity. Reference is made to 01/28/19 letter from MNAP included in this section.

Per the Maine Department of Inland Fisheries and Wildlife (MDIFW) site review response letter dated 02/20/2019 available information indicates no location of endangered, threatened or special concern species within the project vicinity that would be affected by the project. Additionally, the Department has not mapped essential or significant wildlife habitats or fisheries habitats that would be directly affected by this project. Reference is made to the letter and map from MDIFW included in this section.

High and moderate value waterfowl and wading habitat

- (ii) Per review by the MDIFW and review of the available *MDIFW Beginning with Habitats – Map 2*, no high or moderate waterfowl or wading habitat is located within the overall site.

Aquifers on Casco Bay Islands

- (iii) Not applicable.

Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)

- (v) A portion of the overall Birch Meadow Apartments PRUD site is located within the Shoreland Overlay Zone (SHZ) located on the overall site. No work is proposed in or near the SHZ or wetland areas. Reference is made to the enclosed Zoning Map graphic for identifying the overall site and proposed project area.

The proposed new building is also not located in or near the flood zone shown on the attached FEMA Flood Insurance Rate Map Community – Panel Number 230051 0007 C, 12/08/1998 exhibit (FIRMETTE) enclosed in this section.

Proposed preservation areas and protection measures

No dedicated preservation areas or protection measures are proposed as part of the PRUD expansion project.

Documentation from environmental consultant determinations from applicable state agencies. Reference is made to the enclosed correspondence and maps regarding natural features: MNAP, MDIFW, City Zoning, and FEMA FIRMette.



JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

January 28, 2019

Stefanie Nichols
Sebago Technics
75 John Roberts Road, Suite 4A
South Portland, ME 04106

Via email: snichols@sebagotechnics.com

Re: Rare and exemplary botanical features in proximity to: #18519, Birch Meadow Apartments, Portland, Maine

Dear Ms. Nichols:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received January 24, 2019 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM



PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

A handwritten signature in cursive script, appearing to read "Krist Puryear".

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041



February 20, 2019

Stephanie Nichols
Sebago Technics
75 John Roberts Road Suite 4A
South Portland, ME 04106-6963

RE: Information Request - Birch Meadow Apartments, Portland

Dear Stephanie:

Per your request received January 25, 2019, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Birch Meadow Apartments Project* in Portland.

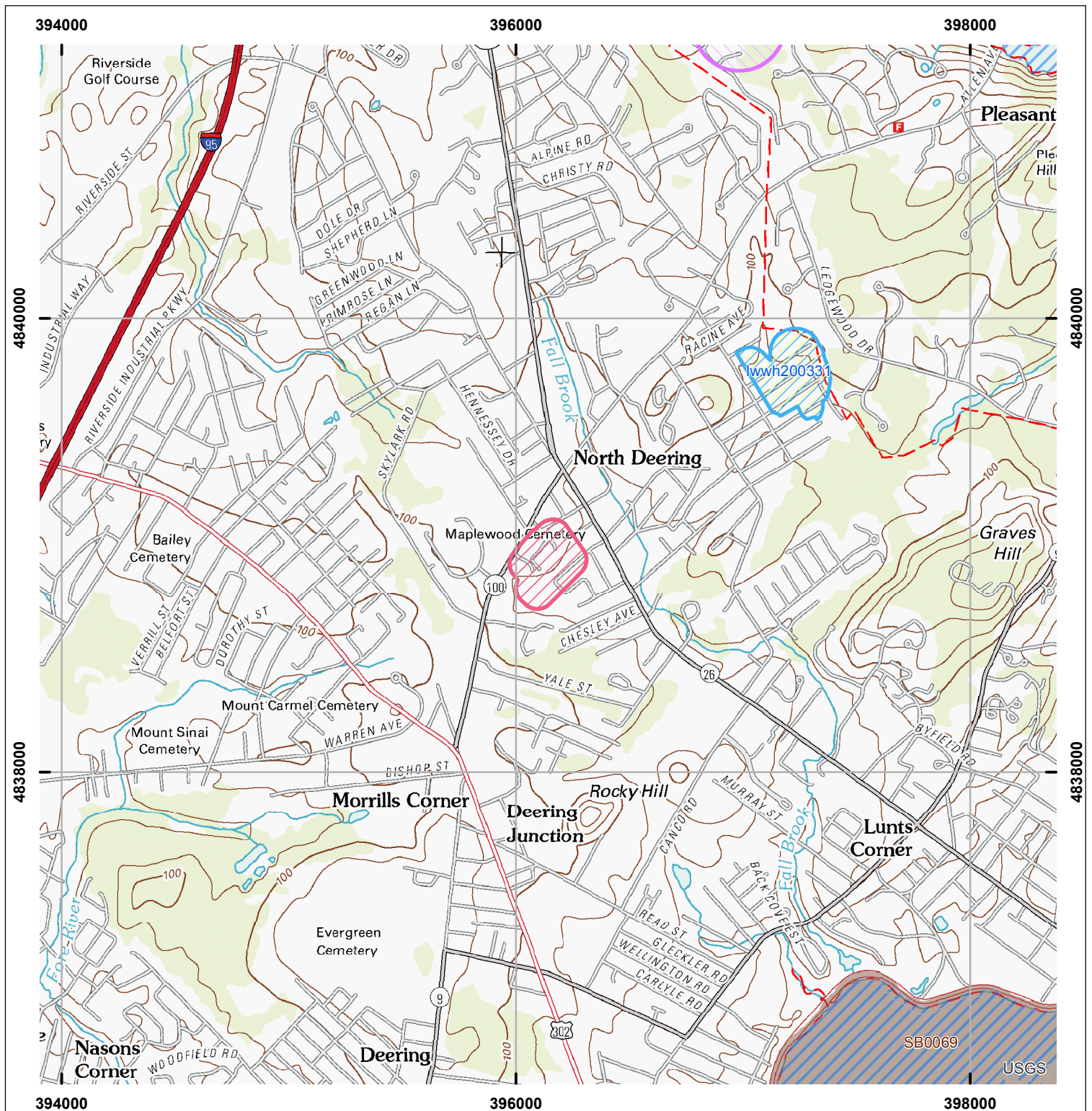
Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats or fisheries habitats that would be directly affected by your project.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist



Environmental Review of Fish and Wildlife Observations and Priority Habitats

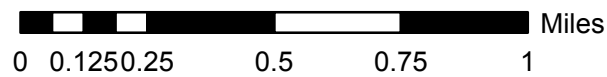
Project Name:

Portland, Birch Meadow Apartments

(Version 1)



Maine Department of
Inland Fisheries and Wildlife

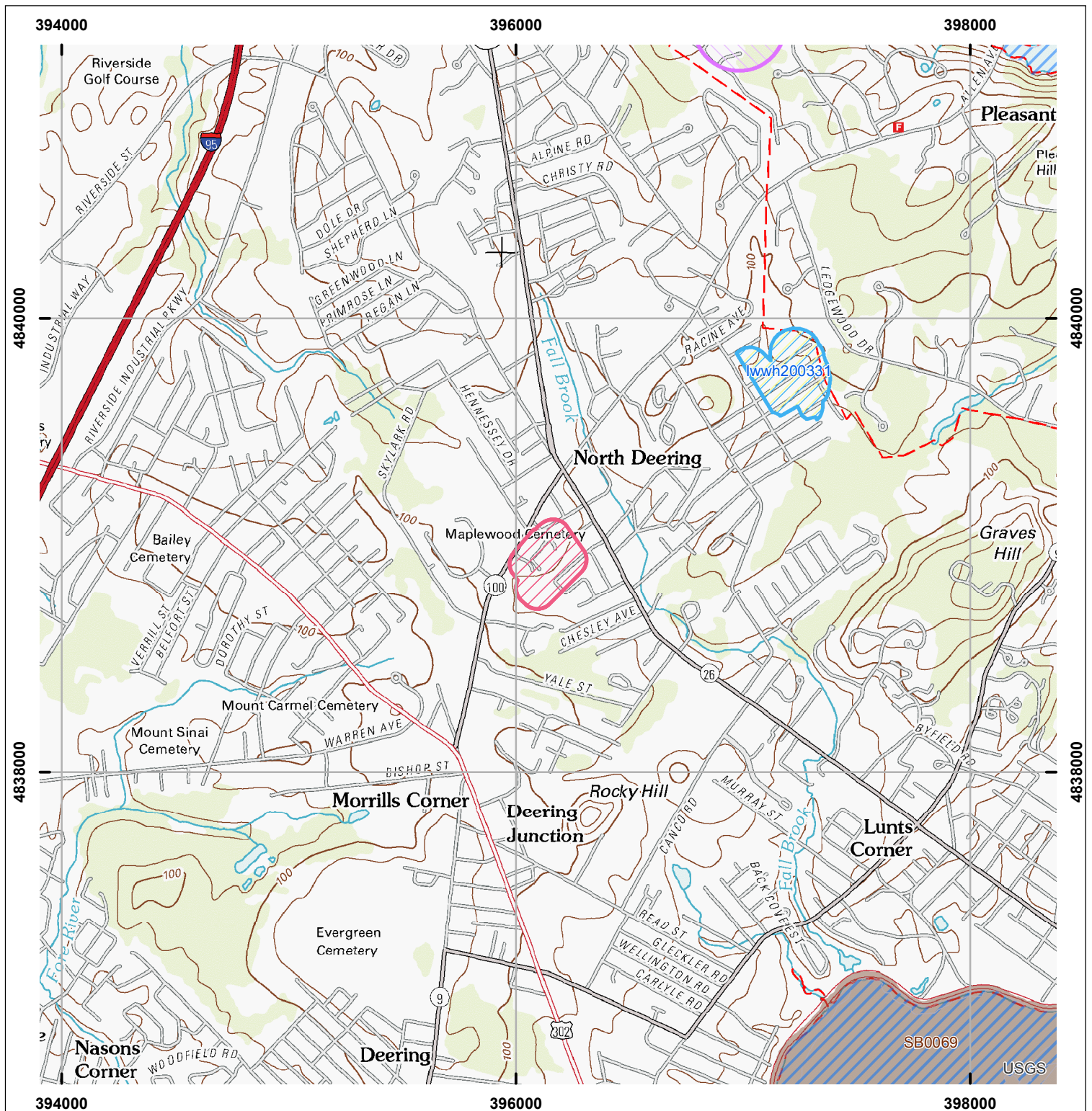


Projection: UTM, NAD83, Zone 19N

Date: 1/30/2019

- ProjectSearchAreas
- Shorebird Areas
- Inland Waterfowl/Wading Bird
- Tidal Waterfowl/Wading Bird
- ETSc Environmental Review Polygons





Environmental Review of Fish and Wildlife Observations and Priority Habitats

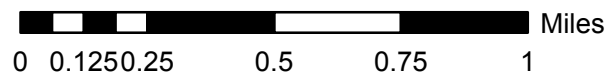
Project Name:

Portland, Birch Meadow Apartments

(Version 1)



Maine Department of
Inland Fisheries and Wildlife



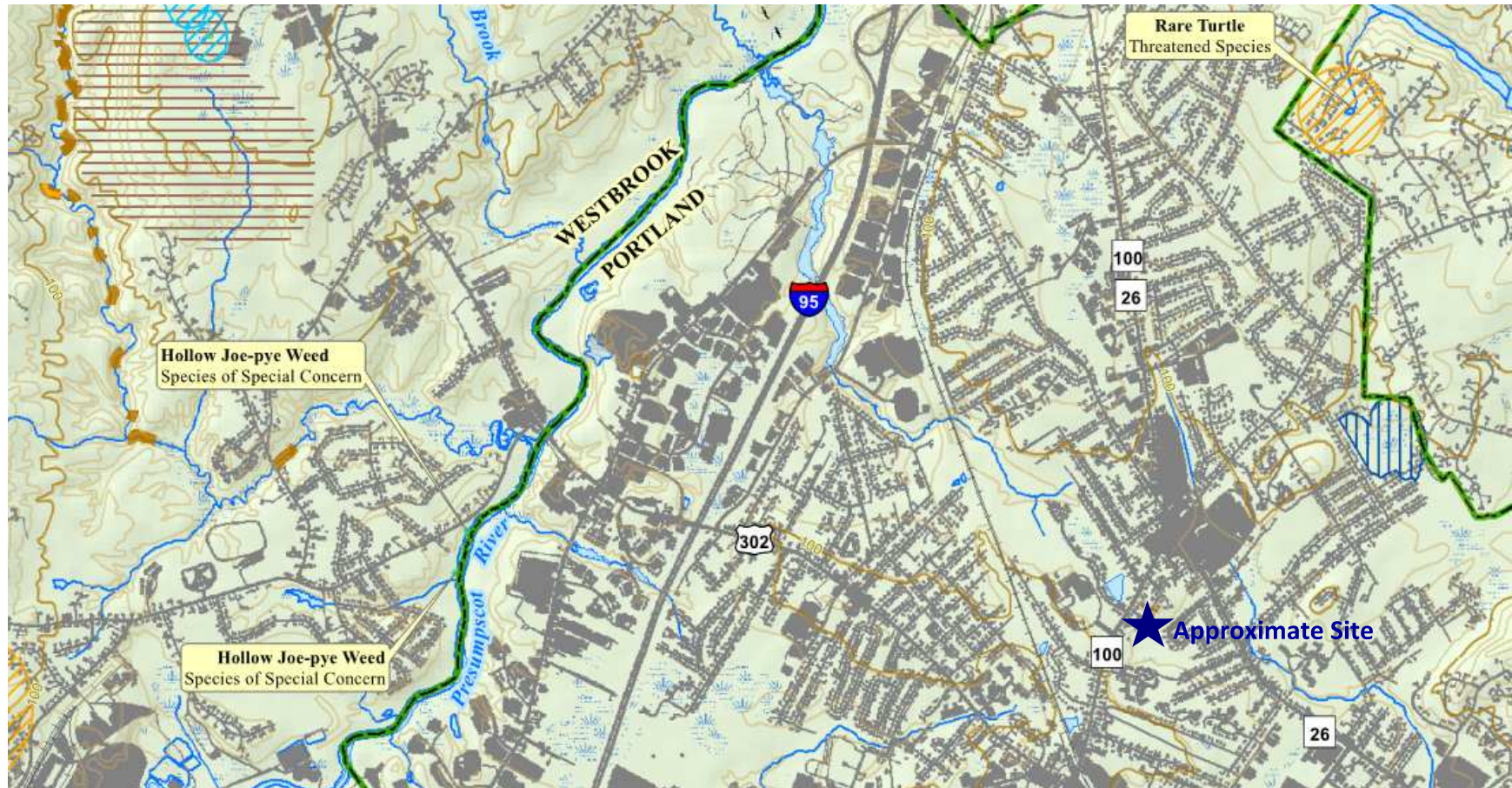
Projection: UTM, NAD83, Zone 19N

Date: 1/30/2019

- ProjectSearchAreas
- Shorebird Areas
- Inland Waterfowl/Wading Bird
- Tidal Waterfowl/Wading Bird
- ETSc Environmental Review Polygons

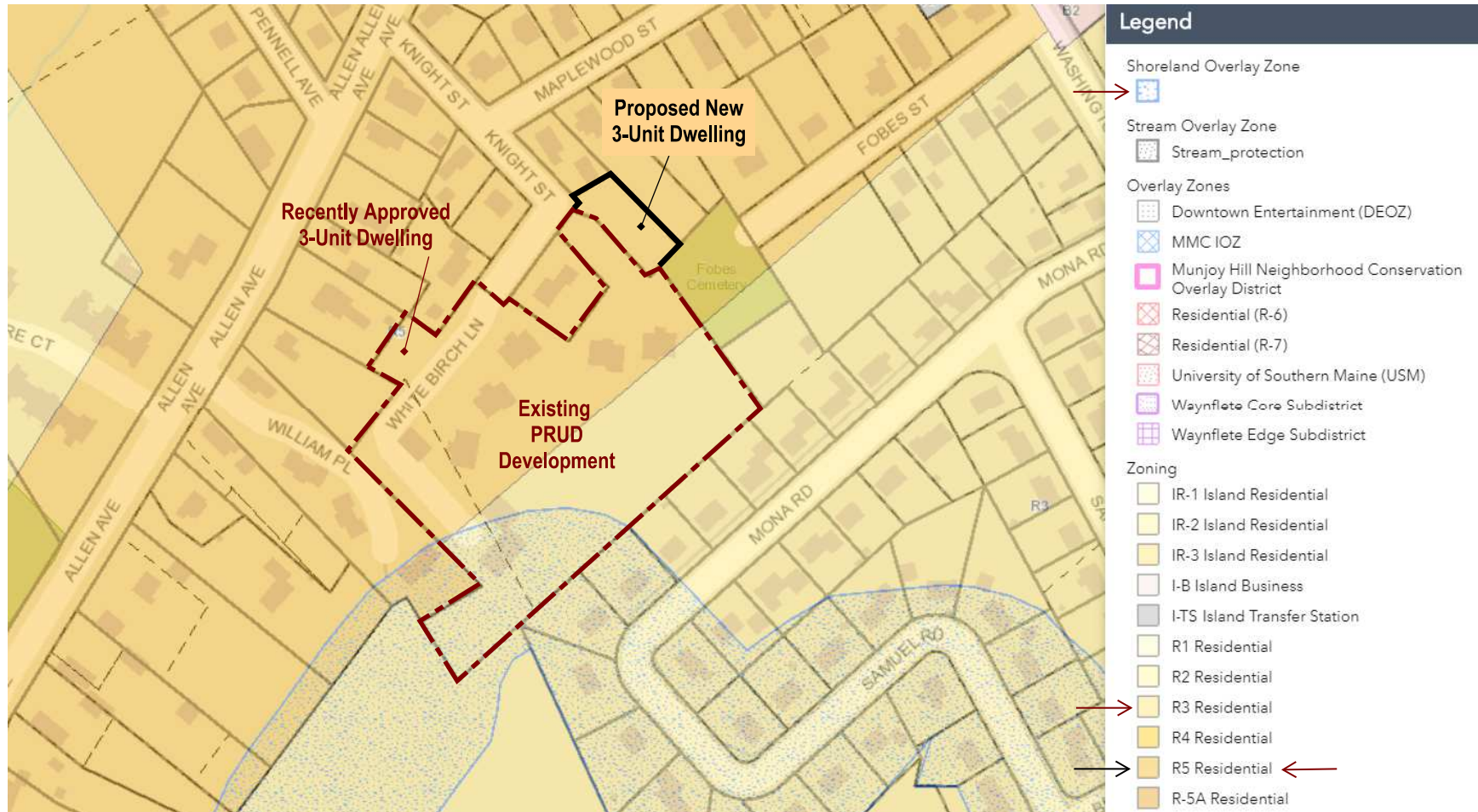


Reference: Excerpt from MDIFW Beginning with Habitat, Primary Map 2- High Value Animal & Plant Habitats Portland



HIGH VALUE PLANT & ANIMAL HABITATS

Reference: Online City of Portland Maine Parcel Viewer



ZONING MAP

20: LANDSCAPING AND LANDSCAPE PRESERVATION (14-526 (b) 2a)

Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)

The project has been designed to limit site disturbance and tree removal to the greatest extent practicable. Tree protection measures will be installed outside of the dripline of perimeter trees.

Protection measures within Shoreland Zone, if applicable

Not applicable. The new building precinct is not located within a Shoreland Overlay Zone (SHZ).

21: SITE LANDSCAPING (14-526 (b) 2b)

Screening and buffering of service areas and between non-residential and residential uses

Not applicable. No service areas are proposed and the new multi-unit dwelling does not abut non-residential uses.

Planting plans with plant schedule and sizes (Technical Manual, Section 4)

Additional site planting is not proposed as part of this project.

22: PARKING LOT LANDSCAPING (14-526 (b) 2 b ii), if applicable

Landscaped islands within parking areas (Technical Manual, Section 4)

Not applicable.

23: STREET TREES (14-526 (b) iii)

Existing Heritage or Feature Trees on site and measures to preserve

No existing Heritage or feature trees have been located on the project site.

Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

There are existing mature street trees located along White Birch Lane and throughout the existing PRUD development. Additional street trees are not proposed as part of this project.

24: WATER QUALITY, STORMWATER MANAGEMENT AND EROSION CONTROL (14-526(b) 3 a)

The proposed site development has been designed in accordance with the City and Maine DEP Chapter 500 Stormwater standards. Please refer to the Stormwater Management Plan enclosed in this section. See the appended set for erosion control locations, details and the written ESC plan.



**Stormwater Narrative
Birchlane 3-Unit Apartment
Portland, Maine**

The proposed project involves construction of a new townhouse to be located within Birch Meadow Apartments and located off Knight Street in Portland, Maine. The project site is currently developed land and is a mix of pavement, gravel, grassed area, and a small storage shed. Existing developed areas are approximately 2,100 square-feet of gravel, 5,335 square-feet of grass, 2,215 square-feet of pavement, and 120 square-feet of roof. The approximate total watershed area is 20,950 square-feet. Land areas will be mostly redeveloped to include a new 1,500 square-foot building, landscaped area, parking, and associated utility and stormwater infrastructure. Overall, the project will result in construction of approximately 9,770 square-feet of redeveloped area, including 4,780 square-feet of impervious surface. A portion of the redeveloped area is located to the southwest of the project site within Birch Meadow Apartments that consists of 490 square-feet of pavement for three new parking spaces.

Existing topography generally varies through landscape and pavement surfaces. However, land grades around the existing gravel area are generally flat (less than 2.0%). There are no existing stormwater features in the proximity of the proposed townhouse. Drainage generally drains south, and ultimately into an existing catch basin located to the south of the proposed townhouse. Underlying soils consist of silty loam that are D soils which have a generally slow infiltration rate. **Attachment A** contains the soil information collected from the Web Soil Survey tool as provided by the USDA.

The site will be graded to generally maintain existing drainage patterns, although there will be some changes to landscaped areas in order to direct runoff into proposed catch basins, that ultimately connects into the existing stormdrain system. Best management practices (BMP), including two stone roof drip edges and two permeable pavers, are proposed for water quality and quantity management. For this level of development at this site, the City of Portland will require that the project satisfy Maine DEP standards for stormwater management. Maine DEP's General Standard applies because the project is located in the Fall Brook watershed, which is classified as urban impaired in Chapter 502. Furthermore, the project is being considered a Redevelopment Project under the General Standard since land area is currently developed as an equipment storage location. The site is visited frequently having limited undisturbed area and existing land uses create pollutant discharges which are untreated. A Maine DEP permit is not required as the site development does not consist of disturbance to land area greater than one acre.

Redevelopment calculations were prepared in general conformance with Maine DEP General Standards (§C(2)d. of Chapter 500). In considering the impervious change of use and creation of additional impervious area, calculations demonstrate a slightly higher weighted average pollutant ranking in the post-development condition. The redevelopment rating difference is 0.52 which requires treatment of runoff from a minimum 60% of developed area. Maine DEP General Standard calculations show that runoff from 66.87% of developed area and 90.32% of impervious area will be treated with the proposed stormwater management BMPs. Since runoff from greater than 60% of developed area will be provided, the project will generally comply with the General Standard. Supporting calculations for water quality and BMP sizing are enclosed under **Attachment B**.

The following table presents the results of the peak runoff calculations at the study points for the existing and proposed conditions.

Peak Runoff Rate Summary Table			
Study Point	Storm Event	Existing Conditions (cfs)	Proposed Conditions (cfs)
SP1	2-year	0.92	0.81
	10-year	1.54	1.36
	25-year	2.04	1.80
SP2	2-year	0.22	0.20
	10-year	0.34	0.30
	25-year	0.45	0.39

The HydroCAD Data output sheets from this analysis are appended to this report under **Attachment C**. The model predicts that peak rates of runoff during the 2-, 10- and 25-year storm events in the proposed conditions are less than the existing peak rates at both study points. Runoff from the project will be detained and treated in the permeable pavers and two stone drip edge filters. All pipes are adequately sized to handle runoff from the developed site and insignificant amount of offsite area.

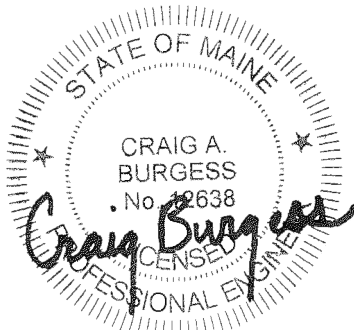
An abutter to the Birch Meadow Apartment area made note of drainage issues in the southwestern corner of the overall site. The abutter claimed there are issues with flooding and that the Birch Meadow Apartments are the reason for this issue. During a site visit in April of 2020, this area was identified as being located adjacent to a natural wetland and surrounded by higher elevated areas. Further research shows that runoff is contributed to this wetland by much of the surrounding area and is not limited to the Birch Meadow Apartment area. This location is also located within Flood Zone AE by Community 0051, Panel 2300510007B and as shown on the Flood Insurance Rate Map effective 1986. Knowing this, and having controlled peak flows for the proposed development, the issues mentioned by the abutter are not only due to the runoff from Birch Meadow Apartments area.

Basic Standards per Section 4(A) of the Department of Environmental Protection Chapter 500 outline specific guidelines for erosion control practices which will be generally followed for development of the townhouse. An Erosion and Sedimentation Control Plan was created for the project that emphasizes the installation of sedimentation barriers and vegetation to minimize erosion potential from development activities during and after construction. The Erosion and Sedimentation Control Plan is incorporated into the design plans and includes the locations of the erosion control provisions (i.e., silt fence) along with notes and construction details for reference by the contractor during construction. With incorporation of these measures, no significant impacts to off-site drainage related to erosion are anticipated due to the development.

Sincerely,

Craig Burgess

Craig A. Burgess, P.E.
Project Manager
CAB/mko



04/30/2020

Attachment A

Soils



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



Custom Soil Resource Report
Soil Map



Cumberland County and Part of Oxford County, Maine

BuB—Lamoine silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0kc

Elevation: 10 to 490 feet

Mean annual precipitation: 33 to 60 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lamoine and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lamoine

Setting

Landform: Marine terraces, river valleys

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Fine glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam

Bw - 7 to 13 inches: silt loam

Bg - 13 to 24 inches: silty clay loam

Cg - 24 to 65 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 6 to 17 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: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Hydric soil rating: No

Minor Components

Scantic

Percent of map unit: 10 percent

Landform: Marine terraces, river valleys

Custom Soil Resource Report

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Buxton

Percent of map unit: 3 percent

Landform: Marine terraces, river valleys

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Ragmuff

Percent of map unit: 1 percent

Landform: Marine terraces, river valleys

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope, base slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Biddeford

Percent of map unit: 1 percent

Landform: Marine terraces, river valleys

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: Marine Terrace Depression (F144BY002ME)

Hydric soil rating: Yes

BuC2—Buxton silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2x1by

Elevation: 10 to 490 feet

Mean annual precipitation: 33 to 60 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Buxton and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting

Landform: Marine terraces, river valleys
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Fine glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: silt loam
Bw1 - 7 to 18 inches: silt loam
Bw2 - 18 to 23 inches: silty clay loam
BC - 23 to 35 inches: silty clay loam
C - 35 to 65 inches: silty clay

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 17 to 24 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: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Lamoine

Percent of map unit: 7 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Scantic

Percent of map unit: 5 percent
Landform: Marine terraces, river valleys
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Buxton, >15% slopes

Percent of map unit: 3 percent

Custom Soil Resource Report

Landform: Marine terraces, river valleys

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Attachment B

Stormwater Calculations

Redevelopment Calculations

(Calculations based on Chapter 500, Section 4.C.2.d)

Redevelopment Footprint

9,270 SF = 0.21 AC

Per Table 2: Pollutant Impact Rankings of Various Redevelopment Land Uses

		Existing	Existing	Pollutant	Weighted
Existing Use		Area (SF)	Area (AC)	Ranking	Avg. Impact
Existing Pavement		2,435	0.06	3	0.17
Existing Roof		120	0.00	2	0.01
Grassed Areas		4,615	0.11	2	0.21
Existing Gravel		2,100	0.05	2	0.10
		9,270		Sum	0.48
Proposed Use		Proposed	Proposed	Pollutant	Weighted
		Area (SF)	Area (AC)	Ranking	Avg. Impact
Building		1,500	0.03	2	0.07
Existing Roof		120	0.00	2	0.01
New/ Existing Pavement		3,600	0.08	3	0.25
Concrete Pads		50	0.00	2	0.00
New/ Existing Grassed Areas		4,000	0.09	2	0.18
		9,270		Sum	0.51

* Light use building pollutant ranking for metal roof (other rooftop classification)

** No vehicular traffic

a.	Existing Impact Rating =	0.48
b.	Proposed Impact Rating =	0.51
c.	Existing Impact Rating per Acre of Development =	2.26
d.	Proposed Impact Rating per Acre of Development =	2.39
e.	Redevelopment Rating Difference	0.13

Therefore 60% of Developed Area must be treated

(per Table 3 - Treatment Levels for Redevelopment Projects)

Table 1: MDEP GENERAL STANDARD CALCULATIONS

Birchlane 3-Unit Apartment

Job #: 18519-01

AREA ID	WATERSHED SIZE (S.F.)	EXISTING ONSITE IMPERVIOUS AREA TO REMAIN (S.F.)	NEW ONSITE IMPERVIOUS AREA (S.F.)	EXISTING ONSITE LANDSCAPED AREA TO REMAIN (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
1.1	9,740	6,600	60	1,850	0	60	8,450	NO	0	0	0	
1.2	2,065	120	0	785	700	700	905	NO	0	0	0	
1.3	1,240	0	515	0	725	1,240	0	YES	515	725	1,240	PER-2
1.4	1,425	0	1,425	0	0	1,425	0	YES	1,425	0	1,425	DEF-2
1.5	360	0	360	0	0	360	0	YES	360	0	360	DEF-1
1.6	1,295	0	500	0	795	1,295	0	YES	500	795	1,295	PER-1
1.7	1,520	0	25	355	1,140	1,165	355	NO	0	0	0	
1.8	215	0	215	0	0	215	0	NO	0	0	0	
2.1	3,090	2,470	0	620	0	0	3,090	NO	0	0	0	
TOTAL (S.F.)	20,950	9,190	3,100	3,610	3,360	6,460	12,800		2,800	1,520	4,320	

TOTAL NEW IMPERVIOUS AREA (S.F.)	3,100	TOTAL DEVELOPED AREA (S.F.)	6,460
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	2,800	TOTAL AREA RECEIVING TREATMENT (S.F.)	4,320
% OF IMPERVIOUS AREA RECEIVING TREATMENT	90.32%	% OF AREA RECEIVING TREATMENT	66.87%

*60% Treatment Required For Redevelopment

SEBAGO TECHNICS, INC.
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 South Portland, ME 04106
(207) 200-2100 FAX (207) 856-2206

JOB	18519-01		
SHEET NO.	1	OF	2
CALCULATED BY	MKO	DATE	4/17/2020
CHECKED BY	CAB		
FILE NAME	18519-01 WQC	PRINT DATE	4/22/2020

Note: Permeable Pavers are sized in accordance with Chapter 7.7 of the Maine Department of Environmental Protection BMPs Technical Design Manual, latest revision

Treatment Calculations for Proposed Permeable Pavers #1 (PER-1)									
PER-1 is labeled 1.6P in the Proposed Conditions HydroCAD model and Watershed Plan									
WQV Calculation									
(WQV = Water Quality Volume)									
Total Impervious Area =	500.0	SF							
Total Landscaped Area=	795.0	SF							
Total Watershed Area=	1,295.0	SF							
Area of Permeable Pavers=	200.0	SF							
Percent of Permeable Pavers=	66.7%		Per 7.7.1, area of pervious shall be no less than 20% of overall drainage area						
WQV Required= 1" x Impervious Area + 0.4"x Landscape Area =	68.2	CF							
Total Depth of Open Graded Base (Reservoir Coarse Varies)=									
Porosity=	40.0%								
WQV within Reservoir Coarse=	40.0	CF							
Maximum Run-on Flow Path=	50	LF							
Filter Layer Depth Required=	18.0	in.							
Filter Layer Depth Provided=	18.0	in.							
Porosity=	30.0%								
WQV within Filter Layer=	90.0	CF							
WQV Provided=	130.0	CF							
Treatment Factor Calculation									
TF=0.4 * (BMP _{ST} /BMP _{TF})=	0.21								
Min TF=	0.25								

Note: Permeable Pavers are sized in accordance with Chapter 7.7 of the Maine Department of Environmental Protection BMPs Technical Design Manual, latest revision

Treatment Calculations for Proposed Permeable Pavers #2 (PER-2)									
PER-2 is labeled 1.3P in the Proposed Conditions HydroCAD model and Watershed Plan									
WQV Calculation									
(WQV = Water Quality Volume)									
Total Impervious Area =			515.0	SF					
Total Landscaped Area=			725.0	SF					
Total Watershed Area=			1,240.0	SF					
Area of Permeable Pavers=			200.0	SF					
Percent of Permeable Pavers=			63.5%		Per 7.7.1, area of pervious shall be no less than 20%				
					of overall drainage area				
WQV Required= 1" x Impervious Area + 0.4"x Landscape Area =						67.1	CF		
Total Depth of Open Graded Base (Reservoir Coarse Varies)=						6.0	in.		
Porosity=	40.0%								
WQV within Reservoir Coarse=			40.0	CF					
Maximum Run-on Flow Path=			50	LF					
Filter Layer Depth Required=			18.0	in.					
Filter Layer Depth Provided=			18.0	in.					
Porosity=	30.0%								
WQV within Filter Layer=			90.0	CF					
WQV Provided=			130.0	CF					
Treatment Factor Calculation									
TF=0.4 * (BMP _{ST} /BMP _{TF})=			0.21						
Min TF=	0.25								

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JOB	18519-01		
SHEET NO.	2	OF	2
CALCULATED BY	MKO	DATE	4/17/2020
FILE NAME	18519-01 WQC	PRINT DATE	4/22/2020

Treatment Calculations for Proposed Roof Drip Edge Filter 1 (DEF-1)Water Quality Volume Calculation

Total Impervious Area 360 SF

WQV Required = 1" x Impervious Area

WQV Required 30.0 CF

Length of Trench 18.0 FT

Width of Trench 4.5 FT

Depth of Stone 12.0 IN 40% porosity

Depth of Sand Media 12.0 IN 25% porosity

*WQV Provided = Area of Trench x (Depth of Stone x Stone Porosity + Depth of Sand x Sand Porosity)

Total WQV Provided 52.7 CF

Roof Drip Edge Filter 1 is labeled 1.5P on the Proposed Conditions Watershed Plan and in the Proposed Conditions HydroCAD model.

*The stone reservoir volume for the drip edge filter was designed to provide the storage required to convey the water quality storm (storm that generates 1" of runoff over the roof) through the filter media under the stone, which is naturally sandy and well-drained.

Treatment Calculations for Proposed Roof Drip Edge Filter 2 (DEF-2)

Water Quality Volume Calculation

Total Impervious Area 1,425 SF

WQV Required = 1" x Impervious Area

WQV Required 118.8 CF

Length of Trench 48.0 FT

Width of Trench 4.0 FT

Depth of Stone 12.0 IN 40% porosity

Depth of Sand Media 12.0 IN 25% porosity

*WQV Provided = Area of Trench x (Depth of Stone x Stone Porosity + Depth of Sand x Sand Porosity)

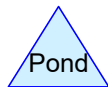
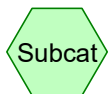
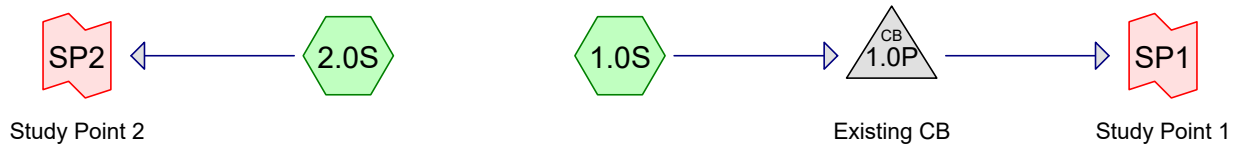
Total WQV Provided 124.8 CF

Roof Drip Edge Filter 2 is labeled 1.4P on the Proposed Conditions Watershed Plan and in the Proposed Conditions HydroCAD model.

*The stone reservoir volume for the drip edge filter was designed to provide the storage required to convey the water quality storm (storm that generates 1" of runoff over the roof) through the filter media under the stone, which is naturally sandy and well-drained.

Attachment C

Hydrologic Modeling HydroCAD Summary



Routing Diagram for 18519-01 PRE
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18519-01 PRE

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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,160	80	>75% Grass cover, Good, HSG D (1.0S, 2.0S)
9,070	98	Existing Pavement (1.0S, 2.0S)
120	98	Existing Shed (1.0S)
2,110	96	Gravel surface, HSG D (1.0S)
1,490	77	Woods, Good, HSG D (1.0S)
20,950	89	TOTAL AREA

18519-01 PRE*Type III 24-hr 2 YR Rainfall=3.10"*

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Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.0S:

Runoff Area=17,320 sf 38.80% Impervious Runoff Depth=1.99"
Flow Length=140' Slope=0.0409 '/' Tc=6.0 min CN=89 Runoff=0.92 cfs 2,873 cf

Subcatchment2.0S:

Runoff Area=3,630 sf 68.04% Impervious Runoff Depth=2.26"
Flow Length=72' Slope=0.0347 '/' Tc=6.0 min CN=92 Runoff=0.22 cfs 682 cf

Pond 1.0P: Existing CB

Peak Elev=86.44' Inflow=0.92 cfs 2,873 cf
12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/' Outflow=0.92 cfs 2,873 cf

Link SP1: Study Point 1

Inflow=0.92 cfs 2,873 cf
Primary=0.92 cfs 2,873 cf

Link SP2: Study Point 2

Inflow=0.22 cfs 682 cf
Primary=0.22 cfs 682 cf

Total Runoff Area = 20,950 sf Runoff Volume = 3,555 cf Average Runoff Depth = 2.04"
56.13% Pervious = 11,760 sf 43.87% Impervious = 9,190 sf

18519-01 PRE*Type III 24-hr 10YR Rainfall=4.60"*

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Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.0S:

Runoff Area=17,320 sf 38.80% Impervious Runoff Depth=3.39"
Flow Length=140' Slope=0.0409 '/' Tc=6.0 min CN=89 Runoff=1.54 cfs 4,893 cf

Subcatchment2.0S:

Runoff Area=3,630 sf 68.04% Impervious Runoff Depth=3.70"
Flow Length=72' Slope=0.0347 '/' Tc=6.0 min CN=92 Runoff=0.34 cfs 1,119 cf

Pond 1.0P: Existing CB

Peak Elev=86.62' Inflow=1.54 cfs 4,893 cf
12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/' Outflow=1.54 cfs 4,893 cf

Link SP1: Study Point 1

Inflow=1.54 cfs 4,893 cf
Primary=1.54 cfs 4,893 cf

Link SP2: Study Point 2

Inflow=0.34 cfs 1,119 cf
Primary=0.34 cfs 1,119 cf

Total Runoff Area = 20,950 sf Runoff Volume = 6,012 cf Average Runoff Depth = 3.44"
56.13% Pervious = 11,760 sf 43.87% Impervious = 9,190 sf

Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.0S: Runoff Area=17,320 sf 38.80% Impervious Runoff Depth=4.54"
 Flow Length=140' Slope=0.0409 '/' Tc=6.0 min CN=89 Runoff=2.04 cfs 6,555 cf

Subcatchment2.0S: Runoff Area=3,630 sf 68.04% Impervious Runoff Depth=4.87"
 Flow Length=72' Slope=0.0347 '/' Tc=6.0 min CN=92 Runoff=0.45 cfs 1,474 cf

Pond 1.0P: Existing CB Peak Elev=86.75' Inflow=2.04 cfs 6,555 cf
 12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/' Outflow=2.04 cfs 6,555 cf

Link SP1: Study Point 1 Inflow=2.04 cfs 6,555 cf
 Primary=2.04 cfs 6,555 cf

Link SP2: Study Point 2 Inflow=0.45 cfs 1,474 cf
 Primary=0.45 cfs 1,474 cf

Total Runoff Area = 20,950 sf Runoff Volume = 8,029 cf Average Runoff Depth = 4.60"
56.13% Pervious = 11,760 sf 43.87% Impervious = 9,190 sf

Summary for Subcatchment 1.0S:

Runoff = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf, Depth= 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
7,000	80	>75% Grass cover, Good, HSG D
1,490	77	Woods, Good, HSG D
2,110	96	Gravel surface, HSG D
* 6,600	98	Existing Pavement
* 120	98	Existing Shed
17,320	89	Weighted Average
10,600	83	61.20% Pervious Area
6,720	98	38.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	140	0.0409	1.55		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
4.5					Direct Entry,
6.0	140	Total			

Summary for Subcatchment 2.0S:

Runoff = 0.45 cfs @ 12.08 hrs, Volume= 1,474 cf, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
1,160	80	>75% Grass cover, Good, HSG D
* 2,470	98	Existing Pavement
3,630	92	Weighted Average
1,160	80	31.96% Pervious Area
2,470	98	68.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	72	0.0347	1.27		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
5.1					Direct Entry,
6.0	72	Total			

Summary for Pond 1.0P: Existing CB

Inflow Area = 17,320 sf, 38.80% Impervious, Inflow Depth = 4.54" for 25YR event
 Inflow = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf
 Outflow = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf, Atten= 0%, Lag= 0.0 min
 Primary = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 86.75' @ 12.08 hrs

Flood Elev= 90.27'

Device	Routing	Invert	Outlet Devices
#1	Primary	85.95'	12.0" Round Existing Stormdrain L= 111.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 85.95' / 77.00' S= 0.0806 ' S= 0.0806 ' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.03 cfs @ 12.08 hrs HW=86.75' TW=0.00' (Dynamic Tailwater)

↑1=Existing Stormdrain (Inlet Controls 2.03 cfs @ 3.04 fps)

Summary for Link SP1: Study Point 1

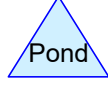
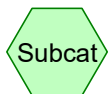
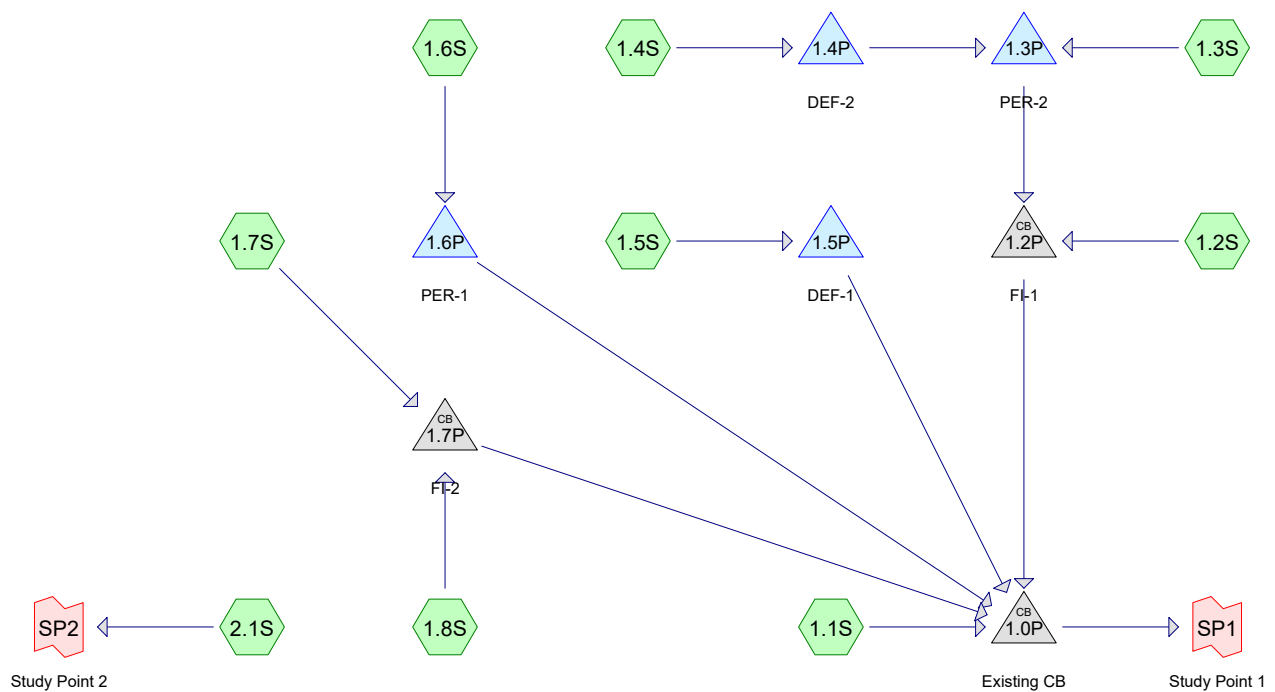
Inflow Area = 17,320 sf, 38.80% Impervious, Inflow Depth = 4.54" for 25YR event
 Inflow = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf
 Primary = 2.04 cfs @ 12.08 hrs, Volume= 6,555 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Summary for Link SP2: Study Point 2

Inflow Area = 3,630 sf, 68.04% Impervious, Inflow Depth = 4.87" for 25YR event
 Inflow = 0.45 cfs @ 12.08 hrs, Volume= 1,474 cf
 Primary = 0.45 cfs @ 12.08 hrs, Volume= 1,474 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs



Routing Diagram for 18519-01 POST
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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
6,970	80	>75% Grass cover, Good, HSG D (1.1S, 1.2S, 1.3S, 1.6S, 1.7S, 2.1S)
9,070	98	Existing Pavement (1.1S, 2.1S)
120	98	Existing Roof (1.2S)
285	94	Newly graded area, HSG D (1.4S, 1.5S)
25	98	Proposed Concrete (1.7S)
1,290	98	Proposed Pavement (1.1S, 1.3S, 1.6S, 1.8S)
1,500	98	Proposed Roof (1.4S, 1.5S)
1,690	77	Woods, Good, HSG D (1.1S, 1.2S)
20,950	90	TOTAL AREA

18519-01 POST

Type III 24-hr 2 YR Rainfall=3.10"

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Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S:	Runoff Area=9,740 sf 68.38% Impervious Runoff Depth=2.26" Flow Length=140' Slope=0.0409 '/' Tc=6.0 min CN=92 Runoff=0.58 cfs 1,831 cf
Subcatchment1.2S:	Runoff Area=2,065 sf 5.81% Impervious Runoff Depth=1.33" Flow Length=50' Slope=0.0100 '/' Tc=9.4 min CN=80 Runoff=0.06 cfs 228 cf
Subcatchment1.3S:	Runoff Area=1,240 sf 41.53% Impervious Runoff Depth=1.83" Flow Length=38' Slope=0.0200 '/' Tc=6.0 min CN=87 Runoff=0.06 cfs 189 cf
Subcatchment1.4S:	Runoff Area=1,425 sf 86.32% Impervious Runoff Depth=2.76" Flow Length=15' Slope=0.0833 '/' Tc=6.0 min CN=97 Runoff=0.10 cfs 327 cf
Subcatchment1.5S:	Runoff Area=360 sf 75.00% Impervious Runoff Depth=2.76" Flow Length=15' Slope=0.0833 '/' Tc=6.0 min CN=97 Runoff=0.02 cfs 83 cf
Subcatchment1.6S:	Runoff Area=1,295 sf 38.61% Impervious Runoff Depth=1.83" Flow Length=38' Slope=0.0200 '/' Tc=6.0 min CN=87 Runoff=0.06 cfs 197 cf
Subcatchment1.7S:	Runoff Area=1,520 sf 1.64% Impervious Runoff Depth=1.33" Flow Length=45' Slope=0.0100 '/' Tc=8.6 min CN=80 Runoff=0.05 cfs 168 cf
Subcatchment1.8S:	Runoff Area=215 sf 100.00% Impervious Runoff Depth=2.87" Flow Length=20' Slope=0.0125 '/' Tc=6.0 min CN=98 Runoff=0.01 cfs 51 cf
Subcatchment2.1S:	Runoff Area=3,090 sf 79.94% Impervious Runoff Depth=2.45" Flow Length=72' Slope=0.0347 '/' Tc=6.0 min CN=94 Runoff=0.20 cfs 630 cf
Pond 1.0P: Existing CB	Peak Elev=86.41' Inflow=0.81 cfs 2,664 cf 12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/' Outflow=0.81 cfs 2,664 cf
Pond 1.2P: FI-1	Peak Elev=87.60' Inflow=0.12 cfs 417 cf 12.0" Round Culvert n=0.013 L=69.0' S=0.0200 '/' Outflow=0.12 cfs 417 cf
Pond 1.3P: PER-2	Peak Elev=88.73' Storage=9 cf Inflow=0.06 cfs 189 cf 6.0" Round Culvert n=0.013 L=53.0' S=0.0200 '/' Outflow=0.06 cfs 189 cf
Pond 1.4P: DEF-2	Peak Elev=93.09' Storage=327 cf Inflow=0.10 cfs 327 cf Outflow=0.00 cfs 0 cf
Pond 1.5P: DEF-1	Peak Elev=91.23' Storage=83 cf Inflow=0.02 cfs 83 cf Outflow=0.00 cfs 0 cf
Pond 1.6P: PER-1	Peak Elev=90.27' Storage=9 cf Inflow=0.06 cfs 197 cf Outflow=0.06 cfs 197 cf
Pond 1.7P: FI-2	Peak Elev=89.40' Inflow=0.06 cfs 219 cf Outflow=0.06 cfs 219 cf

18519-01 POST*Type III 24-hr 2 YR Rainfall=3.10"*

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Link SP1: Study Point 1

Inflow=0.81 cfs 2,664 cf

Primary=0.81 cfs 2,664 cf

Link SP2: Study Point 2

Inflow=0.20 cfs 630 cf

Primary=0.20 cfs 630 cf

Total Runoff Area = 20,950 sf Runoff Volume = 3,704 cf Average Runoff Depth = 2.12"
42.70% Pervious = 8,945 sf 57.30% Impervious = 12,005 sf

18519-01 POST

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Type III 24-hr 10YR Rainfall=4.60"

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Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S:	Runoff Area=9,740 sf 68.38% Impervious Runoff Depth=3.70" Flow Length=140' Slope=0.0409 '/ Tc=6.0 min CN=92 Runoff=0.93 cfs 3,003 cf
Subcatchment1.2S:	Runoff Area=2,065 sf 5.81% Impervious Runoff Depth=2.55" Flow Length=50' Slope=0.0100 '/ Tc=9.4 min CN=80 Runoff=0.13 cfs 438 cf
Subcatchment1.3S:	Runoff Area=1,240 sf 41.53% Impervious Runoff Depth=3.19" Flow Length=38' Slope=0.0200 '/ Tc=6.0 min CN=87 Runoff=0.11 cfs 330 cf
Subcatchment1.4S:	Runoff Area=1,425 sf 86.32% Impervious Runoff Depth=4.25" Flow Length=15' Slope=0.0833 '/ Tc=6.0 min CN=97 Runoff=0.15 cfs 505 cf
Subcatchment1.5S:	Runoff Area=360 sf 75.00% Impervious Runoff Depth=4.25" Flow Length=15' Slope=0.0833 '/ Tc=6.0 min CN=97 Runoff=0.04 cfs 127 cf
Subcatchment1.6S:	Runoff Area=1,295 sf 38.61% Impervious Runoff Depth=3.19" Flow Length=38' Slope=0.0200 '/ Tc=6.0 min CN=87 Runoff=0.11 cfs 344 cf
Subcatchment1.7S:	Runoff Area=1,520 sf 1.64% Impervious Runoff Depth=2.55" Flow Length=45' Slope=0.0100 '/ Tc=8.6 min CN=80 Runoff=0.10 cfs 323 cf
Subcatchment1.8S:	Runoff Area=215 sf 100.00% Impervious Runoff Depth=4.36" Flow Length=20' Slope=0.0125 '/ Tc=6.0 min CN=98 Runoff=0.02 cfs 78 cf
Subcatchment2.1S:	Runoff Area=3,090 sf 79.94% Impervious Runoff Depth=3.91" Flow Length=72' Slope=0.0347 '/ Tc=6.0 min CN=94 Runoff=0.30 cfs 1,008 cf
Pond 1.0P: Existing CB	Peak Elev=86.57' Inflow=1.36 cfs 4,516 cf 12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/ Outflow=1.36 cfs 4,516 cf
Pond 1.2P: FI-1	Peak Elev=87.66' Inflow=0.23 cfs 768 cf 12.0" Round Culvert n=0.013 L=69.0' S=0.0200 '/ Outflow=0.23 cfs 768 cf
Pond 1.3P: PER-2	Peak Elev=88.78' Storage=11 cf Inflow=0.11 cfs 330 cf 6.0" Round Culvert n=0.013 L=53.0' S=0.0200 '/ Outflow=0.10 cfs 330 cf
Pond 1.4P: DEF-2	Peak Elev=94.01' Storage=505 cf Inflow=0.15 cfs 505 cf Outflow=0.00 cfs 0 cf
Pond 1.5P: DEF-1	Peak Elev=91.70' Storage=127 cf Inflow=0.04 cfs 127 cf Outflow=0.00 cfs 0 cf
Pond 1.6P: PER-1	Peak Elev=90.32' Storage=12 cf Inflow=0.11 cfs 344 cf Outflow=0.11 cfs 344 cf
Pond 1.7P: FI-2	Peak Elev=89.44' Inflow=0.12 cfs 401 cf Outflow=0.12 cfs 401 cf

18519-01 POST*Type III 24-hr 10YR Rainfall=4.60"*

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Link SP1: Study Point 1

Inflow=1.36 cfs 4,516 cf

Primary=1.36 cfs 4,516 cf

Link SP2: Study Point 2

Inflow=0.30 cfs 1,008 cf

Primary=0.30 cfs 1,008 cf

Total Runoff Area = 20,950 sf Runoff Volume = 6,156 cf Average Runoff Depth = 3.53"
42.70% Pervious = 8,945 sf 57.30% Impervious = 12,005 sf

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Type III 24-hr 25YR Rainfall=5.80"

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Time span=0.00-50.00 hrs, dt=0.01 hrs, 5001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: Runoff Area=9,740 sf 68.38% Impervious Runoff Depth=4.87"
 Flow Length=140' Slope=0.0409 '/ Tc=6.0 min CN=92 Runoff=1.20 cfs 3,955 cf

Subcatchment1.2S: Runoff Area=2,065 sf 5.81% Impervious Runoff Depth=3.60"
 Flow Length=50' Slope=0.0100 '/ Tc=9.4 min CN=80 Runoff=0.18 cfs 620 cf

Subcatchment1.3S: Runoff Area=1,240 sf 41.53% Impervious Runoff Depth=4.33"
 Flow Length=38' Slope=0.0200 '/ Tc=6.0 min CN=87 Runoff=0.14 cfs 447 cf

Subcatchment1.4S: Runoff Area=1,425 sf 86.32% Impervious Runoff Depth=5.44"
 Flow Length=15' Slope=0.0833 '/ Tc=6.0 min CN=97 Runoff=0.18 cfs 647 cf

Subcatchment1.5S: Runoff Area=360 sf 75.00% Impervious Runoff Depth=5.44"
 Flow Length=15' Slope=0.0833 '/ Tc=6.0 min CN=97 Runoff=0.05 cfs 163 cf

Subcatchment1.6S: Runoff Area=1,295 sf 38.61% Impervious Runoff Depth=4.33"
 Flow Length=38' Slope=0.0200 '/ Tc=6.0 min CN=87 Runoff=0.15 cfs 467 cf

Subcatchment1.7S: Runoff Area=1,520 sf 1.64% Impervious Runoff Depth=3.60"
 Flow Length=45' Slope=0.0100 '/ Tc=8.6 min CN=80 Runoff=0.13 cfs 456 cf

Subcatchment1.8S: Runoff Area=215 sf 100.00% Impervious Runoff Depth=5.56"
 Flow Length=20' Slope=0.0125 '/ Tc=6.0 min CN=98 Runoff=0.03 cfs 100 cf

Subcatchment2.1S: Runoff Area=3,090 sf 79.94% Impervious Runoff Depth=5.10"
 Flow Length=72' Slope=0.0347 '/ Tc=6.0 min CN=94 Runoff=0.39 cfs 1,313 cf

Pond 1.0P: Existing CB Peak Elev=86.68' Inflow=1.80 cfs 6,045 cf
 12.0" Round Culvert n=0.010 L=111.0' S=0.0806 '/ Outflow=1.80 cfs 6,045 cf

Pond 1.2P: FI-1 Peak Elev=87.70' Inflow=0.31 cfs 1,067 cf
 12.0" Round Culvert n=0.013 L=69.0' S=0.0200 '/ Outflow=0.31 cfs 1,067 cf

Pond 1.3P: PER-2 Peak Elev=88.81' Storage=13 cf Inflow=0.14 cfs 447 cf
 6.0" Round Culvert n=0.013 L=53.0' S=0.0200 '/ Outflow=0.14 cfs 447 cf

Pond 1.4P: DEF-2 Peak Elev=94.75' Storage=647 cf Inflow=0.18 cfs 647 cf
 Outflow=0.00 cfs 0 cf

Pond 1.5P: DEF-1 Peak Elev=92.08' Storage=163 cf Inflow=0.05 cfs 163 cf
 Outflow=0.00 cfs 0 cf

Pond 1.6P: PER-1 Peak Elev=90.35' Storage=14 cf Inflow=0.15 cfs 467 cf
 Outflow=0.14 cfs 467 cf

Pond 1.7P: FI-2 Peak Elev=89.47' Inflow=0.16 cfs 556 cf
 Outflow=0.16 cfs 556 cf

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Link SP1: Study Point 1

Inflow=1.80 cfs 6,045 cf

Primary=1.80 cfs 6,045 cf

Link SP2: Study Point 2

Inflow=0.39 cfs 1,313 cf

Primary=0.39 cfs 1,313 cf

Total Runoff Area = 20,950 sf Runoff Volume = 8,167 cf Average Runoff Depth = 4.68"
42.70% Pervious = 8,945 sf 57.30% Impervious = 12,005 sf

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Type III 24-hr 25YR Rainfall=5.80"

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Summary for Subcatchment 1.1S:

Runoff = 1.20 cfs @ 12.08 hrs, Volume= 3,955 cf, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
1,850	80	>75% Grass cover, Good, HSG D
1,230	77	Woods, Good, HSG D
* 6,600	98	Existing Pavement
* 60	98	Proposed Pavement
9,740	92	Weighted Average
3,080	79	31.62% Pervious Area
6,660	98	68.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	140	0.0409	1.55		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
4.5					Direct Entry,
6.0	140	Total			

Summary for Subcatchment 1.2S:

Runoff = 0.18 cfs @ 12.13 hrs, Volume= 620 cf, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 120	98	Existing Roof
1,485	80	>75% Grass cover, Good, HSG D
460	77	Woods, Good, HSG D
2,065	80	Weighted Average
1,945	79	94.19% Pervious Area
120	98	5.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	50	0.0100	0.09		Sheet Flow, A-B
					Grass: Short n= 0.150 P2= 2.00"

Summary for Subcatchment 1.3S:

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 447 cf, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

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Type III 24-hr 25YR Rainfall=5.80"

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Area (sf)	CN	Description
* 515	98	Proposed Pavement
725	80	>75% Grass cover, Good, HSG D
1,240	87	Weighted Average
725	80	58.47% Pervious Area
515	98	41.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	30	0.0200	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.00"
0.0	8	0.0200	2.87		Shallow Concentrated Flow, B-C Paved Kv= 20.3 fps
1.3					Direct Entry,
6.0	38	Total			

Summary for Subcatchment 1.4S:

Runoff = 0.18 cfs @ 12.08 hrs, Volume= 647 cf, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 1,230	98	Proposed Roof
195	94	Newly graded area, HSG D
1,425	97	Weighted Average
195	94	13.68% Pervious Area
1,230	98	86.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	15	0.0833	1.32		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 2.00"
5.8					Direct Entry,
6.0	15	Total			

Summary for Subcatchment 1.5S:

Runoff = 0.05 cfs @ 12.08 hrs, Volume= 163 cf, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 270	98	Proposed Roof
90	94	Newly graded area, HSG D
360	97	Weighted Average
90	94	25.00% Pervious Area
270	98	75.00% Impervious Area

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Type III 24-hr 25YR Rainfall=5.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	15	0.0833	1.32		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
5.8					Direct Entry,
6.0	15	Total			

Summary for Subcatchment 1.6S:

Runoff = 0.15 cfs @ 12.09 hrs, Volume= 467 cf, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 500	98	Proposed Pavement
795	80	>75% Grass cover, Good, HSG D
1,295	87	Weighted Average
795	80	61.39% Pervious Area
500	98	38.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	30	0.0200	0.11		Sheet Flow, A-B
					Grass: Short n= 0.150 P2= 2.00"
0.0	8	0.0200	2.87		Shallow Concentrated Flow, B-C
					Paved Kv= 20.3 fps
1.3					Direct Entry,
6.0	38	Total			

Summary for Subcatchment 1.7S:

Runoff = 0.13 cfs @ 12.12 hrs, Volume= 456 cf, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 1,495	80	>75% Grass cover, Good, HSG D
25	98	Proposed Concrete
1,520	80	Weighted Average
1,495	80	98.36% Pervious Area
25	98	1.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	45	0.0100	0.09		Sheet Flow, A-B
					Grass: Short n= 0.150 P2= 2.00"

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Type III 24-hr 25YR Rainfall=5.80"

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Summary for Subcatchment 1.8S:

Runoff = 0.03 cfs @ 12.08 hrs, Volume= 100 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
* 215	98	Proposed Pavement
215	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	20	0.0125	0.65		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
5.5					Direct Entry,
6.0	20	Total			

Summary for Subcatchment 2.1S:

Runoff = 0.39 cfs @ 12.08 hrs, Volume= 1,313 cf, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
620	80	>75% Grass cover, Good, HSG D
* 2,470	98	Existing Pavement
3,090	94	Weighted Average
620	80	20.06% Pervious Area
2,470	98	79.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	72	0.0347	1.27		Sheet Flow, A-B
					Smooth surfaces n= 0.011 P2= 2.00"
5.1					Direct Entry,
6.0	72	Total			

Summary for Pond 1.0P: Existing CB

Inflow Area = 17,860 sf, 53.39% Impervious, Inflow Depth = 4.06" for 25YR event
 Inflow = 1.80 cfs @ 12.09 hrs, Volume= 6,045 cf
 Outflow = 1.80 cfs @ 12.09 hrs, Volume= 6,045 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.80 cfs @ 12.09 hrs, Volume= 6,045 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 86.68' @ 12.09 hrs
 Flood Elev= 90.27'

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Type III 24-hr 25YR Rainfall=5.80"

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Device	Routing	Invert	Outlet Devices
#1	Primary	85.95'	12.0" Round Existing Stormdrain L= 111.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 85.95' / 77.00' S= 0.0806 '/ Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.79 cfs @ 12.09 hrs HW=86.68' TW=0.00' (Dynamic Tailwater)↑**1=Existing Stormdrain** (Inlet Controls 1.79 cfs @ 2.91 fps)**Summary for Pond 1.2P: FI-1**

Inflow Area = 4,730 sf, 39.43% Impervious, Inflow Depth = 2.71" for 25YR event
 Inflow = 0.31 cfs @ 12.12 hrs, Volume= 1,067 cf
 Outflow = 0.31 cfs @ 12.12 hrs, Volume= 1,067 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.31 cfs @ 12.12 hrs, Volume= 1,067 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 87.70' @ 12.12 hrs

Flood Elev= 94.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	87.43'	12.0" Round SD-1 L= 69.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 87.43' / 86.05' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.31 cfs @ 12.12 hrs HW=87.70' TW=86.67' (Dynamic Tailwater)↑**1=SD-1** (Inlet Controls 0.31 cfs @ 1.78 fps)**Summary for Pond 1.3P: PER-2**

Inflow Area = 2,665 sf, 65.48% Impervious, Inflow Depth = 2.01" for 25YR event
 Inflow = 0.14 cfs @ 12.09 hrs, Volume= 447 cf
 Outflow = 0.14 cfs @ 12.10 hrs, Volume= 447 cf, Atten= 2%, Lag= 0.9 min
 Primary = 0.14 cfs @ 12.10 hrs, Volume= 447 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 88.81' @ 12.10 hrs Surf.Area= 200 sf Storage= 13 cf

Plug-Flow detention time= 5.7 min calculated for 447 cf (100% of inflow)

Center-of-Mass det. time= 5.7 min (801.6 - 795.9)

Volume	Invert	Avail.Storage	Storage Description
#1	88.59'	906 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.59	200	0.0	0	0
89.42	200	30.0	50	50
90.92	200	40.0	120	170
91.42	200	40.0	40	210
94.90	200	100.0	696	906

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Type III 24-hr 25YR Rainfall=5.80"

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Device	Routing	Invert	Outlet Devices
#1	Primary	88.59'	6.0" Round 6" Underdrain L= 53.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 88.59' / 87.53' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.14 cfs @ 12.10 hrs HW=88.81' TW=87.70' (Dynamic Tailwater)

↑ **1=6" Underdrain** (Inlet Controls 0.14 cfs @ 1.61 fps)

Summary for Pond 1.4P: DEF-2

Inflow Area = 1,425 sf, 86.32% Impervious, Inflow Depth = 5.44" for 25YR event
Inflow = 0.18 cfs @ 12.08 hrs, Volume= 647 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Peak Elev= 94.75' @ 24.34 hrs Surf.Area= 192 sf Storage= 647 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description	
#1	89.47'	752 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
89.47	192	0.0	0	0
89.48	192	40.0	1	1
90.30	192	40.0	63	64
90.31	192	20.0	0	64
91.31	192	20.0	38	103
91.32	192	40.0	1	103
92.32	192	40.0	77	180
92.33	192	100.0	2	182
95.30	192	100.0	570	752

Device	Routing	Invert	Outlet Devices
#1	Primary	89.47'	6.0" Round 6" Underdrain L= 58.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 89.47' / 88.31' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	89.47'	2.410 in/hr Filtration over Surface area above 89.47' Excluded Surface area = 192 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=89.47' TW=88.59' (Dynamic Tailwater)

↑ **1=6" Underdrain** (Controls 0.00 cfs)

↑ **2=Filtration** (Controls 0.00 cfs)

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Summary for Pond 1.5P: DEF-1

Inflow Area = 360 sf, 75.00% Impervious, Inflow Depth = 5.44" for 25YR event
 Inflow = 0.05 cfs @ 12.08 hrs, Volume= 163 cf
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 92.08' @ 24.34 hrs Surf.Area= 95 sf Storage= 163 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description	
#1	88.85'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.85	95	0.0	0	0
88.86	95	40.0	0	0
89.68	95	40.0	31	32
89.69	95	20.0	0	32
90.69	95	20.0	19	51
90.70	95	40.0	0	51
91.03	95	40.0	13	64
91.04	95	100.0	1	65
95.10	95	100.0	386	450

Device	Routing	Invert	Outlet Devices
#1	Primary	87.30'	12.0" Round SD-1 L= 62.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 87.30' / 86.05' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	88.40'	10.0" Round SD-2 L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 88.40' / 87.30' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#3	Device 2	88.85'	6.0" Round 6" Underdrain L= 22.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 88.85' / 88.40' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	88.85'	2.410 in/hr Filtration over Surface area above 88.85' Excluded Surface area = 95 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=88.85' TW=85.95' (Dynamic Tailwater)

↑ **1=SD-1** (Passes 0.00 cfs of 3.88 cfs potential flow)
 ↑ **2=SD-2** (Passes 0.00 cfs of 0.69 cfs potential flow)
 ↑ **3=6" Underdrain** (Controls 0.00 cfs)
 ↑ **4=Filtration** (Controls 0.00 cfs)

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Type III 24-hr 25YR Rainfall=5.80"

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Summary for Pond 1.6P: PER-1

Inflow Area = 1,295 sf, 38.61% Impervious, Inflow Depth = 4.33" for 25YR event
 Inflow = 0.15 cfs @ 12.09 hrs, Volume= 467 cf
 Outflow = 0.14 cfs @ 12.10 hrs, Volume= 467 cf, Atten= 2%, Lag= 0.9 min
 Primary = 0.14 cfs @ 12.10 hrs, Volume= 467 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs
 Peak Elev= 90.35' @ 12.10 hrs Surf.Area= 200 sf Storage= 14 cf

Plug-Flow detention time= 5.6 min calculated for 467 cf (100% of inflow)
 Center-of-Mass det. time= 5.6 min (801.5 - 795.9)

Volume	Invert	Avail.Storage	Storage Description	
#1	90.12'	600 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
90.12	200	0.0	0	0
90.95	200	30.0	50	50
92.45	200	40.0	120	170
92.95	200	40.0	40	210
94.90	200	100.0	390	600

Device	Routing	Invert	Outlet Devices
#1	Primary	87.30'	12.0" Round SD-1 L= 62.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 87.30' / 86.05' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	89.08'	10.0" Round SD-2 L= 89.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 89.08' / 87.30' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#3	Device 2	90.12'	6.0" Round 6" Underdrain L= 52.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 90.12' / 89.08' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.14 cfs @ 12.10 hrs HW=90.35' TW=86.68' (Dynamic Tailwater)

↑ **1=SD-1** (Passes 0.14 cfs of 6.04 cfs potential flow)
 ↑ **2=SD-2** (Passes 0.14 cfs of 2.43 cfs potential flow)
 ↑ **3=6" Underdrain** (Inlet Controls 0.14 cfs @ 1.63 fps)

Summary for Pond 1.7P: FI-2

Inflow Area = 1,735 sf, 13.83% Impervious, Inflow Depth = 3.84" for 25YR event
 Inflow = 0.16 cfs @ 12.11 hrs, Volume= 556 cf
 Outflow = 0.16 cfs @ 12.11 hrs, Volume= 556 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.16 cfs @ 12.11 hrs, Volume= 556 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

18519-01 POST

Type III 24-hr 25YR Rainfall=5.80"

Prepared by Sebago Technics, Inc.

Printed 4/30/2020

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Peak Elev= 89.47' @ 12.11 hrs

Flood Elev= 94.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	87.30'	12.0" Round SD-1 L= 62.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 87.30' / 86.05' S= 0.0200 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	89.27'	10.0" Round SD-2 L= 99.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 89.27' / 87.30' S= 0.0199 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.16 cfs @ 12.11 hrs HW=89.47' TW=86.67' (Dynamic Tailwater)↑ **1=SD-1** (Passes 0.16 cfs of 4.89 cfs potential flow)↑ **2=SD-2** (Inlet Controls 0.16 cfs @ 1.54 fps)**Summary for Link SP1: Study Point 1**

Inflow Area = 17,860 sf, 53.39% Impervious, Inflow Depth = 4.06" for 25YR event
 Inflow = 1.80 cfs @ 12.09 hrs, Volume= 6,045 cf
 Primary = 1.80 cfs @ 12.09 hrs, Volume= 6,045 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Summary for Link SP2: Study Point 2

Inflow Area = 3,090 sf, 79.94% Impervious, Inflow Depth = 5.10" for 25YR event
 Inflow = 0.39 cfs @ 12.08 hrs, Volume= 1,313 cf
 Primary = 0.39 cfs @ 12.08 hrs, Volume= 1,313 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Attachment D

Inspection, Maintenance and Housekeeping Plan



INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

For:
Birchlane 3-Unit Apartment
Knight Street
Portland, Maine

By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine

Introduction

The following plan outlines the anticipated inspection and maintenance procedures for the erosion and sedimentation control measures as well as stormwater management facilities for the project. This plan also outlines several housekeeping requirements that shall be followed during and after construction. These procedures shall be followed in order to ensure the intended function of the designed measures and to prevent unreasonably 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 detail 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 Maine Department of Environmental Protection (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 (0.5" of rainfall), 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 7 calendar days and prior to any storm event (0.5" of 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 years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on a 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 (0.5" of rainfall). They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to the requirements of this plan.

D. 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).

E. 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.

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 or foundation dewatering: Trench dewatering is the removal of water from

trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

Post-Construction

1. **Inspection:** After construction, it is the responsibility of the owner or assigned heirs to comply with the inspection and maintenance procedures outlined in this section. All measures must be maintained in effective operating condition. The owner shall inspect and maintain the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Specific Inspection and Maintenance Tasks:** The following is a list of permanent erosion control and stormwater management measures and the inspection and maintenance tasks to be performed after construction. If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the local municipality in the annual report.

A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains (>0.5") 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, level spreaders 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 (>0.5") 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. Removal of Winter Sand:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

E. Roof Drip Edges:

- These structures may not be paved over or altered in anyway. No gutter may be installed on the roof line.
- During the first year, the dripline shall be inspected semi-annually and following major storm events.
- Debris and sediment buildup shall be removed as needed. Any bare area or erosion rills shall be repaired with new stone.
- The dripline should be inspected after every major storm in the first year to be sure it is functioning properly. Thereafter, the dripline should be inspected at least once every six months to ensure that it is draining within 48 hours following a one-inch storm or greater.
- Sediment and plant debris should be removed at least annually.

F. Permeable Pavers:

- Check upslope face of stone layer to prevent clogging by eroded soil, road sand, debris and leaf litter.
- Check for standing water on the surface of the pavement after a precipitation event. If standing water remains within 30 minutes after rainfall had ended, cleaning of porous pavement is recommended.
- Vacuum sweeper shall be used regularly to remove sediment and organic debris on the pavement surface. The sweeper may be fitted with water jets.
- Pavement vacuuming should occur during spring cleanup following the last snow event to remove accumulated debris, at minimum.
- Pavement vacuuming should occur during fall cleanup to remove dead leaves, at minimum.
- Power washing can be an effective tool for cleaning clogged areas. This should

occur at mid pressure typically less than 500 psi and at an angle of 30 degrees or less.

- Check for debris accumulating on pavement, especially debris buildup in winter.
- For loose debris, a power/leaf blower or gutter broom can be used to remove leaves and trash.
- Check for damage to porous pavements from non-design loads.

3. Documentation:

- A. The owner or operator of a BMP or a qualified post-construction stormwater inspector hired by that person, shall, as required by the local municipality, provide a completed and signed certification on a form provided by the local municipality, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they required maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- B. 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. 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.

ATTACHMENT 1 – STORMWATER INSPECTION AND MAINTENANCE LOG

Birchlane 3-Unit Apartment Knight Street Portland, Maine

This log is intended to accompany the Inspection, Maintenance, and Housekeeping Plan for the proposed Birchlane 3-Unit Apartment in Portland, Maine. The following items shall be checked, cleaned, and maintained on a regular basis as specified in the Maintenance Plan and as described in the sections below. This log shall be kept on file for a minimum of five (5) years and shall be available for review by the City of Portland. Qualified personnel familiar with the drainage systems and soils shall perform all inspections. A copy of the construction and post-construction maintenance logs are provided.

General Site

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
Site Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Vegetated Areas	Inspect Slopes/Embankments for erosion (annually)		
	Replant bare areas or areas of sparse growth (annually)		
Ditches/Swales	Remove obstructions/debris/sediment (monthly)		
	Inspect for erosion/repair as needed (annually)		
	Remove woody vegetation (annually)		
	Mow vegetated ditches (annually)		
Culverts	Remove sediment/debris from inlet/outlet aprons (annually)		
	Inspect inlet/outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Pipe Outlets	Remove sediment/debris from outlet aprons (annually)		
	Inspect outlet aprons for erosion, repair as needed (annually)		
	Inspect, repair as needed, riprap aprons for dislodged/sparse coverage (annually)		
Additional Notes/Observations:			

Roof Drip Edge Filter

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Pretreatment	Sediment/Debris Removal (Annually)		
	Inspect for bare areas or rill erosion (Annually)		
Downstream Structure	Sediment Depth (Annually)		
	Floatables/Debris (Annually)		
Discharge Pipe	Ground Stabilized (>1" rain, Annually)		
Embankments	Review for signs of erosion (Twice Annually)		
Stone	Trim overgrown vegetation with string trimmer (annually)		
	Review trench for evidence of vehicular traffic or storage of snow within footprint (annually)		
	Confirm no excessive ponding of water (annually)		
Additional Notes/Observations:			

Permeable Pavers

INSPECTION MAINTENANCE AND HOUSEKEEPING FORM			
General Information			
Project Name:		Inspection Date:	
Project Location:		Current Weather:	
		Date / Amount Last Precip:	
BMP Owner:		Company conducting inspection:	
Owner Mailing Address:		Company Mailing Address	
Owner Phone #:		Company Phone #:	
Owner Email:		Inspector Name:	
		Inspector Email:	
BMP Element	Suggested Maintenance (recm'd frequency)	Observations	Inspection Notes/Recommended Action
Forebay/Pretreatment	Sediment/Debris Removal (Annually)		
	Inspect for bare areas or rill erosion (Annually)		
Outlet Control Structure	Sediment Depth (Annually)		
	Floatables/Debris (Annually)		
Discharge Pipe	Ground Stabilized (>1" rain, Annually)		
Upgradient Drainage Areas	Review for signs of erosion (Twice Annually)		
Porous Surface	Remove fallen leaf debris (fall-annually)		
	Review surface for rutting or raffeling of pavement surface (annually)		
	Confirm pond drains in 24-48 hours for water quality volume (annually)		
Additional Notes/Observations:			

25: CONSISTENCY WITH CITY MASTER PLANS (14-526 (c) 1)

Identify consistency with master plans

- a. A formal Master Plan for the North Deering area of the City is not available. The proposed new residential building is consistent with the adjacent uses and will not create an eyesore or diminish the neighborhood characteristics nor will the proposed site development include features that will burden the City's resources.

Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable

- b. Connections are limited to extension of existing/available public services as shown on the enclosed Site Plans.

26: PUBLIC SAFETY AND CRIME PREVENTION (14-526(c))

Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)

Natural Surveillance: The site design allows formal and non-formal natural surveillance increasing safety of users and deterring possible offenders. The proximity of the existing residences and the new building to the internal access drive enable occupants and visitors to observe movement and activities on the site during the day and at night. A mechanical surveillance system is not proposed as part of this project.

Mechanical Access Control: Not applicable. Mechanical access controls are not proposed.

Emergency vehicle access

2.b. There is adequate access to the site for emergency vehicles. Please see the plan set. The proposed new building is an expansion to an approved PRUD development. The access drive will remain as it exists without change to the vehicular circulation pattern. We note that the access drive requires a small expansion to maintain the required 20'-wide travel lane. Reference is made to Sheet 03-Site Plan enclosed in this submittal

Address consistency with public safety standards (Technical Manual, Section 3)

The site design complies with the applicable sections of the Technical Design Manual in the following manner:

Fire Hydrant Standard: There is an existing fire hydrant approximately 200 LF from the new building location at the intersection of Knight Street and Maplewood Street.

Site Access Standards: Fire Department vehicles can enter the site via the existing drive. Direct access to three sides of the new building is available from the existing drive.

Street Numbers: The assigned street numbers will be placed on the new building façade as required by the City of Portland.

Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3)-Fire Checklist. Please see the attached Fire Department Checklist, this section.



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



#18519-01

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 **Birchlane, LLC , 198 Saco Ave., Old Orchard Beach, ME 04064 (207) 934-7762**
- 2.
3. Name address, telephone number of architect/designer: **Richard Pellerin, 132 Airport Rd. #4, Sanford, ME 04073 (207) 324-2174**
4. Proposed uses of any structures [NFPA and IBC classification]
- 5.
6. Square footage of all structures [total and per story] **4,500 SF Gross
1,500 SF 1st Fl
1,500 SF 2nd Fl
1,500 SF 3rd Fl**
7. Elevation of all structures **35' Max, See Elevation Plans**
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 **< 300 LF from proposed building at the intersection of Knight Street and Maplewood Street**
10. Water main[s] size and location **2" domestic water service and 2" fire protection extending from existing main at White Birch Lane and Knight Street**
11. Access to all structures [min. 2 sides] **Yes. Access to 3 sides from existing internal drive**
12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

NOTE: The applicant is using the plans recently approved for the 6 White Birch Lane dwelling in the same development. New plans are not being prepared for this project.

Some structures may require Fire flows using annex H of NFPA 1

27: AVAILABILITY AND ADEQUACY OF PUBLIC UTILITIES (14-526 (c) 3)
Technical Manual, Sections 2 & 9

Electrical services, including providing underground services

Electrical service will extend from an existing utility pole where they will drop utilities to a new transformer and extendin underground to the new building per CMP. Reference is made to the appended plan 05-Utility Plan.

Identify existing and proposed connections for public utilities and required public utility upgrades

See enclosed plan set for proposed utilities connections. Natural gas is available within the existing drive and connection will be coordinated directly with local supplier, Unitil. Water service will be provided by Portland Water District. The water service includes the installation of a new 2" fire service and 2" domestic service line from the water main within the existing drive. All design and connections will be reviewed by and coordinated directly with the utility companies.

Sewer line connections are required, if there is a main within 200 feet

Sanitary sewer service to be connected to an existing sewer manhole that is located at the intersection of Knight Street and White Birch Lane. The proposed sewer service will be installed and connected in accordance with City standards.

Proposed solid waste management facilities on-site and management for the site

Solid waste in the form of typical residential household trash (MSW) will be generated from each of the three units. Tenants will be responsible for bringing their trash to the existing on-site dumpster.

Construction debris associated with the building construction, including clean wood, material packaging, cardboard, etc. will be collected in large onsite construction dumpsters. Proposed improvements will result in approximately 39.5 cy of building construction waste.

$$4,500 \text{ s.f. (gross) building} \times 4.39 \text{ lbs./s.f. waste} = 19,755 \text{ lbs. of waste}$$

$$19,755 \text{ lbs}/500 \text{ lbs./c.y.} = 39.5 \text{ c.y. of waste}$$

Construction will also require removal of a pavement which will generate approximately 30 c.y. of waste. Very minimal tree clearing is anticipated for the project.

Written evidence of the ability to serve from utility companies, as applicable

Please refer to ability/capacity to serve correspondence regarding water and sewer service for this project that is enclosed in this section.



April 17, 2019
18519-01

Bradley Roland, P.E., Senior Project Engineer
Portland Public Works
212 Canco Road
Portland, ME 04103

Request for Acceptance of Wastewater Flow
Birchlane 3-Unit Apartment
Knight Street, Portland

Dear Mr. Roland:

Sebago Technics, Inc., as part of a design team, has been retained to prepare plans and permit applications for the proposed three-unit apartment building to be located on Knight Street in Portland. The site is located off of Allen Avenue at the intersection of Knight Street and White Birch Lane in the North Deering section of the city. The proposed development consists of a 1,500 square-foot apartment complex located within an existing Planned Residential Unit Development (PRUD). A site location map is attached for your reference.

As seen in the enclosed plans, the proposed system is anticipated to consist of approximately 70 linear feet of sewer service, connecting to an existing manhole located in Knight Street. The proposed sewer connection between the existing manhole in Knight Street and the proposed development is 6-inch diameter PVC pipe. All sewer services are less than 10-feet in depth from the ground surface. Enclosed you will also find the City of Portland Wastewater Capacity Application.

We are hopeful that we have provided sufficient information for you to review the proposed project and to provide comments on the proposed sanitary sewer service connection. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

SEBAGO TECHNICS, INC.

A handwritten signature in black ink, appearing to read "Mathew Orr".

Mathew Orr, EI
Civil Engineer

MKO/cab
Enc.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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



Bradley Roland, P.E.
Water Resources Division

brad@portlandmaine.gov

Date: April 17, 2020

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

Site Address: Knight Street (Birch Meadow Apartments, 27 Existing Units)

Chart Block Lot Number: 437-A-35

Proposed Use: New 3-Unit Residential Building

Previous Use: Unimproved Land within a PRUD

Existing Sanitary Flows: n/a GPD

Existing Process Flows: n/a GPD

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

Site Category	Commercial (<i>see part 4 below</i>)	☐
	Industrial (<i>complete part 5 below</i>)	☐
	Governmental	☐
	Residential	☒
	Other (<i>specify</i>)	☐

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

2. Please, Submit Contact Information.

City Planner's Name: Shukria Wiar Phone: (207) 874-8719, Portland Planning
 Owner/Developer Name: Owner: Birchlane, LCC Developer: King Real Estate
 Owner/Developer Address: King Real Estate, 198 Saco Ave., Old Orchard Beach, ME 04064
 Phone: (207) 934-7622 Fax: c/o Richard Pelletier E-mail: rhp1148@gmail.com
 Engineering Consultant Name: Sebago Technics, Inc. c/o Craig Burgess, P.E.
 Engineering Consultant Address: 75 John Roberts Road, Suite 4A, S. Portland, ME 04106
 Phone: (207) 200-2081 Fax: (207) 856-2206 E-mail: cburgess@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: 810 GPD

Peaking Factor/ Peak Times: 5 PM - 7 PM

Specify the source of design guidelines: (*i.e.* "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify) State of Maine Subsurface Wastewater Disposal Rules

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

Section 4.E.2: 90 GPD per bedroom for multiple family dwelling units with multiple bedrooms.

9 Bedrooms x 90 GPD per Bedroom = 810 GPD Total

n/a **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.

n/a **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): _____

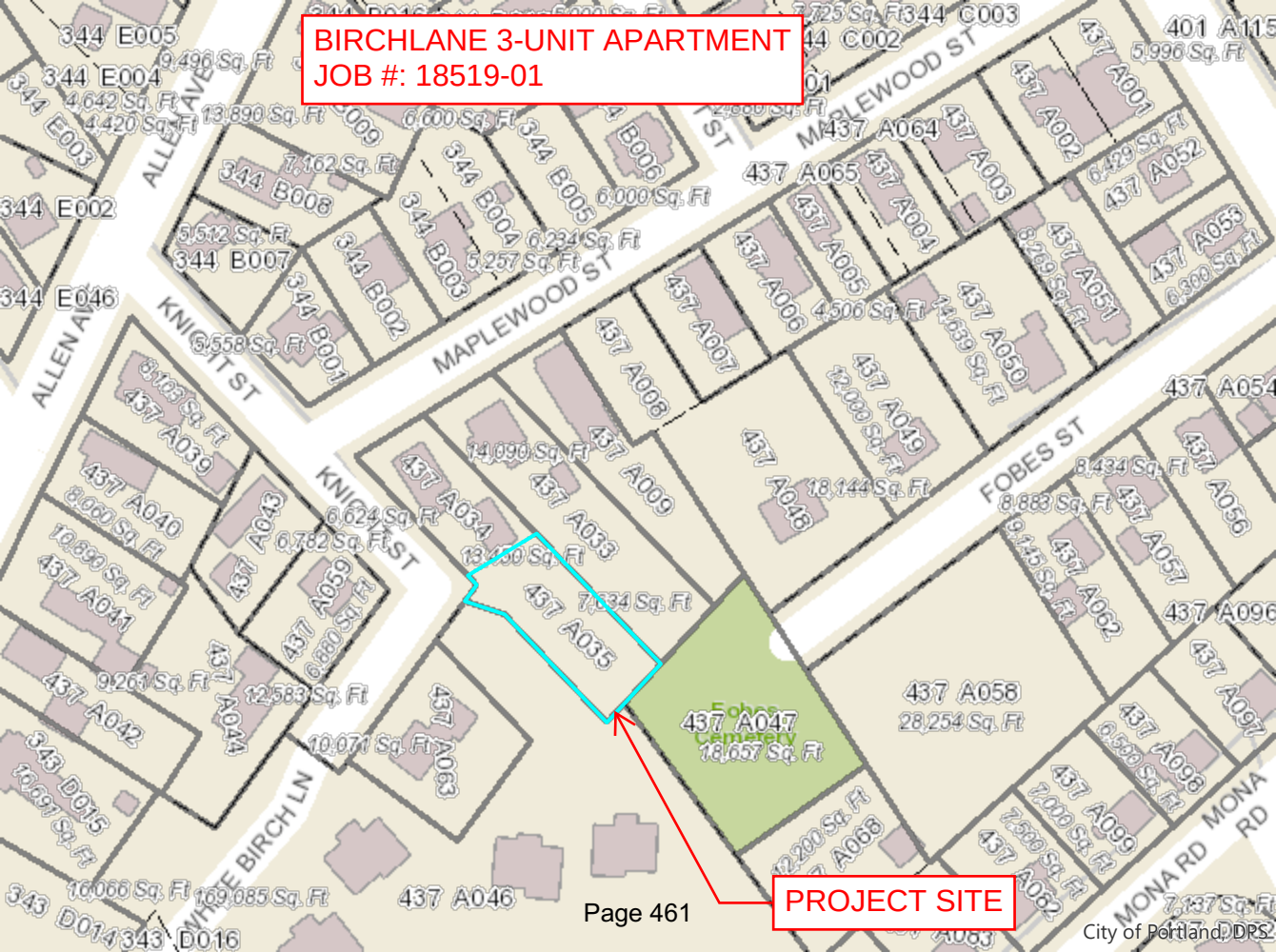
(<http://www.osha.gov/oshstats/sicser.html>)

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.

**BIRCHLANE 3-UNIT APARTMENT
JOB #: 18519-01**





April 17, 2020
18519-01

MEANS Group
Portland Water District
225 Douglass Street
Portland, ME 04104

Ability to Serve Request
Birchlane 3-Unit Apartment
Knight Street, Portland

Dear MEANS Group:

Sebago Technics, Inc., as part of a design team, has been retained to prepare plans and permit applications for the proposed three-unit apartment building to be located on Knight Street in Portland. The site is located off of Allen Avenue at the intersection of Knight Street and White Birch Lane in the North Deering section of the city. The proposed development consists of a 1,500 square-foot apartment complex located within an existing Planned Residential Unit Development (PRUD). A site location map is attached for your reference.

As seen in the enclosed plans, a proposed 2-inch domestic service and 2-inch fire service will extend from the existing main which is located within Knight Street. An approximate fixture count is attached for use by the District with a combined fixture value of 92.6.

We are hopeful that we have provided sufficient information for you to review the proposed project and to provide comments on the proposed water service connection. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

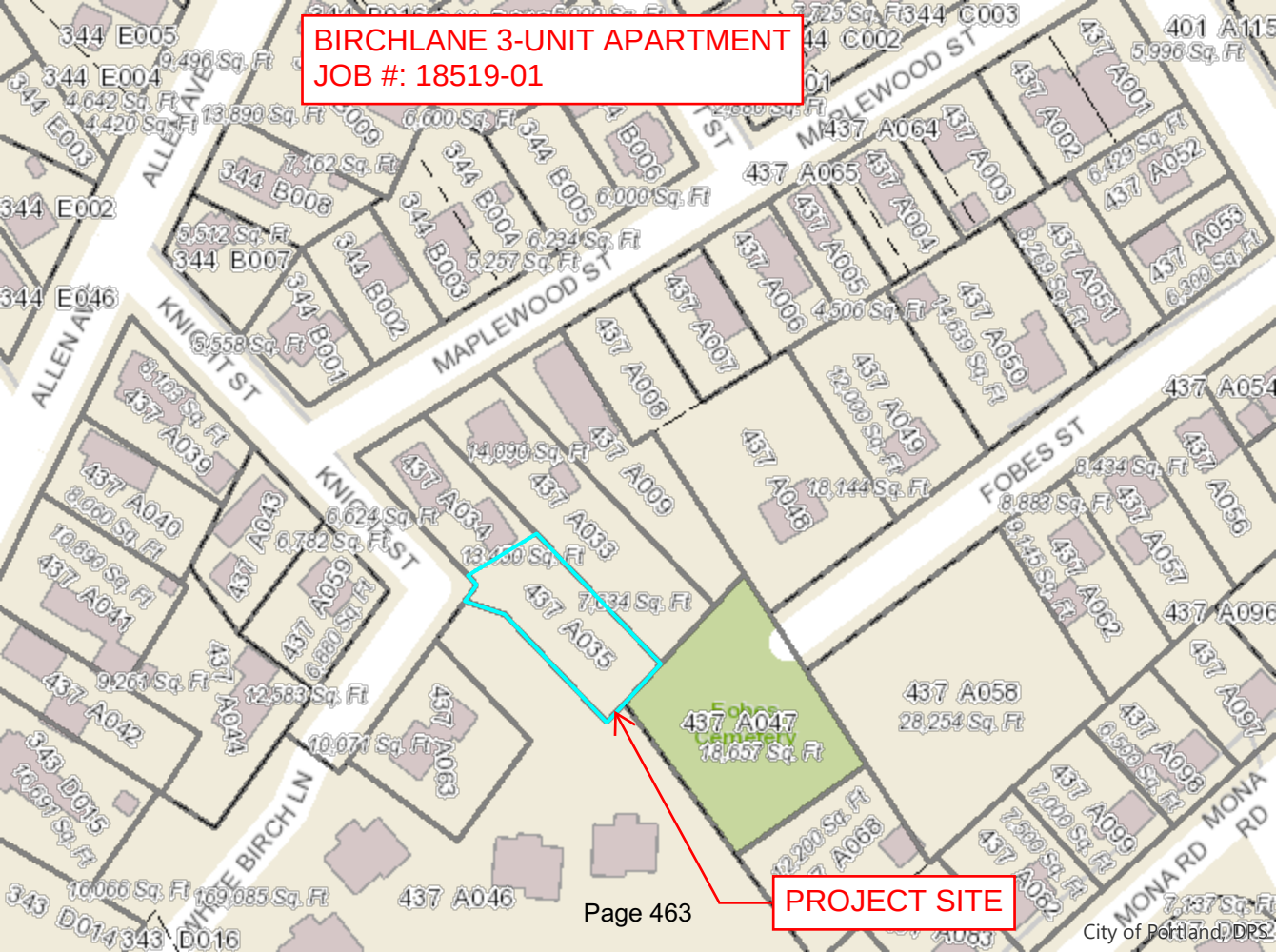
SEBAGO TECHNICS, INC.

A handwritten signature in black ink, appearing to read "Mathew Orr".

Mathew Orr, EI
Civil Engineer

MKO/cab
Enc.

**BIRCHLANE 3-UNIT APARTMENT
JOB #: 18519-01**



PROJECT SITE

Peak Flow Based on Fixture Count

Customer	KING REAL ESTATE
Street Address	KNIGHT STREET
City	PORTLAND

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	x	3	=	24
Bedpan Washers	10	x	0	=	0
Bidet	2	x	0	=	0
Dental Unit	2	x	0	=	0
Drinking Fountain - Public	2	x	0	=	0
Kitchen Sink	2.2	x	3	=	6.6
Lavatory	1.5	x	6	=	9
Showerhead (Shower Only)	2.5	x	0	=	0
Service Sink	4	x	0	=	0
Toilet -Flush Valve	35	x	0	=	0
-Tank Type	4	x	6	=	24
Urinal -Pedestal Flush Valve	35	x	0	=	0
-Wall Flush Valve	16	x	0	=	0
Wash Sink (Each Set of Faucets)	4	x	0	=	0
Dishwasher	2	x	3	=	6
Washing Machine	6	x	3	=	18
Hose (50 ft. Wash Down) -1/2 in.	5	x	1	=	5
-5/8 in.	9	x	0	=	0
-3/4 in.	12	x	0	=	0

Combined Fixture Value Total

92.6

Customer Peak Demand From Fig. 4-2 or 4-3
Pressure Factor From Table 4-1

No. of Irrigation Sections (Areas of 100 sq. ft.)	
Irrigation Factor (1.16-Spray Systems, 0.40-Rotary Systems)	
Hose Bibs for Irrigation:	
Size	Fixture Value
1/2"	
5/8"	
3/4"	

Total Fixed Demand (Peak Flow)

0 gpm

Table 4-1 Pressure Adjustment Factors

Working Pressure at Meter Discharge (psi)	Pressure Adjustment Factor
35	0.74
40	0.80
50	0.90
60	1.00
70	1.09
80	1.17
90	1.25
100	1.34

Adapted from AWWA Manual M22 table 4-1

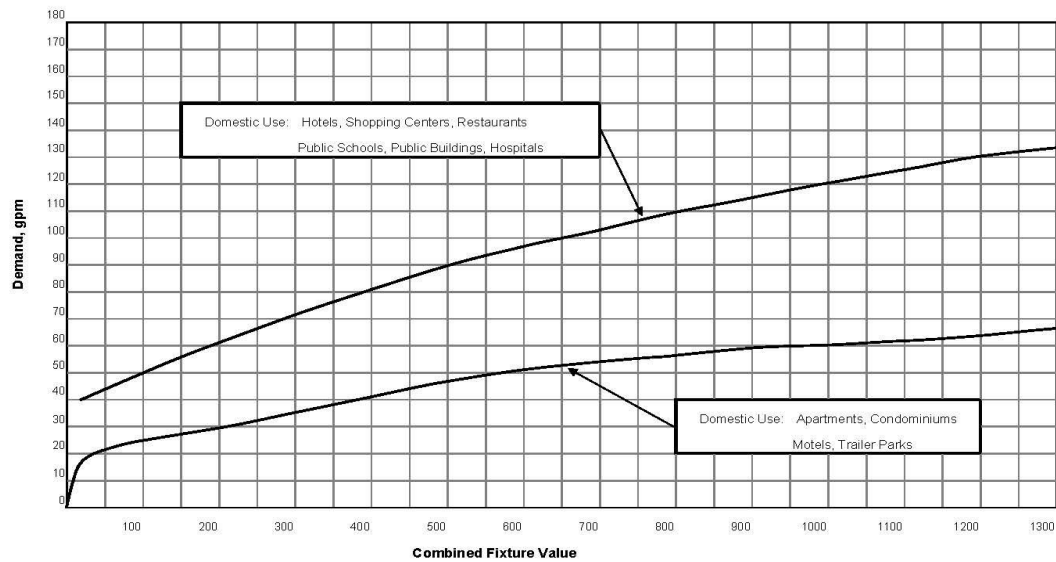


Figure 4-2 Water flow demand per fixture value - low range

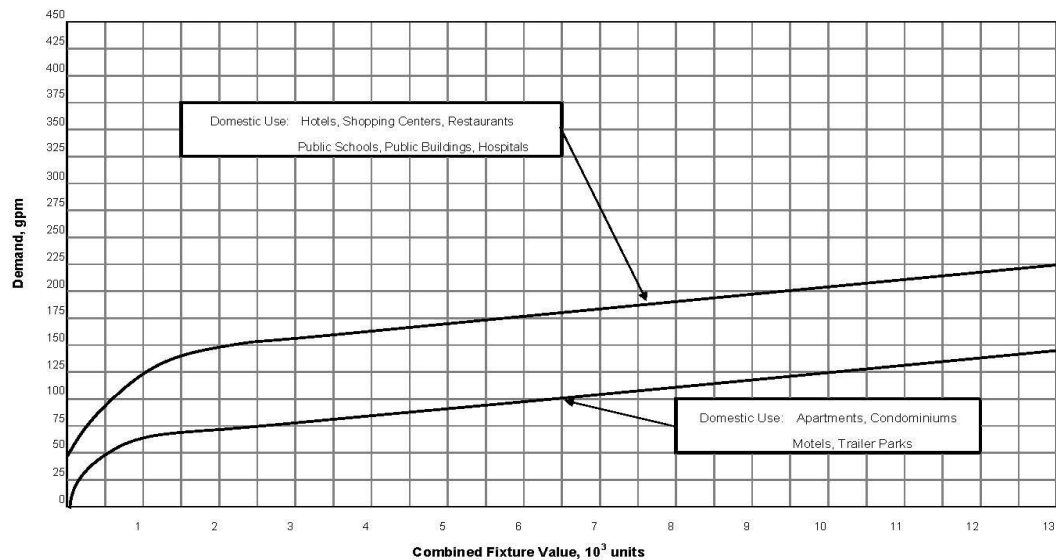


Figure 4-3 Water flow demand per fixture value - High range



CITY OF PORTLAND
Department of Public Works
Christopher C. Branch, P.E., Director

Date: June 16, 2020

Re: Wastewater Capacity Authorization

Address: 2 White Birch Lane

Applicant: Birchlane, LLC – King Real Estate

Planner: Shukria Wiar

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				
Multiple Family Dwelling Units	3-Bedroom	3	270	810
Net Change				+ 810
*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,

Bradley A. Roland, P.E.
Senior Project Engineer

28: MASSING, VENTILATION AND WIND IMPACT (14-526(d) 1)

Wind and ventilation impacts on adjoining structures and/or adjacent public spaces.

Windy study, if applicable

The proposed building will not result in health or safety problems due to reduction in ventilation to adjoining structures or adjacent public spaces. A wind study is not applicable to this site development.

Bulk, location or height impacts on adjoining structures

The bulk, location, and height of the proposed buildings will not minimize the value or utility to neighboring structures. The proposed development is consistent in size and scale and use with other multi-unit neighborhood properties and is an allowed use in the district.

Identify and locate HVAC equipment and venting away from public spaces and residential properties

Residential scale HVAC equipment (heat pumps) will be utilized. Reference is made to the vendor email response, this section, indicating that the pumps meet state and federal standards

Identify screening and manufacturing specifications for noise, if applicable

Not applicable.

Craig Burgess

From: Tompkins, Caton <CTompkins@homans.com>
Sent: Friday, July 12, 2019 9:50 AM
To: Craig Burgess; King Weinstein
Cc: rhp1148@gmail.com
Subject: Mitsubishi Heat Pumps

Hi Craig,

Regarding our brand of Mitsubishi M&P Series heat pumps that you are looking at for your job in Portland: They will meet the State of Maine and Federal standards that you inquired about.

Best Regards,



Caton Tompkins

Territory Manager

p: 207-874-9500

m: 207-310-3908

a: 111C Pine Tree Industrial Pkwy.
Portland, ME 04103

w: <http://www.homans.com>



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29: SHADOWS (14-526 9d), if applicable

Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

Not applicable. There are no publicly accessible open spaces areas that will be affected by shadows from the proposed new building.

30: 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

Not applicable. The proposed new building is not located adjacent to a public way or in close proximity to adjacent properties where snow or ice is of concern.

31: VIEW CORRIDORS (14-526 (d)4)

Protection of designated view corridors (Portland Design Manual, Appendix 1)

Not applicable. The site is not located in a view corridor as identified in the City of Portland Downtown Vision View Corridor Protection Plan, Portland Design Manual, Appendix 1.

32: HISTORIC RESOURCES (14-526(d) 5)

Identify developments within Historic Districts or affecting Designated Landmarks

Certificate of Appropriateness or other evidence

Identify Developments within 100 feet of Historic Districts of affecting Designated Landmarks. Advisory HP review may be required

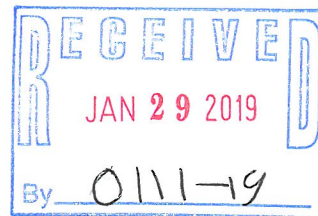
Address preservation and documentation of Archaeological Resources

Per review of available City information, the proposed new residential building is not located in a City Historic District and will not affect a designated landmark. The response received from the Maine Historic Preservation Commission (MHPC) does not indicate the presence of historical or archaeological within the vicinity of site is enclosed in this section. Reference is made to the letter dated February 4, 2019, this section.



January 24, 2019
18519

Mr. Kirk Mohney
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, ME 04039-0065



Re: Proposed New 3-Unit Residential Building, Birch Meadows Apartments
12 White Birch Lane, Portland

Dear Mr. Mohney

On behalf of King Real Estate, Sebago Technics formally requests a site review for the construction of a new 3-unit, 2-story residential building in proposed in an existing Planned Residential Unit Development (PRUD) known as Birch Meadow Apartments on a ±3.9-acre lot in the City of Portland at 12 White Birch Lane. This proposed project includes the new building, parking, utilities and other associated site improvements. The site is located within the North Deering Section of Portland off Allen Avenue in a dense residential area consisting of multi-family units and single-family homes.

Sebago Technics intends to file Level III Site Plan Application with the City. We have reviewed City resources and determined that the development site is not located within a designated Historic District. We respectfully request a review by the Maine Historic Preservation Commission for any Archaeological or Historic Sites within or adjacent to the redevelopment area in accordance with the provisions of 36 CFR, Part 800, Section 106.

We have enclosed a site location map and a selection of keyed assessor cards with photos depicting abutting/nearby structures that are 50 years or older. At your earliest convenience, please review and forward your findings. If you have any questions or need further information please do not hesitate to contact me at snichols@sebagotechnics.com.

Sincerely,

SEBAGO TECHNICS, INC.

Stefanie Nichols
Permitting Specialist/Project Coordinator

enc.

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney,
State Historic Preservation Officer
Maine Historic Preservation Commission

2/4/19
Date

33: EXTERIOR LIGHTING (14-526 (d) 6)**Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)**

The building lighting includes wall-mounted full cut-off fixtures to direct illumination to the building entry and to provide illumination within the unit privacy areas at the rear of the building. The fixture is typical of a residential dwelling unit that holds a 60-watt equivalent bulb. Reference is made to the light cut sheet that is included in this section. We respectfully request a waiver from a photometric plan considering the minimal nature of the lighting. A formal waiver is requested in Section 7.

Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)

No lights are proposed in a street right-of-way.

1002 956 547



For Wet Locations

Uncovered Porches/Patios
Para lugares húmedos
Porches descubiertos/Patios

Uses (1) Standard Bulb up to 60 Watts
or CFL or LED Equivalent (Not Included)

Usa 1 bombilla estándar de hasta 60 W
o CFL o LED equivalente (no incluida)

Clear Seeded Glass

Vidrio granulado transparente

3 Year Warranty

3 Años de garantía



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for more product information.
ESCANÉAME con The Home Depot App
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HOME DEPOT
2455 PACES FERRY RD., N.W.
ATLANTA, GA 30339

FOR ASSISTANCE, CALL:
SI NECESITA AYUDA, LLAME AL:
1-855-HD-HAMPTON
HAMPTONBAY.COM



34: NOISE AND VIBRATION (14-526(d)7)

Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements

- (i), (ii) The proposed HVAC equipment is limited to residential-scale heat pumps meeting applicable local zoning standards. See Section 28-Mass, Ventilation, Wind Impact for additional information.

We note that an emergency generator is not proposed as part of this project therefore generator maintenance, testing and noise standards are not applicable.

35: 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

All signage shall meet applicable requirements of Division 22 of the City Code, in addition to:

- (i) Historic Preservation: Not applicable
- (ii) Commercial Signage and Directional Traffic Signage: Not applicable
- (iii) On-site directional traffic signage: Not applicable, no new internal signage proposed.
- (iv) Waiver criteria: Not applicable, no signage waivers requested.

36: ZONE RELATED STANDARDS (14-526(d) 5)

The new residential building is subject to the PRUD design standards found in the City of Portland Design Standards Manual adopted May 11, 2010 per *(h) Planned Residential Unit Developments (PRUDS) in the R-3, R-5, and R5-A Residential Zones and Manufactured Housing Parks in any zone in addition to the provisions of Section 14-526(a) as follows:*

The applicant offers the same building design that was recently approved at 6 Birch Lane within the same PRUD development site.

- a. Design relationship to site: The building placement is based on existing site conditions of the previously established PRUD. The building is setback from the White Birch Lane and Knight Street along an existing entry drive and is consistent with the other building placement nearby. The proposed new building is set apart from the rest of the development and the communal open space, however, the new dwelling is in close proximity that allows a fluid expansion to the PRUD.
- b. Internal design character and relationship to surrounding neighborhood: The proposed new 3-unit structure will be built utilizing the same architectural plans that were recently approved for 6 White Birch Lane dwelling that is in the same development. The applicant addressed all of the building design concerns by the City to achieve a design that is cohesive with existing development within the PRUD and the surrounding neighborhood by virtue of such features as architectural style, height, scale, massing, character of exterior facades, roof, circulation, and the transition of scale and massing with the surrounding neighborhood, as required.
- c. Recreation and open space:
 1. External buffers: The project development area will keep the existing mature vegetation and utilize fencing at the rear and abutting residential properties that are not part of the PRUD, as shown on the enclosed site plans.
 2. Internal buffers: Site improvements include fencing. The complex has an existing dumpster that will be utilized by the tenants.
 3. Passive recreational open space: There are existing passive recreational features available within the existing PRUD including open space and lawn seating area. Each unit is provided dedicated lawn area as shown on the site plans.
 4. Passive recreational open space: Not applicable.
 5. Private open spaces: Each unit will have a dedicated, private lawn area at the rear of the building as shown on the enclosed site plans.

37: Construction Management Plan

May 08, 2020

This document and its attachment comprise the Construction Management Plan (CMP) for the new 3-unit dwelling as part of Birch Meadow Apartments submitted to the City of Portland for Level III Site Plan review. The plan is submitted by Sebago Technics, Inc. on behalf of the applicant. The CMP plan contains information pertaining to the overall planning and coordination of the project.

A. Construction Management Principles

The impact of this project during construction will be minimized via the following management practices and principles:

- As shown on the attached graphic, the Construction Zone is largely on private property and will have minimal impact to the Public. We do not anticipate that the project will require traffic control. If needed, Traffic Control Measures (TCMs) will be developed, established and executed by the Sitework contractor and follow MUTCD guidelines and requirements.
- Onsite, the immediate area surrounding the work will be secured with a locked construction fence. Adequate signage will also be provided to ensure that the employees understand the parameters of the work site and are provided with safe access to and from their place of work. These measures will be coordinated directly with the Owner.
- All construction activities will be performed within the limits of the site fence to ensure the public is not exposed to any risks caused by construction activities. The existing vehicular access will be maintained and used for construction access. No changes to site access are proposed.
- All deliveries will be scheduled and coordinated to ensure there is minimal off-site queuing required.
- All construction activities will occur within standards and times within applicable sound ordinances.

B. Development Review of Construction Management Plan

A comprehensive management plan will remain in place for the duration of the construction timeline or until permanent/final measures are installed. These are depicted on the accompanying graphic. At no point will the public have access to the project site within the fenced limits.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

All fees, building permit fee and guarantees will be paid/issued prior to the commencement of construction. No blasting is anticipated for this project.

D. Construction Administration and Communication

The contact person for all construction activities for the project will be:

King Weinstein, Birchlane, LLC
(207) 934-7622
krekw1@aol.com

Signage will be posted onsite with additional emergency contact information for the selected superintendent that will be the site contractor for the project. An Emergency Call Log will be developed and distributed to the project team, including subcontractors.

E. Construction Schedule

The project is expected to commence immediately upon permit issuance, anticipating Summer/Fall 2020, and be completed no more than 3-6 months post commencement of work. All construction activities will adhere to the City of Portland Noise Ordinances and applicable timeframes. Deliveries for this project are anticipated to occur during normal recognized working hours (7AM-7PM).

F. Security and Public Safety

Please refer to the enclosed graphic for the site fencing/gates which will be utilized during the duration of the project. If required by the City, Knox Box Pad Locks will be installed fire and emergency access.

G. Construction Permitting and Traffic Control Plans

No temporary or semi-permanent barriers will encroach on Knight Street and no traffic controls are anticipated as part of this project. The project does include utilities that will require work within the public right-of-way.

H. Site Management and Controls

The site contractor will adopt the following management and maintenance activities through the duration of the project:

- Trash and debris will be contained within the project area and removed on a regular basis.
- Street cleaning will not be required on a regular basis but reviewed dialed and cleaned as required to remove dirt/debris caused by the construction efforts. A stabilized temporary construction entrance will be installed and maintained where the pavement ends at the existing gravel within the project site.
- Noise levels will be in compliance with City Ordinances.
- If needed, water will be used to control dust during the sitework activities. We do not anticipate any other activities that will require dust control measures.
- Onsite snow removal will be handled by the site contractor and deposited at designated storage areas on the site.

I. Erosion Control and Preservation of Trees

The contractor will comply with the approved erosion and sedimentation control plan.

J. Construction Staging Area

The attached graphic is the site logistics plan for the project.

K. Parking During Construction

On-site parking is expected to be utilized. The parking will be coordinated with the applicant and provision for the parking allowed in designated areas shown on the accompanying graphic.

L. Special Measures as Necessary

As it is understood currently, no special measures will be required.

See Construction Management Plan Graphic.

Google Groups

Fwd: Plan Number PL-001101-2020**Shukria Wiar** <shukriaw@portlandmaine.gov>

Aug 13, 2020 1:53 PM

Posted in group: **Planning and Urban Development**

Please add this as a public comment.

----- Forwarded message -----

From: **Michelle T Fitts** <mtfitts@su.suffolk.edu>

Date: Wed, Aug 12, 2020 at 10:39 AM

Subject: Re: Plan Number PL-001101-2020

To: Shukria Wiar <shukriaw@portlandmaine.gov>

OK understood

If it holds any merit my husband and I are advocating for this development for a number of reasons including the addition of new rental properties to a conveniently located and vibrant area of Portland. It is our understanding that the developer is becoming restless and may move on to other opportunities if we cannot get this moving forward. It would be unfortunate to see a good housing opportunity for our neighborhood and the city dissolve, as many other projects in our area have.

Please let us know if there is anything we can do to ensure that the project moves forward, and if not, we look forward to a follow up hopefully sometime soon

Thank you

From: Shukria Wiar <shukriaw@portlandmaine.gov>**Sent:** Wednesday, August 12, 2020 7:05 AM**To:** Michelle T Fitts <mtfitts@su.suffolk.edu>**Cc:** planningboard@portmaine.gov <planningboard@portmaine.gov>**Subject:** Re: Plan Number PL-001101-2020

Good Morning,

Thank you for your email. The development at 12 White Birch Lane is in review with City staff. once the review is complete, it will need a workshop and public hearing with the Planning Board. At this time, and due to COVID-19, we are scheduling projects that were in the queue prior to the submission date of this project. Once we have this on a tentative schedule, I will email you. This may be in the next couple of months.

Thank you for your patience.

Shukria

On Wed, Aug 12, 2020 at 9:50 AM Michelle T Fitts <mtfitts@su.suffolk.edu> wrote:

To Whom This May Concern,

We are the owners of 52 Maplewood Street Portland, Maine. We have a signed P&S with KRE Real Estate to sell our back lot. We signed this P&S about a year ago, but I understand King submitted the plan at the end of April 2020. With that said, we are really hoping to get some sort of update as to where the Plan stands with the City of Portland. We understand these things take awhile but it has just felt really long on our end since we signed the P&S about a year ago. As homeowners we are just hoping to get everything finalized so that we can move forward with our own property. We hope to hear back and we appreciate your time.

Sincerely,
Michelle & Evan Glassman
603-275-5697

--

Shukria Wiar, Planner
Planning & Urban Development Department
389 Congress Street 4th Floor
Portland, ME 04101
Phone 207.756.8083
Fax 207.756.8258
<http://www.portlandmaine.gov/planning>

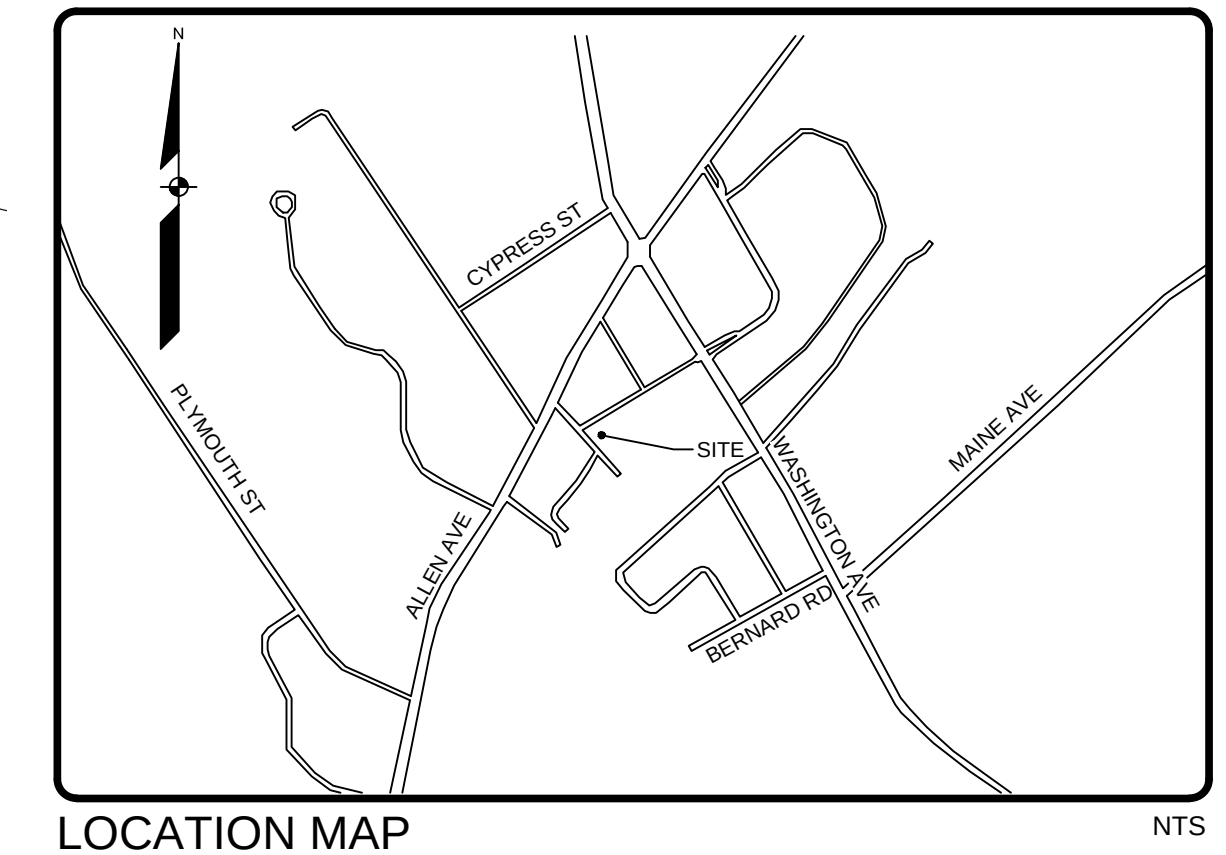
Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--

Shukria Wiar, Planner
Planning & Urban Development Department
389 Congress Street 4th Floor
Portland, ME 04101
Phone 207.756.8083
Fax 207.756.8258
<http://www.portlandmaine.gov/planning>

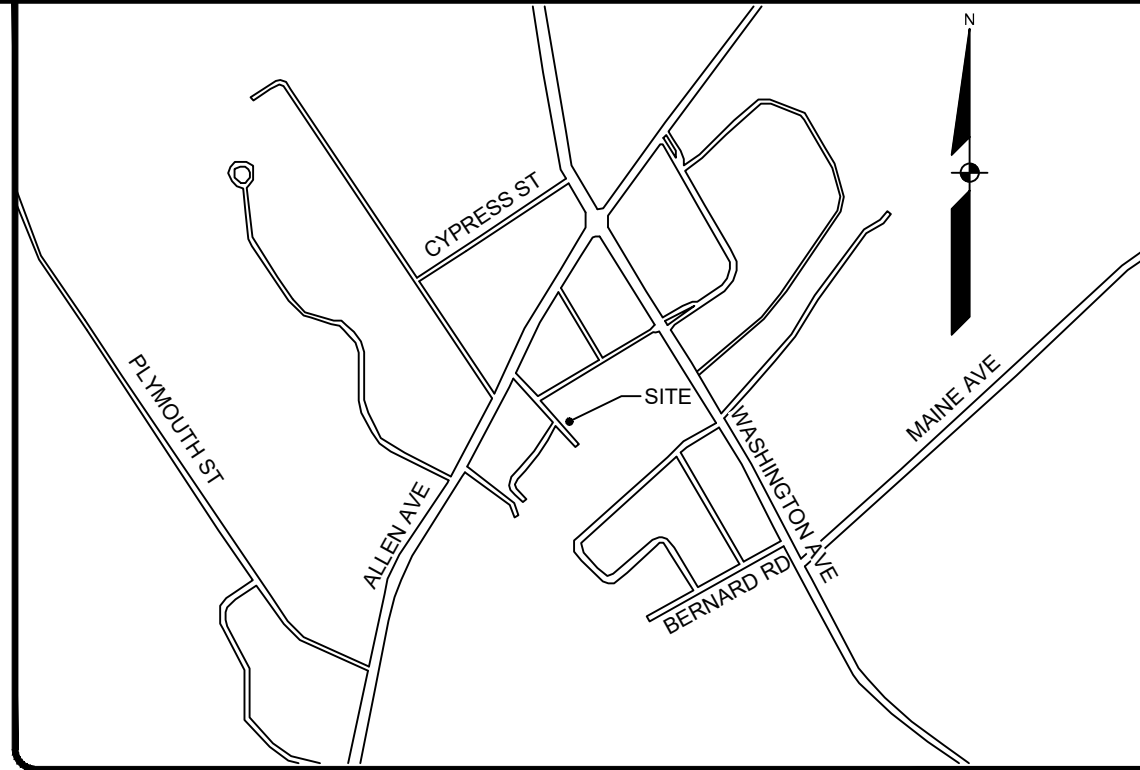
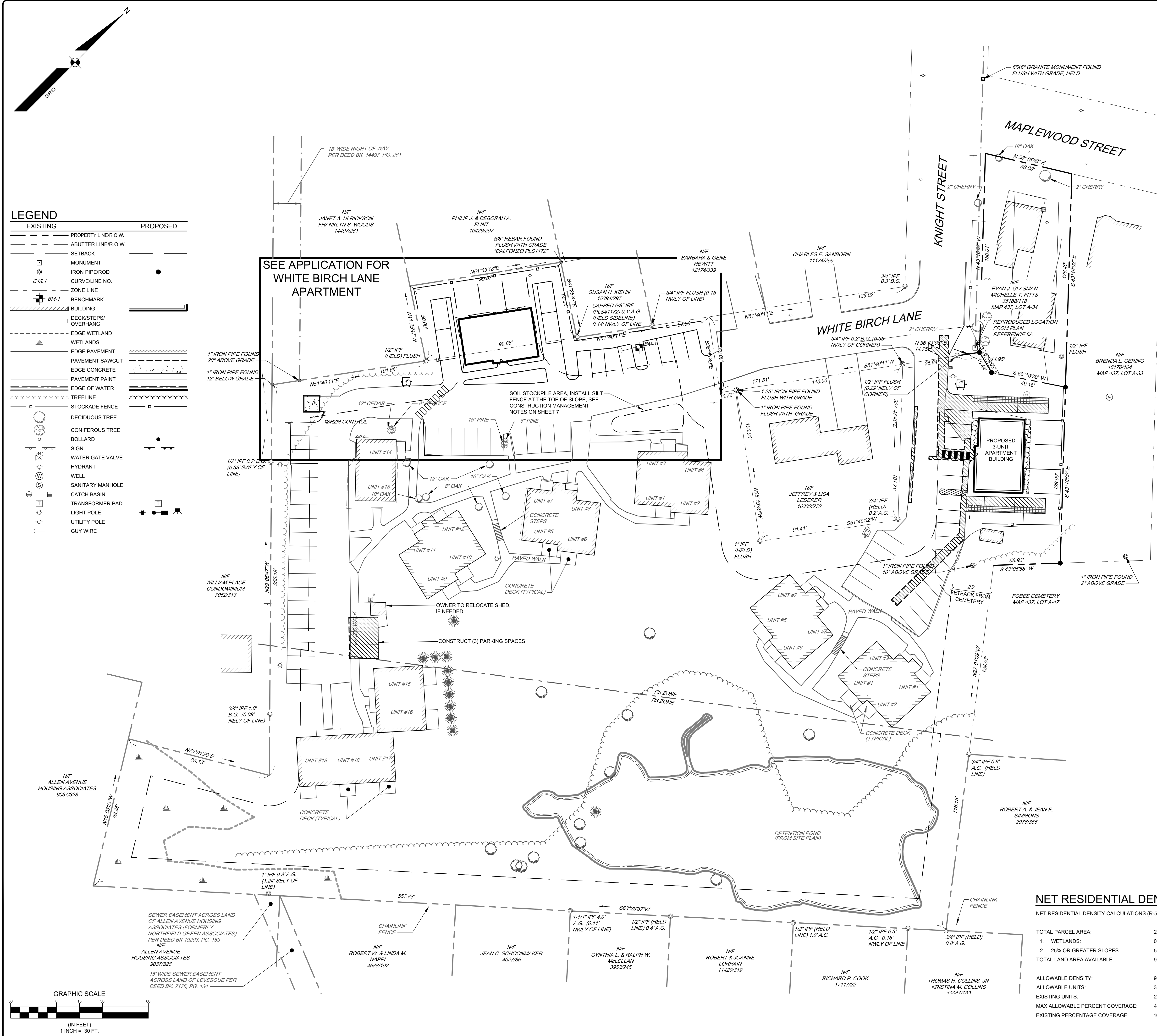
NOT FOR
CONSTRUCTION

STATE OF MAINE
CRAIG A. BURGESS
No. 0638
JAN 16 2020
MAINE
PROFESSIONAL
05/04/2020



DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 40'
PROJECT	18519-01

18519-01 C.dwg, TAB:24x36



LOCATION MAP N.T.S.

GENERAL NOTES:

- THE RECORD OWNER OF THE PARCEL IS EVAN J. GLASSMAN AND MICHELLE T. FITTS BY THE FOLLOWING DEEDS RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD):
DATED JUNE 25, 2018 IN BOOK 35188, PAGE 118.
DATED JUNE 25, 2018 IN BOOK 35188, PAGE 116.
DATED JUNE 25, 2018 IN BOOK 35188, PAGE 114.
DATED JANUARY 8, 2018 IN BOOK 34591, PAGE 61.
- THE PROPERTY IS SHOWN AS LOTS A-34 AND A-35 ON THE CITY OF PORTLAND TAX MAP 437 AND IS LOCATED IN THE R5 RESIDENTIAL DISTRICT.
- SPACE AND BULK CRITERIA FOR THE R5 RESIDENTIAL DISTRICT ARE AS FOLLOWS:
NET RESIDENTIAL DENSITY: 6,000 SQ FT PER UNIT
MINIMUM LOT SIZE: 6,000 SQ FT
MINIMUM STREET FRONTAGE: 50 FT
MINIMUM FRONT YARD: 20 FT
MINIMUM SIDE YARD: 8-14 FT (DEPENDENT ON STORIES)
MINIMUM REAR YARD: 20 FT
MAXIMUM BUILDING HEIGHT: 35 FT
MAXIMUM LOT COVERAGE: 40%
* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.
- TOTAL AREA OF PARCEL IS APPROXIMATELY 15,109 SQUARE FEET. THE PROPOSED LOT CONSISTS OF APPROXIMATELY 7,172 SQUARE FEET.
- BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHINCS, INC. IN DECEMBER AND JANUARY OF 2020. THE BASIS OF THIS BOUNDARY SURVEY IS PLAN REFERENCE 6A AND ELECTRONIC FILES PROVIDED BY THE CLIENT.
- PLAN REFERENCES:
A. "EXISTING CONDITIONS PLAN, LAND OF BIRCHLANE, L.L.C. WHITE BIRCH LANE, PORTLAND, MAINE 04103" DATED MAY 2008 BY BH2M.
B. "PLAN OF MAPLEWOOD PARK, NORTH DEERING BELONGING TO MESSRS WELLS, LITTLEFIELD AND WENTWORTH" DATED APRIL 1896 BY FRED H. KNIGHT, AND RECORDED AT THE CCRD IN PLAN BOOK 8, PAGE 115.
C. "KNIGHT TERRACE PORTLAND, MAINE PLAN FOR FREDERICK H. KNIGHT" DATED OCTOBER 1956 AND RECORDED AT THE CCRD IN PLAN BOOK 46, PAGE 8.
D. "PLAN OF PROPERTY IN PORTLAND MAINE FOR FRANK CAVALLARO" DATED JULY, 1979 BY A.W. HUME AND RECORDED AT THE CCRD IN PLAN BOOK 124, PAGE 7.
E. "BIRCH MEADOW APARTMENTS, A PLANNED UNIT RESIDENTIAL DEVELOPMENT, WHITE BIRCH LANE, PORTLAND, MAINE" DATED FEBRUARY 26, 1985 BY ROBERT N. FARTHING AND RECORDED AT THE CCRD IN PLAN BOOK 156, PAGE 35.
- PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83. ELEVATIONS DEPICTED HEREON ARE NAVD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS CONVERTED UTILIZING VERTCON FROM NOAA. THE VERTICAL SHIFT FROM NAVD83 TO NGVD 29 IN THIS AREA IS +0.69 FEET.
- UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 38-02. 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 WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
- 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 230051-0007C, HAVING AN EFFECTIVE DATE OF DECEMBER 8, 1998. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE X, AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD-PLAIN.
- THERE IS A 25 FOOT NO DISTURB BUFFER SURROUNDING FOBES CEMETERY PER MAINE REVISED STATUTE TITLE 13, §1371-A.
- THE PROPOSED DEVELOPMENT WILL BE SERVED BY PUBLIC WATER, PUBLIC SEWER, GAS AND UNDERGROUND ELECTRIC AND TELECOMMUNICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT TO BE REMOVED.
- ALL EXISTING CATCH BASINS, MANHOLES, CONNECTIONS, CONDUIT AND PIPING SHALL BE CLEANED AND LEFT IN SATISFACTORY OPERATING CONDITION AFTER CONSTRUCTION HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
- ALL LAWN AREAS, WALKWAYS, AND DRIVEWAYS OUTSIDE THE WORK AREA, DAMAGED BY THE CONTRACTOR, SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE.
- EXISTING PAVEMENT SHALL BE SAW CUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.
- EXISTING DRAINAGE STRUCTURES SHALL NOT BE DISTURBED UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED BY THE ENGINEER.
- THE CONTRACTOR IS REQUIRED TO PROVIDE A SECURE PROJECT AREA. ALL PIPE TRENCH EXCAVATIONS SHALL BE BACKFILLED AND "CLOSED" DURING CONTRACTOR NON-WORKING HOURS INCLUDING NIGHTS, HOLIDAYS AND WEEKENDS. THE CONTRACTOR MAY REQUEST IN WRITING TO THE ENGINEER AND OWNER TO SECURE OPEN EXCAVATION IN LIEU OF BACKFILLED AND "CLOSED". NOT ALLOWING A SECURE OPEN EXCAVATION SHALL NOT BE A BASIS FOR CLAIMS AGAINST THE OWNER.
- CONTRACTOR SHALL COMPLETE WORK SPECIFIED ON EACH PLAN AND SHALL COORDINATE WORK WITH ENTIRE PROJECT PLAN SET.
- PARKING CALCULATION: SECTION 14-332 OF THE CITY OF PORTLAND CITY ORDINANCE, 2 PARKING SPACES FOR EACH DWELLING UNIT IS REQUIRED.
SPACES ADDED: 7 SPACES TOTAL EXISTING SPACES IN PRUD: 59 SPACES
SPACES REMOVED: 0 SPACES
SPACES REQUIRED: 6 SPACES TOTAL NEW SPACES IN PRUD: 66 SPACES
- IMPERVIOUS CALCULATIONS:
NEW IMPERVIOUS: 3,845 S.F.
REMOVED IMPERVIOUS: 1,539 S.F.
NET CHANGE: 2,306 S.F. TOTAL NEW IMPERVIOUS SINCE 2005: 6,117 S.F.

NET RESIDENTIAL DENSITY CALCULATIONS

NET RESIDENTIAL DENSITY CALCULATIONS (R-5 ZONE)		NET RESIDENTIAL DENSITY CALCULATIONS (R-3 ZONE)	
TOTAL PARCEL AREA:	2.36 ACRES (102,588 S.F.)	TOTAL PARCEL AREA:	1.71 ACRES (74,663 S.F.)
1. WETLANDS:	0	1. WETLANDS:	6,923 S.F.
2. 25% OR GREATER SLOPES:	5,623 S.F.	2. 25% OR GREATER SLOPES:	1,390 S.F.
TOTAL LAND AREA AVAILABLE:	96,965 S.F.	TOTAL LAND AREA AVAILABLE:	47,569 S.F.
ALLOWABLE DENSITY:	96,965 / 3,000 S.F. = 32.32	ALLOWABLE DENSITY:	47,569 / 6,500 S.F. = 7.32
ALLOWABLE UNITS:	32 UNITS	ALLOWABLE UNITS:	7 UNITS
EXISTING UNITS:	25 UNITS (3 APPROVED)	EXISTING UNITS:	5 UNITS
MAX ALLOWABLE PERCENT COVERAGE:	40%	MAX ALLOWABLE PERCENT COVERAGE:	35%
EXISTING PERCENTAGE COVERAGE:	10.54%	EXISTING PERCENTAGE COVERAGE:	4.55%

NOT FOR CONSTRUCTION

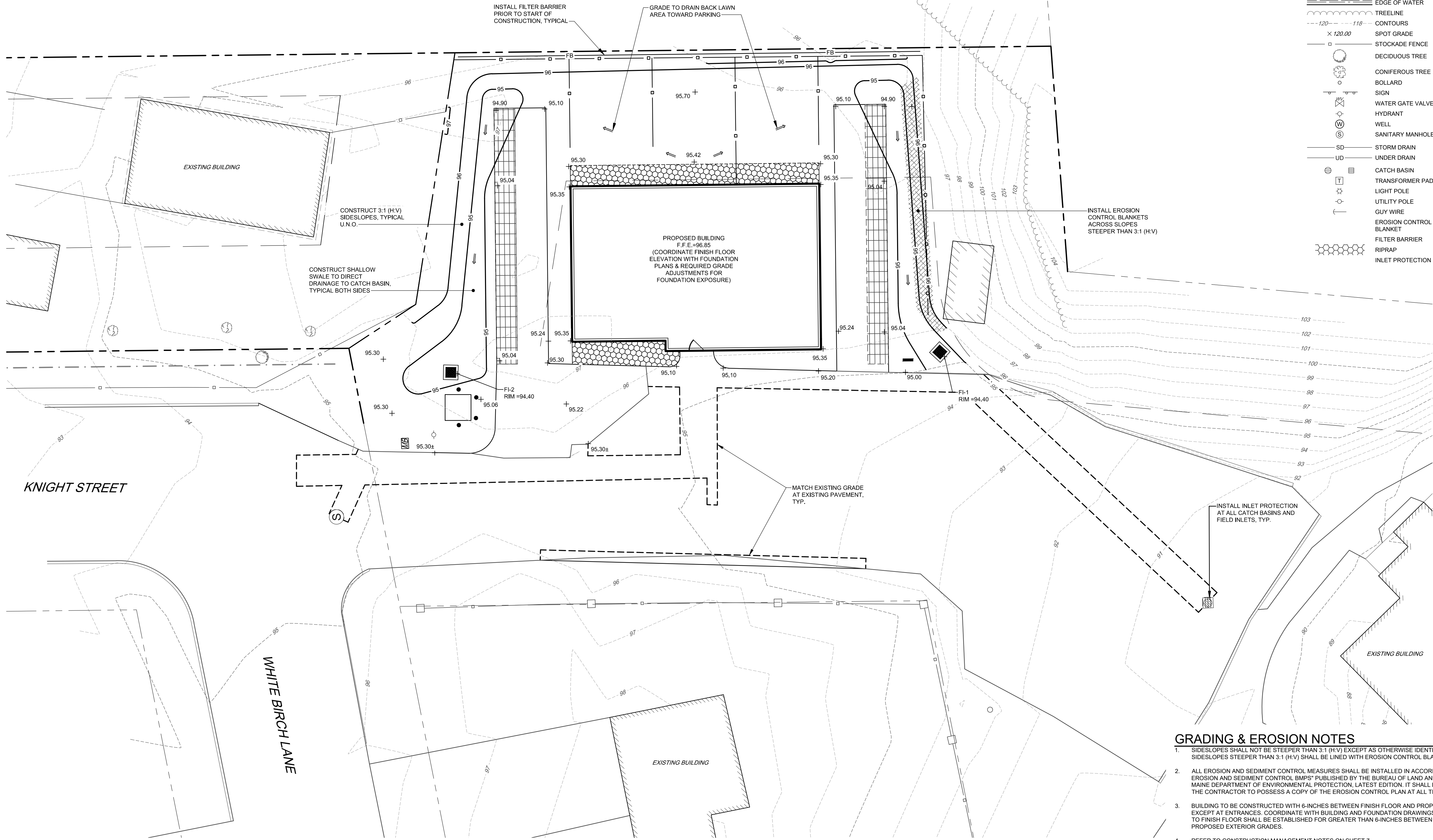
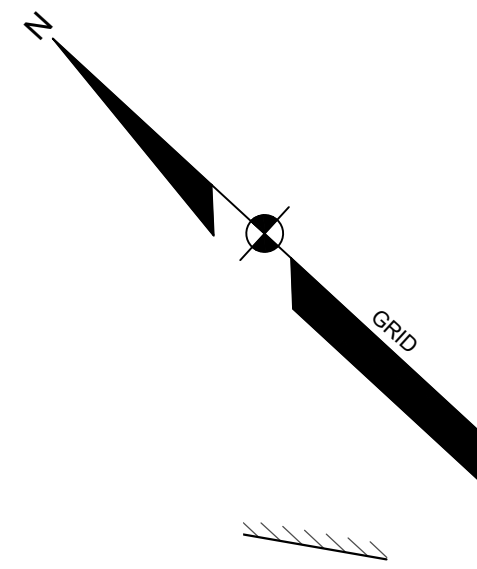


DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 30'
PROJECT	18519-01

SEBAGO TECHINCS
75 John Burdette Rd.
Sullivan, MA 01460
South Portland, ME 04106
Tel. 207-200-2100
WWW.SEBAGOTECHINCS.COM

OVERALL SITE PLAN
OF:
BIRCHLANE 3- UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

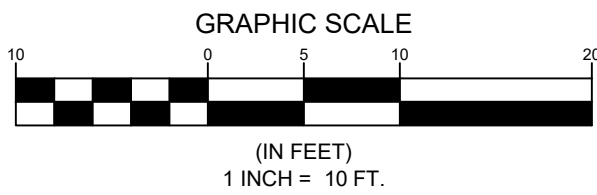
DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 30'
PROJECT	18519-01



LEGEND	
EXISTING	PROPOSED
—	PROPERTY LINE/R.O.W.
---	ABUTTER LINE/R.O.W.
---	SETBACK
□	MONUMENT
○	IRON PIPE/ROD
---	ZONE LINE
BM-1	BENCHMARK
---	BUILDING
---	DECK/STEPS/ OVERHANG
---	EDGE WETLAND
---	WETLANDS
---	EDGE PAVEMENT
---	PAVEMENT SAWCUT
---	EDGE CONCRETE
---	EDGE OF WATER
---	TREELINE
120 118	CONTOURS
X 120.00	SPOT GRADE
□	STOCKADE FENCE
○	DECIDUOUS TREE
○	CONIFEROUS TREE
○	BOLLARD
○	SIGN
○	WATER GATE VALVE
○	HYDRANT
○	WELL
○	SANITARY MANHOLE
SD	STORM DRAIN
UD	UNDER DRAIN
○	CATCH BASIN
○	TRANSFORMER PAD
○	LIGHT POLE
○	UTILITY POLE
○	GUY WIRE
---	EROSION CONTROL BLANKET
---	FILTER BARRIER
---	RIPRAP
---	INLET PROTECTION

GRADING & EROSION NOTES

- SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H:V) SHALL BE LINED WITH EROSION CONTROL BLANKET.
- 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.
- BUILDING TO BE CONSTRUCTED WITH 6-INCHES BETWEEN FINISH FLOOR AND PROPOSED EXTERIOR GRADES EXCEPT AT ENTRANCES. COORDINATE WITH BUILDING AND FOUNDATION DRAWINGS. PRIOR TO CONSTRUCTION TO FINISH FLOOR SHALL BE ESTABLISHED FOR GREATER THAN 6-INCHES BETWEEN FINISH FLOOR AND PROPOSED EXTERIOR GRADES.
- REFER TO CONSTRUCTION MANAGEMENT NOTES ON SHEET 7.



NOT FOR
CONSTRUCTION



ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION	
REV. A	DATE: 05-04-2020
BY: CAB	STATUS: DATE:
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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Tel. 207-200-2100

GRADING PLAN
OF:
BIRCHLANE 3- UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
188 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 10'
PROJECT	18519-01

SHEET 4 OF 9

CONSTRUCTION MANAGEMENT PRINCIPLES: THE FOLLOWING PLAN PROVIDES AN OVERVIEW OF THE CONSTRUCTION MANAGEMENT PRINCIPLES THAT THE PORTLAND PUBLIC WORKS DEPARTMENT HAS IDENTIFIED TO MINIMIZE IMPACTS FROM THE CONSTRUCTION, SUCH AS NOISE, VIBRATIONS, GROUND MOVEMENT, TRUCK TRAFFIC, AND OTHER CONSTRUCTION RELATED FACTORS TO THE SURROUNDING BUILDING AND COMMUNITIES. THE FOLLOWING DETAILS DEFINE THE INTENDED APPROACH TO THE SUCCESSFUL MANAGEMENT OF THE PROJECT CONSTRUCTION AND THE CONSTRUCTION MANAGEMENT PLAN WILL ADDRESS THE GENERAL CONDITIONS CONTAINED BELOW.

2. **PERFORMANCE GUARANTEES, INSPECTION FEES, PRECONSTRUCTION MEETING, AND PERMITS:** PRIOR TO SCHEDULING A PRECONSTRUCTION MEETING AND THE ISSUANCE OF ANY CITY REQUIRED PERMITS, PORTLAND PUBLIC WORKS DEPARTMENT 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.

3. **OTHER PERMITS, AS APPLICABLE, INCLUDE:**

- A. 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.
- B. 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.

4. **CONSTRUCTION ADMINISTRATION AND COMMUNICATION:** THE PORTLAND PUBLIC WORKS DEPARTMENT 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 BUILDERS, BUSINESSES AND ALL PARTIES INVOLVED AS FAR AS POSSIBLE TO PREVENT OR MINIMIZE ANY UNDESIRABLE CONSTRUCTION WORK PARTICULARLY WORK ANTICIPATED TO CAUSE SIGNIFICANT NOISE, VIBRATIONS, OR DUST. THE FINAL CONSTRUCTION MANAGEMENT PLAN SHALL PROVIDE FOR THE FOLLOWING:

- A. CONTACT PERSON AND CONTACT INFORMATION FOR KING REAL ESTATE AND WHO IS AVAILABLE 24 HOURS.
- B. CONSTRUCTION SIGNAGE POSTED ON THE SITE WITH CONTACT INFORMATION FOR CONTRACTOR
- C. DESCRIBE ANY ADDITIONAL COMMUNICATION STRATEGIES
- D. ALL CONSTRUCTION SITE SIGNAGE IS TEMPORARY AND SHALL BE REMOVED AT PROJECT COMPLETION.

5. **CONSTRUCTION SCHEDULE:**

CONSTRUCTION SITE IMPROVEMENTS WILL MOST LIKELY BEGIN IN FALL 2020, DEPENDING UPON FINAL PROJECT APPROVAL.

- A. HOURS OF CONSTRUCTION: CONSTRUCTION WILL OCCUR DURING THE DAYTIME HOURS AS DEFINED IN SECTION 17-18, CONSTRUCTION ACTIVITIES FOR BUILDING PERMIT AND SECTION 25-129, NOISE, DUST AND DEBRIS (ATTACHMENT 2).
- B. 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 DEFERRED 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."
- C. MATERIAL DELIVERIES: SCHEDULE AND DESIGNATED LOCATION FOR DELIVERY OF MATERIALS AND BOXED GOODS.

6. **SECURITY AND PUBLIC SAFETY:**

- A. THE CONSTRUCTION MANAGEMENT PLAN DEPICTS ALL PROPOSED FENCING OR OTHER BARRIERS AND ACCESS GATES WITH THE INTENT OF SEPARATING PEDESTRIAN AND VEHICLE CIRCULATION FROM THE CONSTRUCTION SITE.
- B. STRUCTURES OR EQUIPMENT UNDER CONSTRUCTION, ALTERATION, OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA CHAPTER 16, SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS.
- C. FIRE SAFETY PROGRAM: AN OVERALL CONSTRUCTION OF DEMOLITION FIRE SAFETY PROGRAM SHALL BE DEVELOPED PRIOR TO CONSTRUCTION. ESSENTIAL ITEMS TO BE EMPHASIZED INCLUDE THE FOLLOWING:
 - a. GOOD HOUSEKEEPING
 - b. ON-SITE SECURITY
 - c. INSTALLATION OF NEW FIRE PROTECTION SYSTEMS AS CONSTRUCTION PROGRESSES
 - d. PRESERVATION OF EXISTING SYSTEMS DURING DEMOLITION
 - e. ORGANIZATION AND TRAINING OF AN ON-SITE FIRE BRIGADE
 - f. DEVELOPMENT OF A PRE-FIRE PLAN WITH THE LOCAL FIRE DEPARTMENT
 - g. RAPID COMMUNICATION
 - h. CONSIDERATION OF SPECIAL HAZARDS RESULTING FROM PREVIOUS OCCUPANCIES
 - i. PROTECTION OF EXISTING STRUCTURES AND EQUIPMENT FROM EXPOSURE FIRES RESULTING FROM CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS
- D. 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.
- E. ANY PROPOSED TEMPORARY SECURITY LIGHTING SHALL BE SHOWN ON CMP AND ALL FIXTURES SHALL BE FULL CUTOFFS.

7. **CONSTRUCTION PERMITTING AND TRAFFIC CONTROL PLANS:**

- A. **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 CONSTRUCTION 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.
- B. **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 AND REGIFICATIONS 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.

8. **TRAFFIC CONTROL PLANS:** CONSTRUCTION ACTIVITY THAT IMPACTS THE EXISTING PUBLIC STREET SYSTEM MUST BE CONTROLLED TO PROTECT THE SAFETY OF THE CONSTRUCTION WORKERS AND ALL MODES OF THE TRAVELING PUBLIC. PROJECTS THAT WILL OCCUR ALONG ARTERIAL AND OR COLLECTOR STREETS ARE REQUIRED TO SUBMIT A SATISFACTORY MAINTENANCE OF TRAFFIC (MOT) PLAN PRIOR TO ANY SITE PLAN, SUBDIVISION, OR STREET OPENING PERMIT APPROVAL. MOT PLANS MAY BE PREPARED AND COORDINATED WITH OTHER ON-GOING OR FUTURE CONSTRUCTION OR UTILITY PROJECTS IN THE VICINITY.

MAINTENANCE OF TRAFFIC (NOT) 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 STREET AND/OR DETOUR A MODE OF TRAFFIC WHEN ABSOLUTELY NECESSARY FOR SAFETY. MOT PLANS SHALL EMPLOY THE APPROPRIATE TECHNIQUES AND DEVICES

AS CALLED FOR IN THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), IN ADDITION:

- A. CONSTRUCTION STOP SIGNING MAY BE USED AS NEEDED TO SLOW TRAFFIC
- B. TRAFFIC CONTROL SIGNS SHALL NOT BE PLACED WHERE THEY ARE AN OBSTRUCTION TO BICYCLES OR PEDESTRIANS.
- C. IN EXTREME SITUATIONS, FLAGGERS MAY BE REQUIRED.
- D. POLICE DETAIL IS REQUIRED AT LIGHTED INTERSECTIONS AND MAY BE REQUESTED BY THE CITY'S TRANSPORTATION ENGINEER OR HIS DESIGNEE.

ALL EXISTING MODES OF TRAVEL IN WORK ZONE AREA SHALL BE ACCOMMODATED IF IMPACTED BY THE ACTIVITY. THE SAFE PASSAGE OF PEDESTRIANS, BICYCLISTS, TRANSIT PROVIDERS, AND MOTORISTS ARE OF EQUAL IMPORTANCE WHEN PLANNING OUT THE WORK ZONE; NO PRE-EXISTING TRAVEL MODE MAY BE ELIMINATED WITHOUT THE EXPRESS APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS. THE MOT SHOULD ALSO ADDRESS ON-STREET PARKING IMPACTS, INCLUDING DELIVERIES AND PARKING FOR ADJOINING BUSINESSES AND PROPERTY OWNERS, ANALYSIS OF ROADWAY CAPACITY OR DIVERSION CAPACITY IF STREET CLOSURE OR CHANGE TO ROADWAY CAPACITY IS REQUIRED, AND COORDINATION WITH OTHER ON-GOING OR FUTURE CONSTRUCTION OR UTILITY PROJECTS IN THE VICINITY.

- A. 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.
- B. 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.
- C. 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.

9. **SITE MANAGEMENT AND CONTROLS:** THE FINAL CONSTRUCTION MANAGEMENT PLAN WILL ADDRESS MAINTAINING THE SITE IN A SAFE CONDITION AND WILL INCLUDE THE FOLLOWING:

- A. REGULAR TRASH AND DEBRIS REMOVAL
- B. STREET CLEANING AND DAMAGE CONTROLS
- C. DUST CONTROLS- THE CONSTRUCTION SHALL COMPLY WITH PORTLAND'S REQUIREMENTS UNDER SECTION 25-129 ON NOISE, DUST AND DEBRIS (ATTACHMENT 2)
- D. 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).
- E. RODENT CONTROL WILL BE PROVIDED, IF APPLICABLE, BY A PROFESSIONAL EXTERMINATOR AND CONSISTENT WITH CHAPTER 22 OF THE CITY CODE.
- F. SNOW REMOVAL: PURSUANT TO SECTION 25-173 CONTRACTORS TO ENSURE A SAFE MEANS OF TRAVEL WITHIN THE WORK ZONE.
 - 1) SNOW/ICE REMOVAL OR COMMENCE AUTOMATICALLY FROM (1" OF SNOW AND UP) OR ICE
 - 2) REMOVE SNOW AS NEEDED WITHIN THE WORK ZONE, INCLUDING PARKING SPACES & NOT TO BLOCK ANY DRIVEWAYS OR SITE LINES WITH THE PILES OF SNOW.
 - 3) CLEAR ALL WALKS & RAMPS WITH THE WORK ZONE
 - 4) SAND OR SALT AS NEEDED
 - 5) CLEAR ALL BASIN OR DRAINAGE TO HELP SNOW MELT
 - 6) THIS WOULD INCLUDE MONDAY-FRIDAY SAT/SUNDAY/HOLIDAYS

10. **EROSION CONTROL AND PRESERVATION OF TREES:**

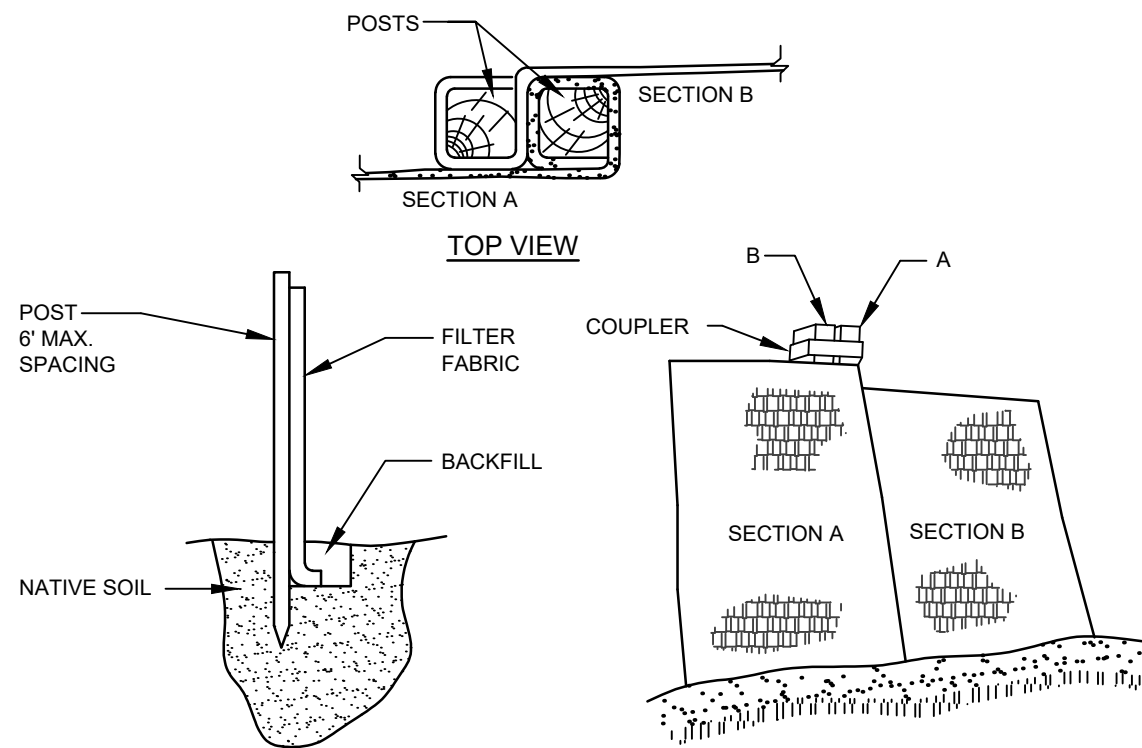
- A. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROLS AS DEPICTED ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION FOR INSPECTION BY THE CITY. THE CONTRACTOR SHALL REGULARLY INSPECT THE CONTROL MEASURES, NO LESS THAN WEEKLY AND AFTER SIGNIFICANT 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.
- B. THE CONTRACTOR SHALL MAINTAIN ALL TREE AND LANDSCAPING PRESERVATION MEASURES AS DEPICTED ON THE LANDSCAPING PLAN WITHIN THE AREA OF CONSTRUCTION.
- C. THE STORAGE OF MATERIALS SHALL BE IDENTIFIED AND AVOID BEING LOCATED UNDER/NEAR TREES.

11. **CONSTRUCTION STAGING AREA**

- A. THE CONSTRUCTION MANAGEMENT PLAN SHOWS THE LOCATION OF THE MATERIAL STAGING AREAS, THE LOCATION OF ONSITE TEMPORARY CONSTRUCTION TRAILERS, THE LOCATION OF 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 AREAS SHALL BE SHOWN ON THE PLAN.
- B. 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 WILL BE BROUGHT WITHIN THE FENCE LINE AND WILL MAKE EVERY ATTEMPT TO AVOID QUEUING ON PUBLIC STREETS.
- C. DELIVERY TRUCK HOLDING AREAS OFF-SITE: IN THE EVENT THAT ADEQUATE ON-SITE AREA FOR HOLDING OF TRUCKS IS NOT AVAILABLE, AN OFF-SITE UNPAVING AREA WILL BE UTILIZED FOR TRUCKING. THE DESIGNATED OFF-SITE LOCATION WILL BE IDENTIFIED IN THE CONSTRUCTION MANAGEMENT PLAN.

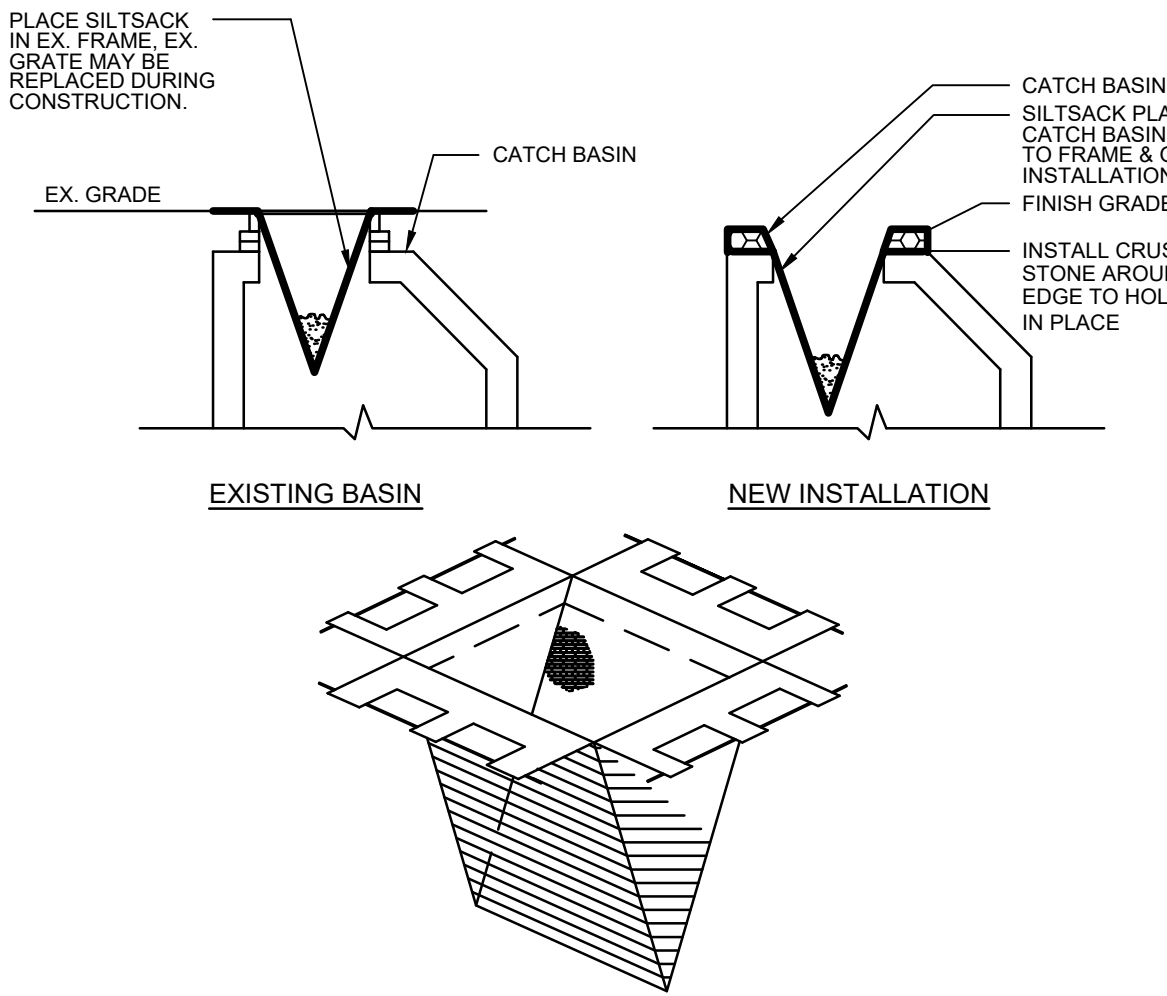
13. **SPECIAL MEASURES AS NECESSARY:** FOR CONSTRUCTION WORK THAT WILL TAKE PLACE OVER A LONG PERIOD (E.G. 12 MONTHS OR MORE), INVOLVE MAJOR DEMOLITION / DEEP EXCAVATION/ PILING AND/OR SPECIAL CONSTRUCTION TECHNIQUES, OR ARE LOCATED NEAR SENSITIVE USES (E.G. MEDICAL CARE FACILITIES, SCHOOLS), THE CONSTRUCTION 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 AIRBORNE PHOTOGRAPHY TO REVEAL THE FOUNDATIONS OF NEARBY PROPERTIES UPON CONSENT OF THE OWNERS, IN ORDER TO ASSESS ANY FUTURE IMPACTS OF VIBRATION, NOISE, ETC.

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
2. THE 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 USE PUBLIC WORKS SYSTEMS.
12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRS.A 336-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. MATCH EXISTING PAINT COLOR.
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 AN 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 MANUAL 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 CUTSFILLS, 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 WORKSMANSHIP 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 THE OWNER.
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 PLAN REFERENCE A AND AVAILABLE GIS DATA. 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 DATA 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.

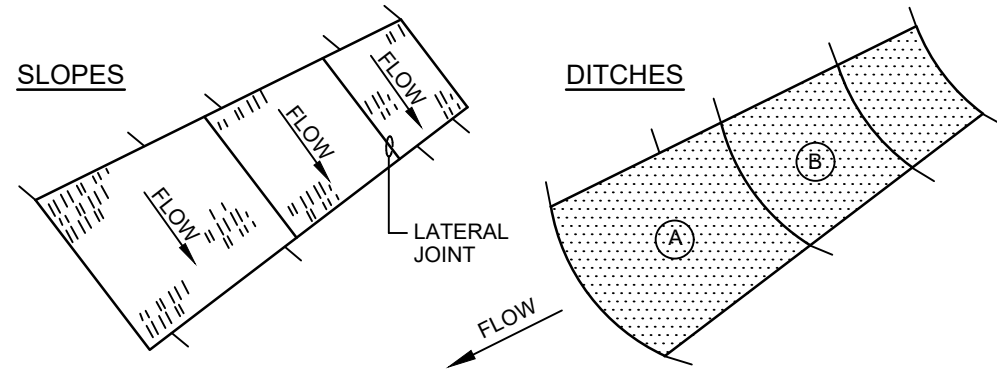


1. EXCAVATE A 6'x 6' TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACHIEVED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMING FLIP AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION TO SECTION ABOVE.
6. BARRIER SHALL BE MIRAFI SILT FENCE OR EQUAL.

NOT TO SCALE

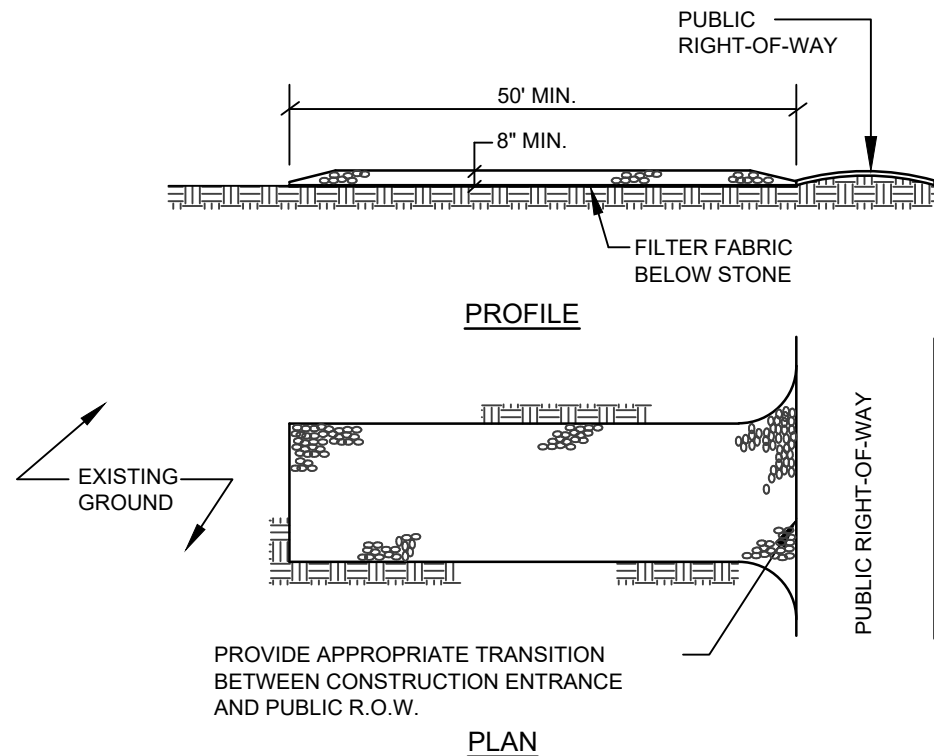


NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG II) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.



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 8 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.

NOT TO SCALE



1. STONE SIZE: AASHTO DESIGNATION M43, SIZE NO. 2 1/2 (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 ADDITION STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

NOT TO SCALE

STATE OF MAINE
CRAIG A. BURGESS
NO. 06638
CRAIG BURGESS
PROFESSIONAL ENGINEER
05/04/2020

REV:	BY:	DATE:	STATUS:
A	CAB	05-04-2020	ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION
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.SEBOGOTECHNICS.COM

75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

CONSTRUCTION NOTES & DETAILS
OF:
BIRCHLANE 3- UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	N.T.S.
PROJECT	18519-01

SHEET 7 OF 9

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% AND AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).

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 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 DOWNGRADEMENT 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 SWALES 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 THAN 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 THAN 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 MANUFACTURER'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 SWEEP OR WASHED TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS. 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 MEASURES 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 SWEEP 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. SEEDED 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:

SEEDED 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 CONSTRUCTION SCHEDULE. 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 (60% 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 SEEDED 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)
REEDTOP 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.

SEEDING:

FOLLOWING SEEDED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DRAIN 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.

- 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). IF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 3(D) OF THIS STANDARD.
- 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.
- 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.
- 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.

- 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). IF THIS STANDARD.
- STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 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.

- MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, 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.
- 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 80% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSEKEEPING:

- 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, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.
- 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.
- 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 SWEEP 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.
- DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
- EXCAVATION DE-WATERING: EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY 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.
- AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES, WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST. THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
 - DISCHARGES FROM FIRE-FIGHTING ACTIVITY;
 - FIRE HYDRANT FLUSHINGS;
 - VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
 - DUST CONTROL, RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND ITEM 3 OF THIS SECTION;
 - ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
 - PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED IF DETERGENTS ARE NOT USED);
 - UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
 - UNCONTAMINATED GROUNDWATER OR SPRING WATER;
 - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
 - UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN ITEM 5 OF THIS SECTION);
 - POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
 - LANDSCAPE IRRIGATION.

UNAUTHORIZED NON-STORMWATER DISCHARGES: THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH ITEM 6 OF THIS SECTION. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

- WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORMAL RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
- FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
- TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

WINTER EROSION CONTROL MEASURES

THE WINTER CONSTRUCTION PERIOD IS FROM OCTOBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREAS SHALL BE CONSIDERED TO BE DENUEDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS/1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. THE CONTRACTOR 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.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE/EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA.

PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOOD WASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENUEDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1,000 SQUARE FEET (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF SEPTEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS./1,000 S.F. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 5%. EROSION CONTROL BLANKETS SHALL BE USED WHERE SLOPES SHALL BE ANCHORED WITHIN ALL DRAINAGE WAYS WITH SLOPES 8%. EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA IS A BERMS, FINAL GRADED WITH PLASTIC CHANGFACE. THEN THE AREA MAY BE TEMPORARILY SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 48.8/1000 S.F.. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS SUFFICIENTLY VEGETATED (LESS THAN 70% 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. SEED TYPE SHALL BE WINTER RYE.

7. INSPECTION AND MONITORING

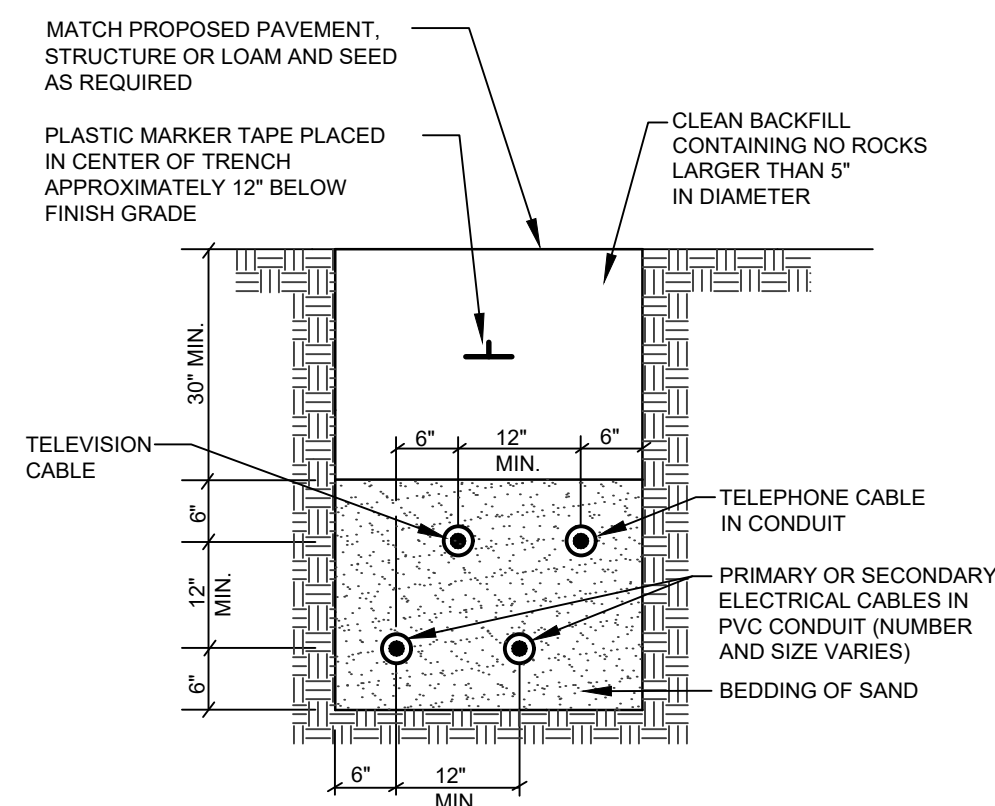
MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AT A MINIMUM, AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

NOTE:
TRANSFORMER PAD AND COVER
TO BE FIBERGLASS MEETING CENTRAL
MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL

NOT TO SCALE

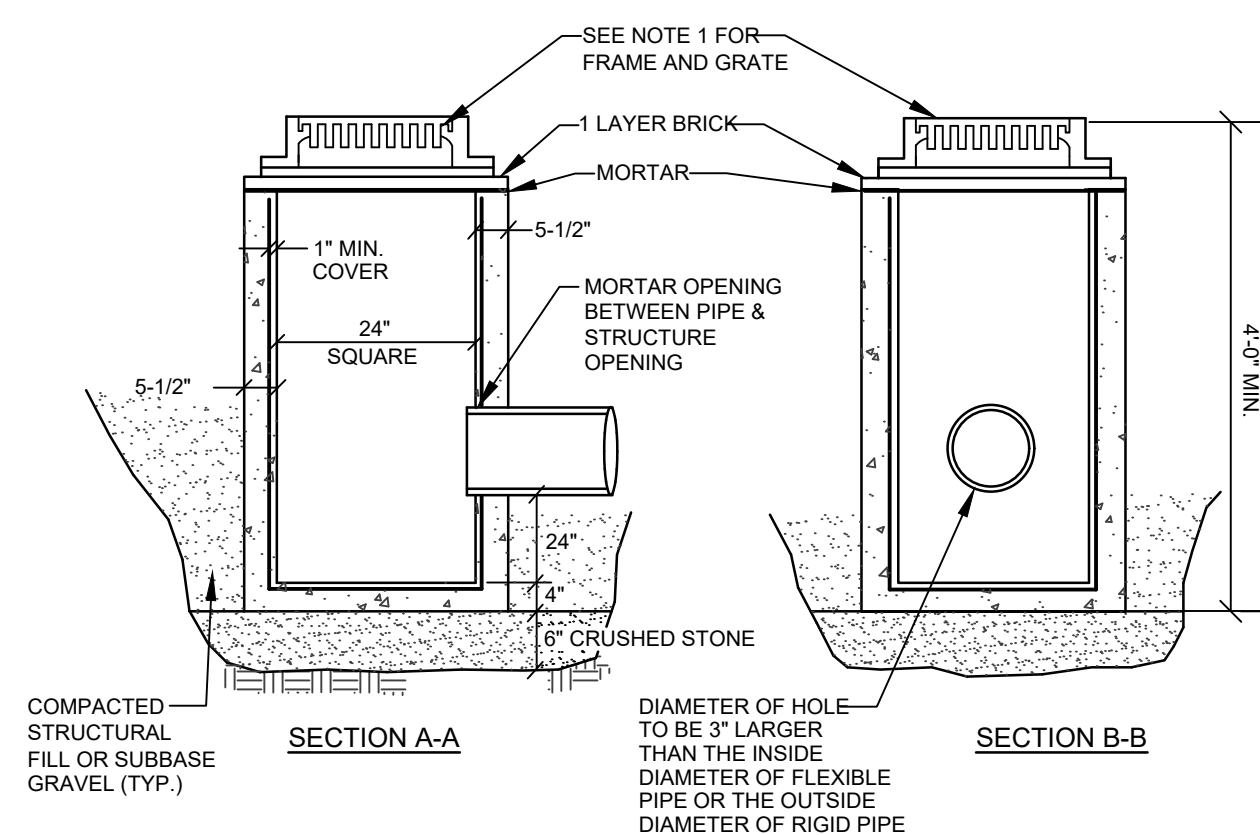
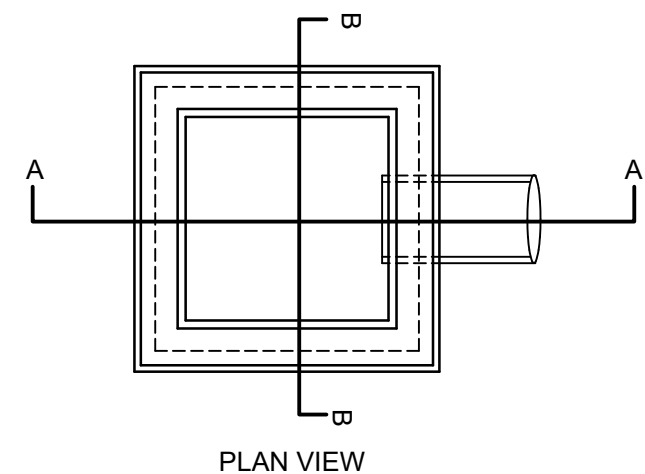


NOTES:

1. CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT WHEN RUN BENEATH PAVED AREAS.
2. DUCT BANK FOR SINGLE POWER TO BE COORDINATED WITH CMP REFER TO ELECTRICAL DRAWINGS.
3. THIS DETAIL IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. DUCT BANK DETAILS SHALL BE COORDINATED WITH SITE ELECTRICAL DRAWINGS.
4. ENCASE IN CONCRETE UNDER PAVED AREAS.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

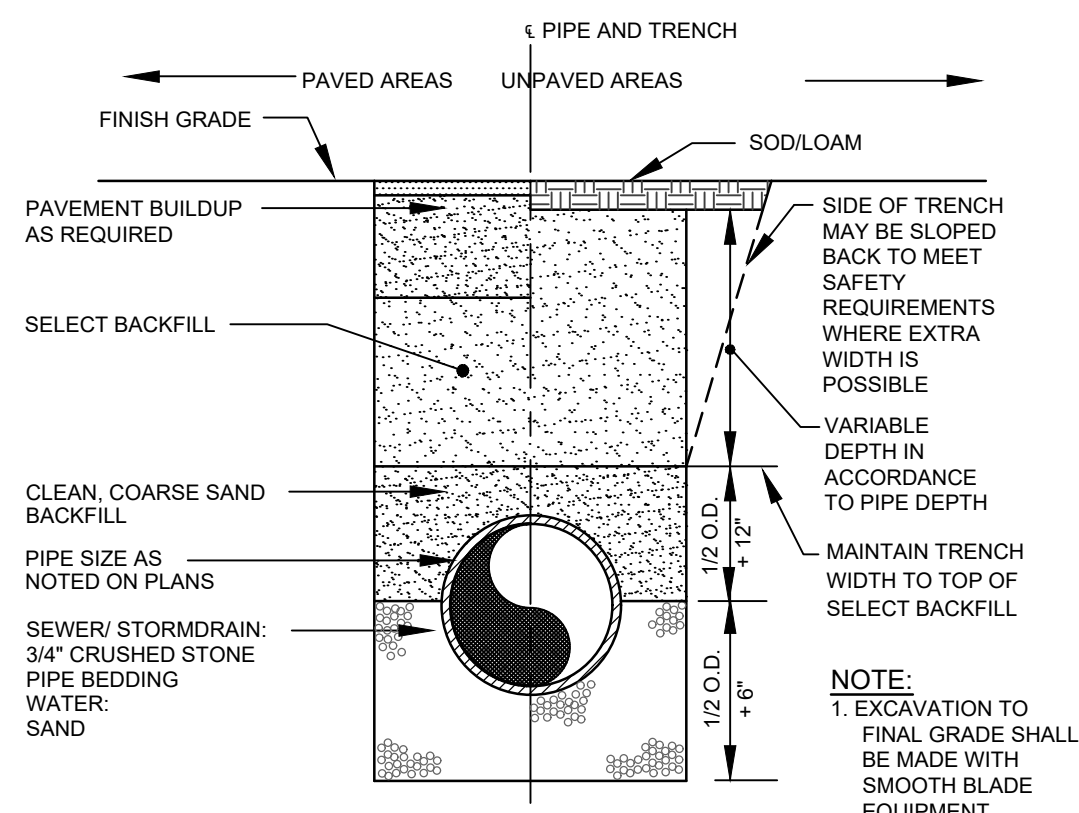


NOTES:

- NOTES:**
1. FRAME SHALL BE FOR 24" SQUARE GRATE- LEBARON TYPE "F" SQUARE FRAME (LF 245) 4 FLANGE OR ETHERIDGE SQUARE FRAME S24G. GRATE SHALL BE 24"x24" CAST IRON.
 2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.

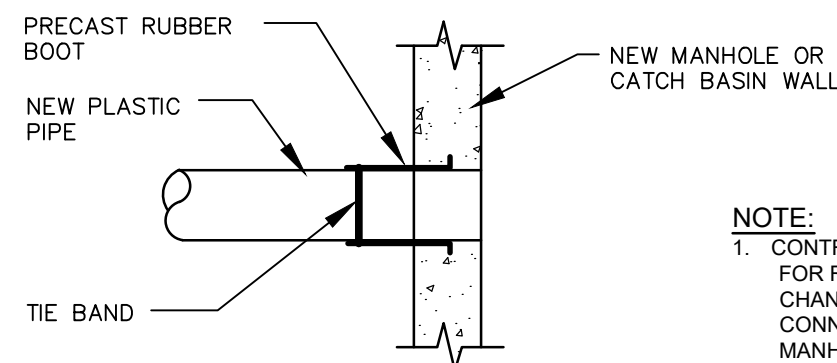
TYP. TYPE "F" CATCH BASIN

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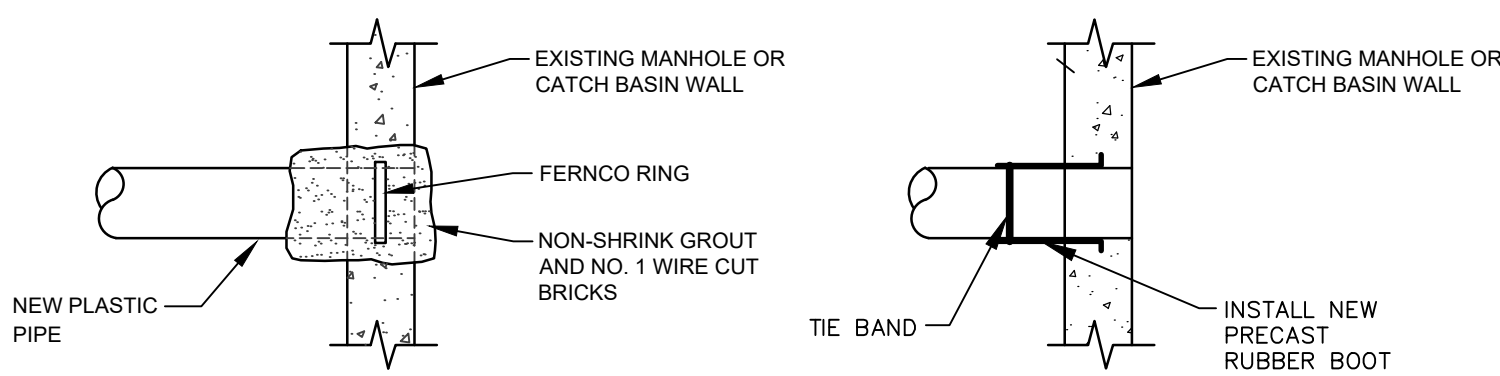


TYPICAL TRENCH SECTION

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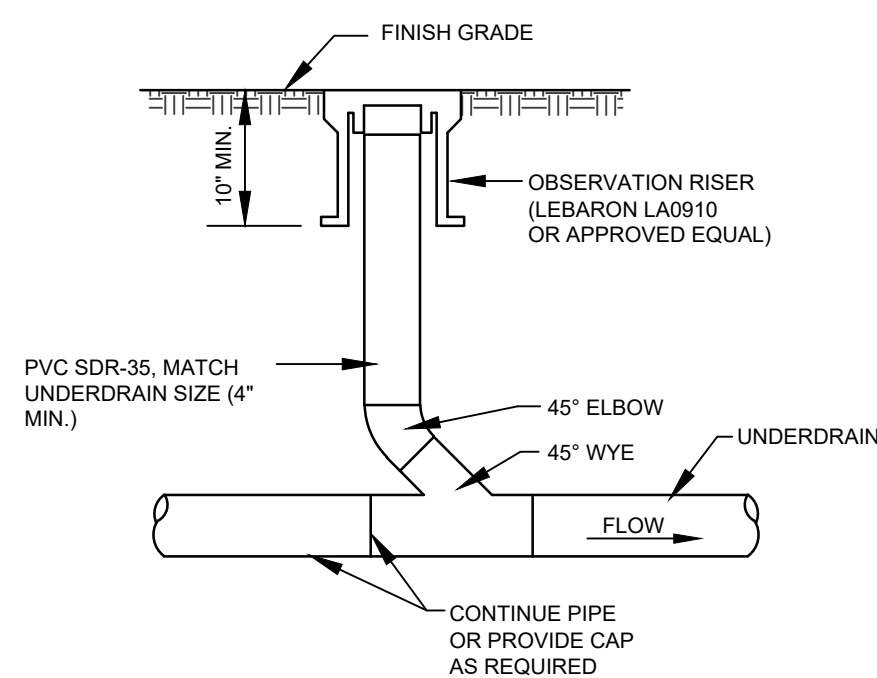
METHOD 2- NEW CONSTRUCTION



METHOD 1- EXISTING PIPE INTO NEW STRUCTURE

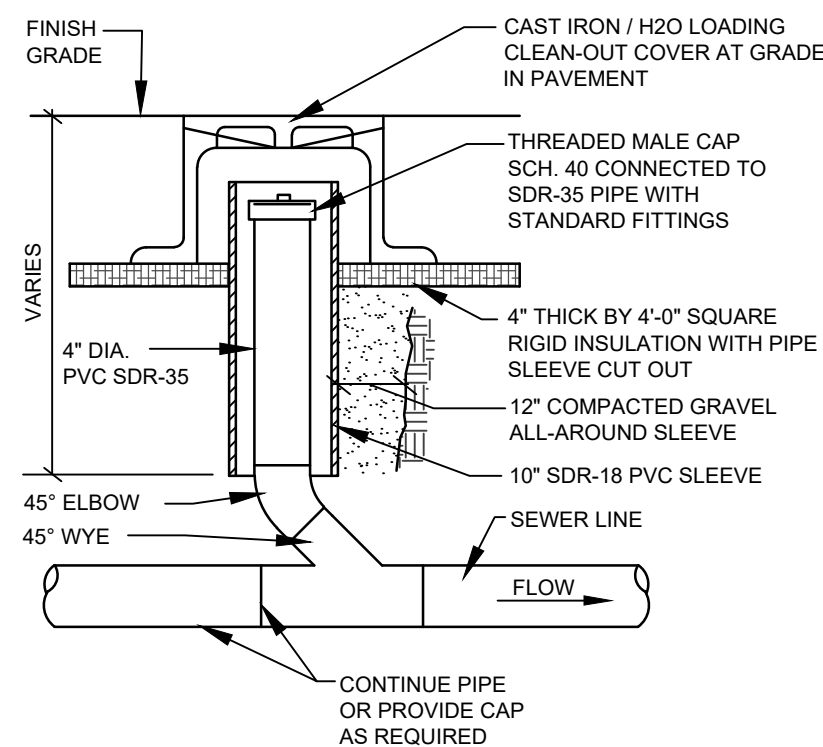
PLASTIC PIPE CONNECTIONS

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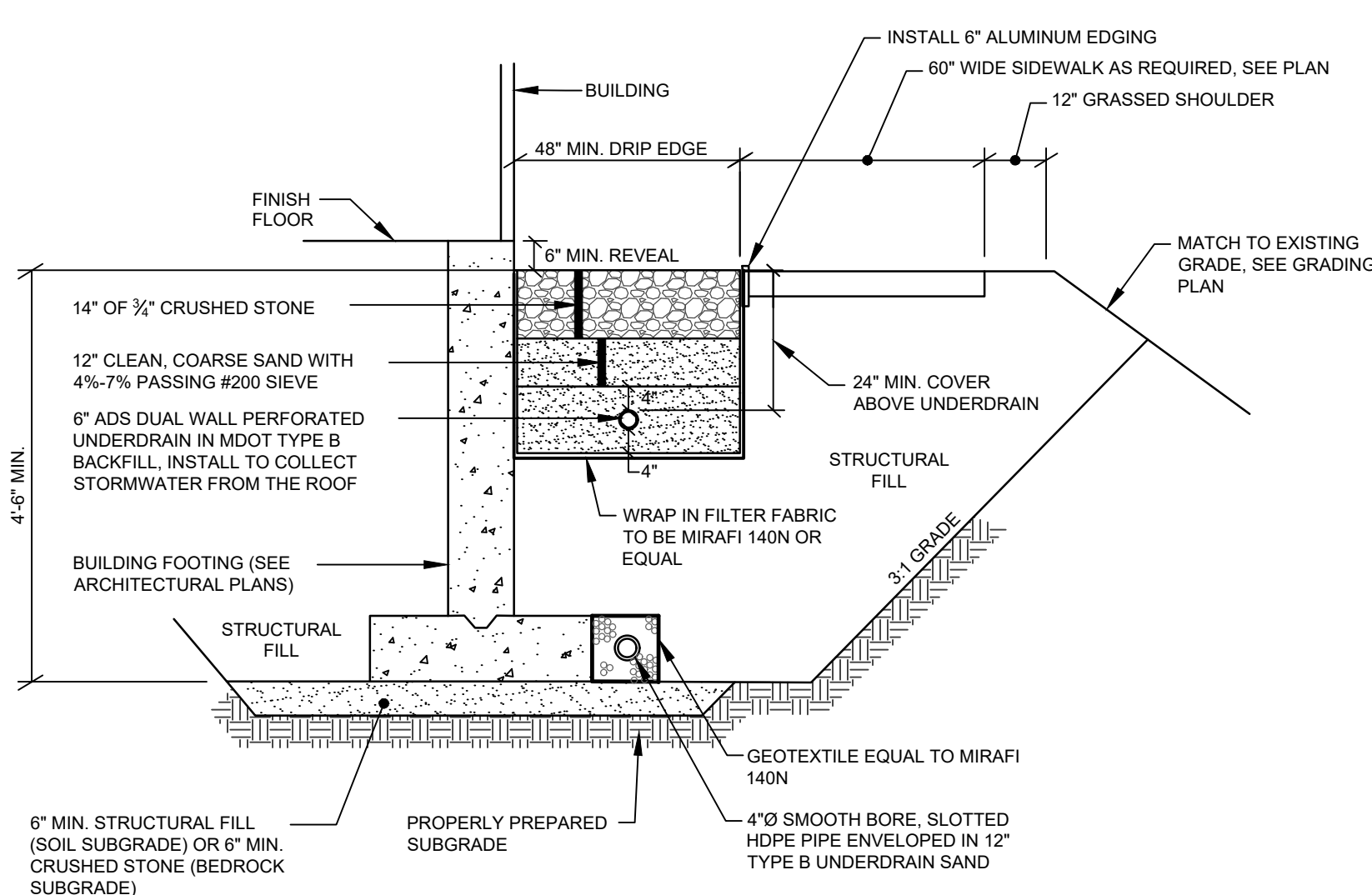
CLEAN-OUT IN NON-PAVEMENT AREAS

NOT TO SCALE



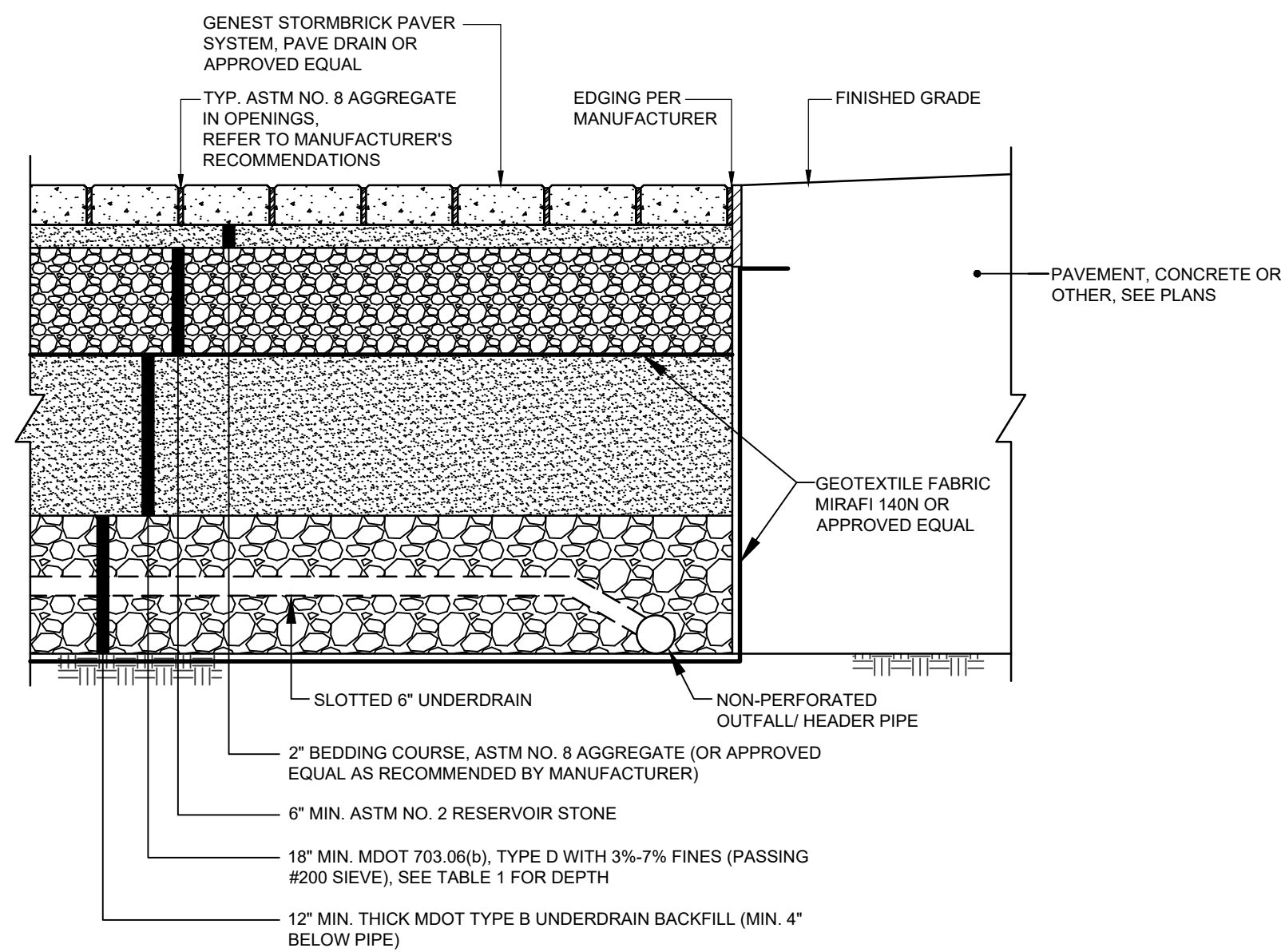
CLEAN-OUT IN PAVEMENT AREAS

NOT TO SCALE



UNDERDRAINED ROOF DRIP EDGE DETAIL

NOT TO SCALE



NOTES

1. PAVERS SHALL BE "STORMWATER BRICK" PERMEABLE INTERLOCKING CONCRETE PAVERS 4"x8"x18" BY GENEST CONCRETE, PAVEDRAIN BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
2. COORDINATE PAVES COLOR AND INSTALLATION PATTERN WITH THE OWNER.
3. THE SAND LAYER SHALL BE MINERAL SOIL WITH BETWEEN 4% AND 7% FINES PASSING THE #200 SIEVE.
4. BRING TO SUBGRADE AS REQUIRED WITH COMMON BORROW. COMPACT SUBGRADE TO 95% OF MODIFIED PROCTOR (ASTM D-1557).

PARKING PERMEABLE PAVERS SECTION

NOT TO SCALE



								A.	CAB	05-04-2020	ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION
								REV.	BY:	DATE:	STATUS:

THIS PLANSMAN MAY BE LOANED 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.



DETAILS

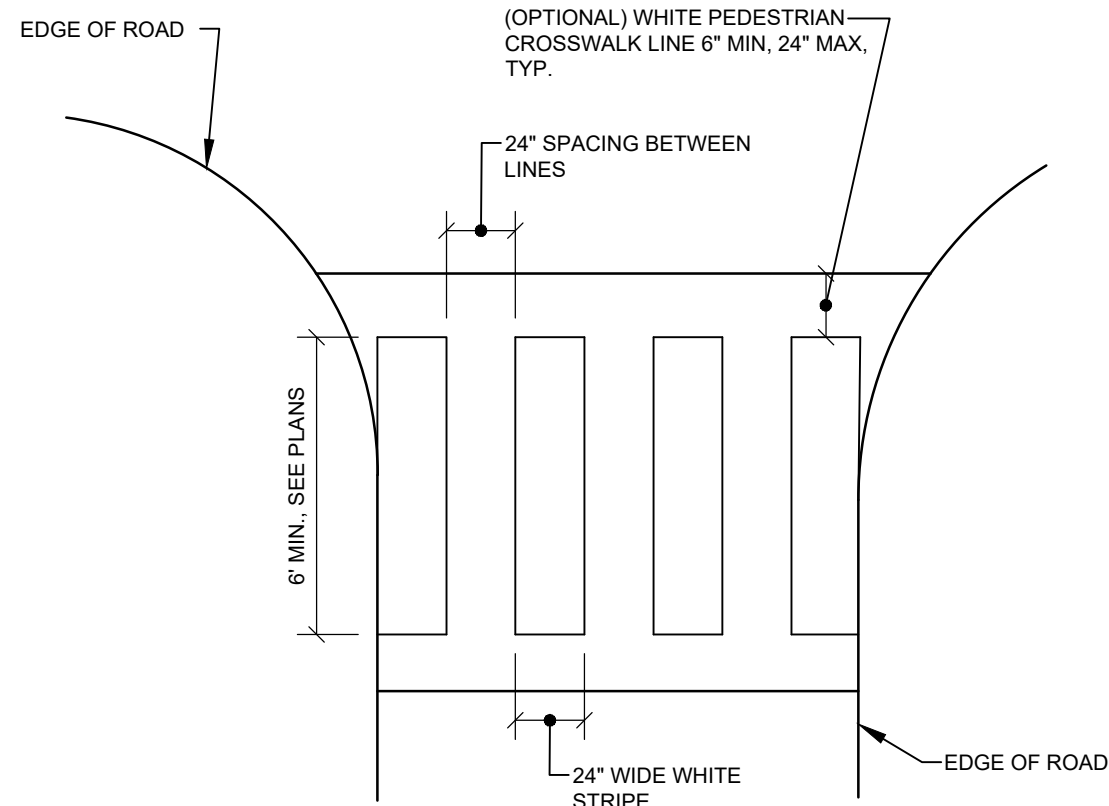
OF:
BIRCHLANE 3- UNIT APARTMENT

KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE

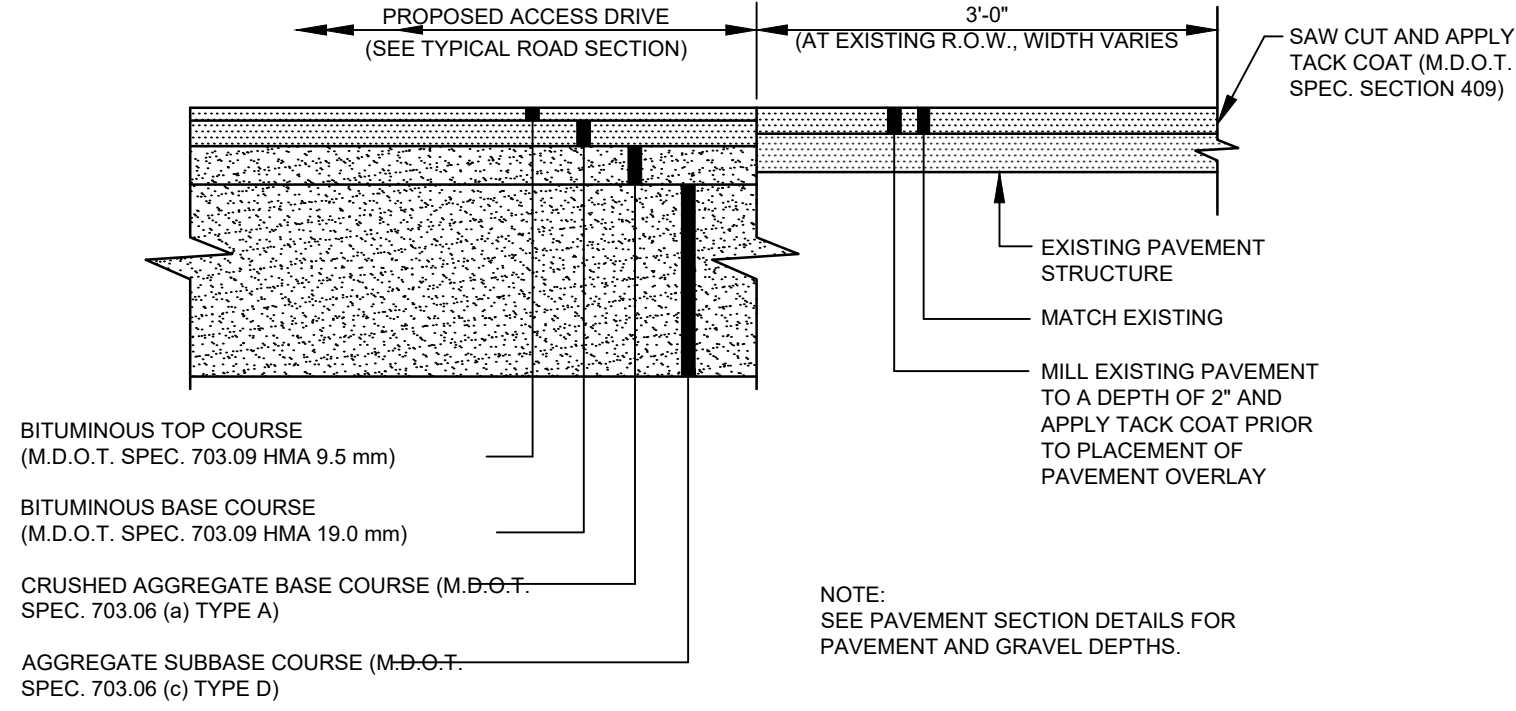
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	N.T.S.
PROJECT	18519-01

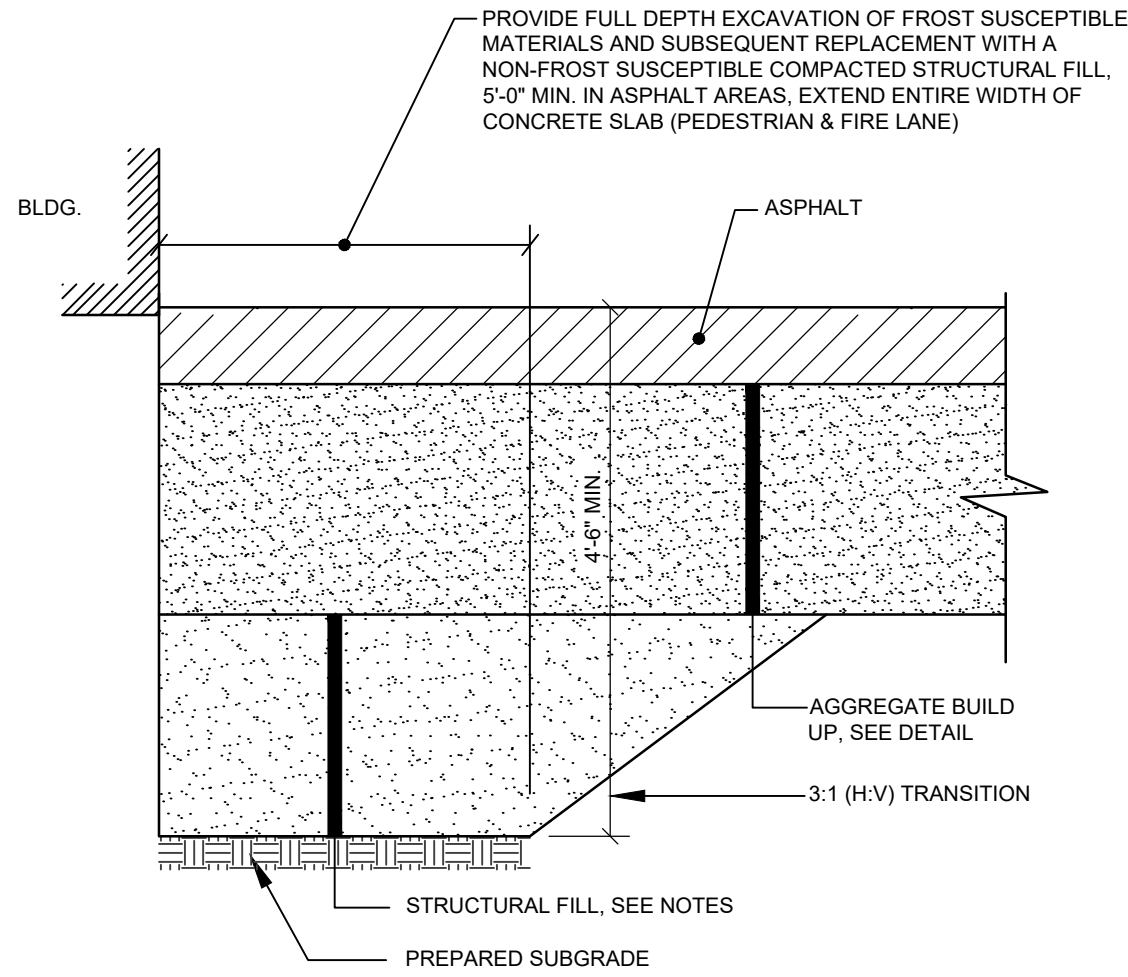
SHEET 8 OF 9



CROSSWALK MARKINGS
NOT TO SCALE

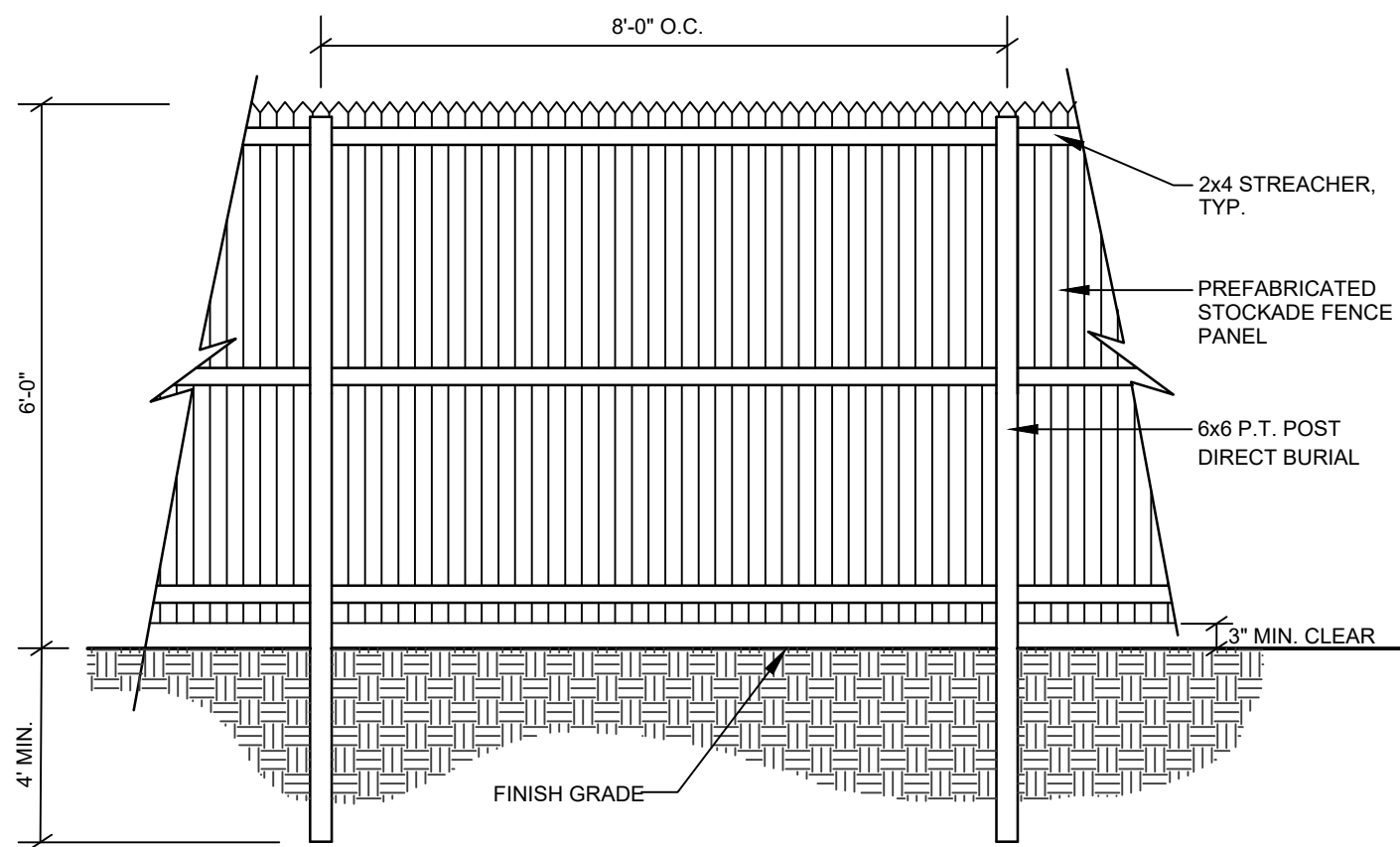


TYPICAL PAVEMENT JOINT
NOT TO SCALE

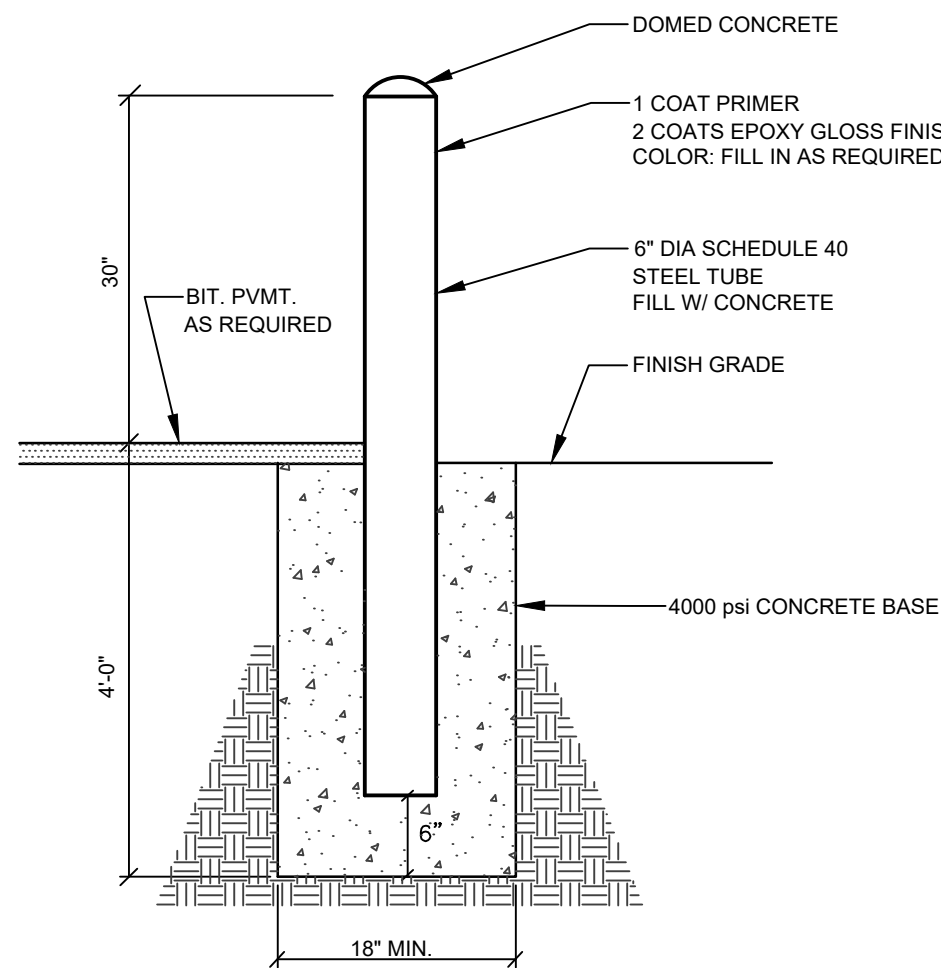


- NOTES:**
1. REFER TO DETAILS FOR PAVEMENT AND CONCRETE.
 2. PROVIDE FULL DEPTH EXCAVATION OF FROST SUSCEPTIBLE MATERIALS AND SUBSEQUENT REPLACEMENT WITH A NON-FROST SUSCEPTIBLE COMPACTED STRUCTURAL FILL. STRUCTURAL FILL DEPTH SHALL BE MIN. 4.5' FROM FINISHED GRADE.

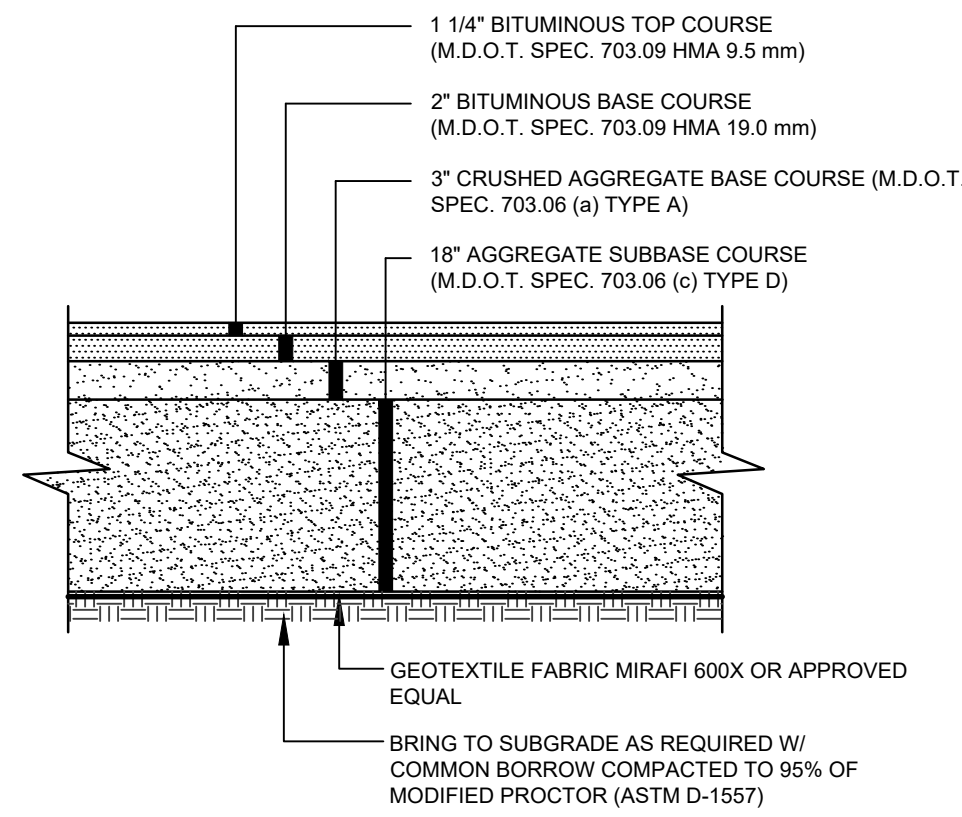
PAVEMENT SECTION @ BUILDING
NOT TO SCALE



STOCKADE FENCE
NOT TO SCALE

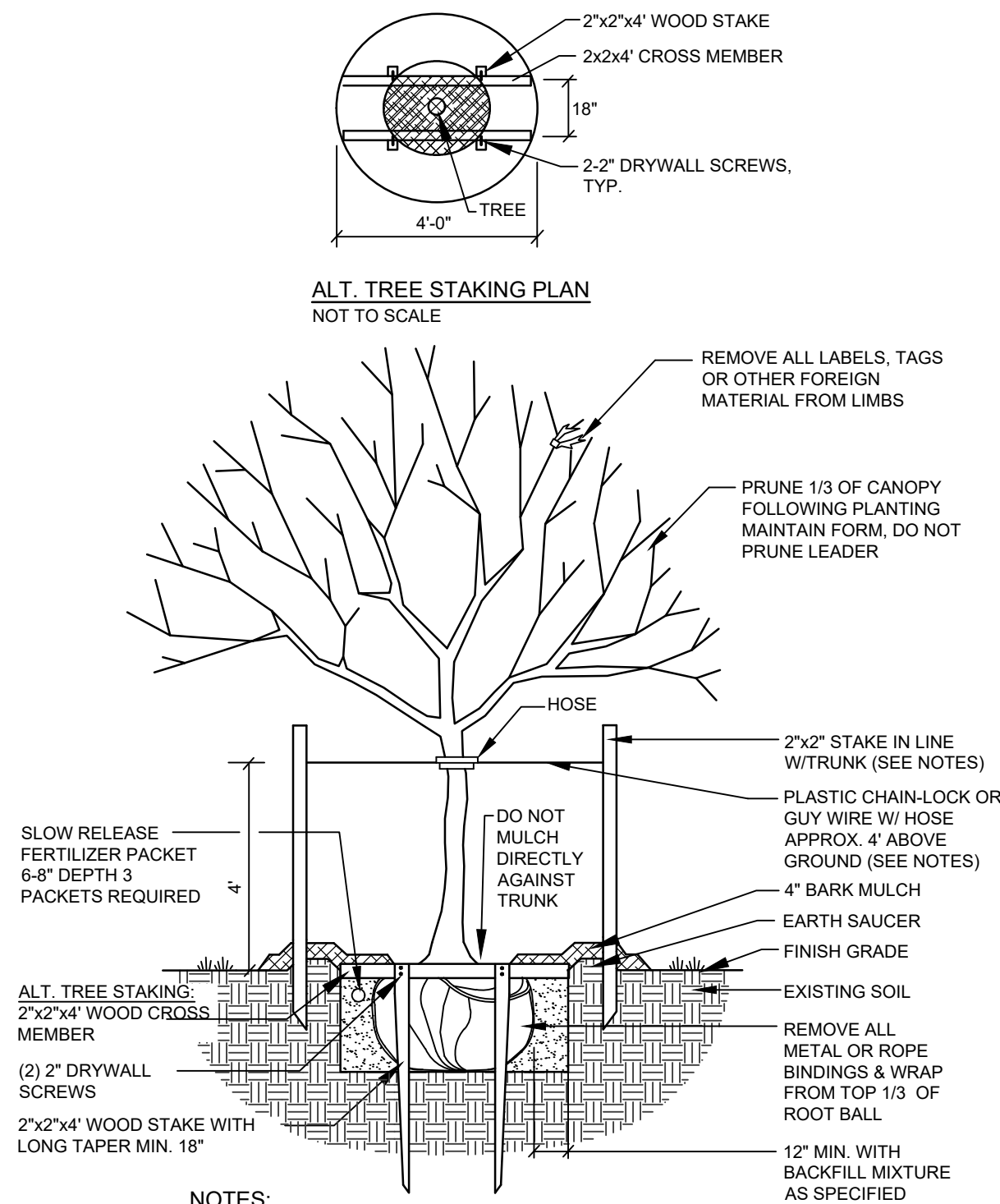


METAL BOLLARD
NOT TO SCALE



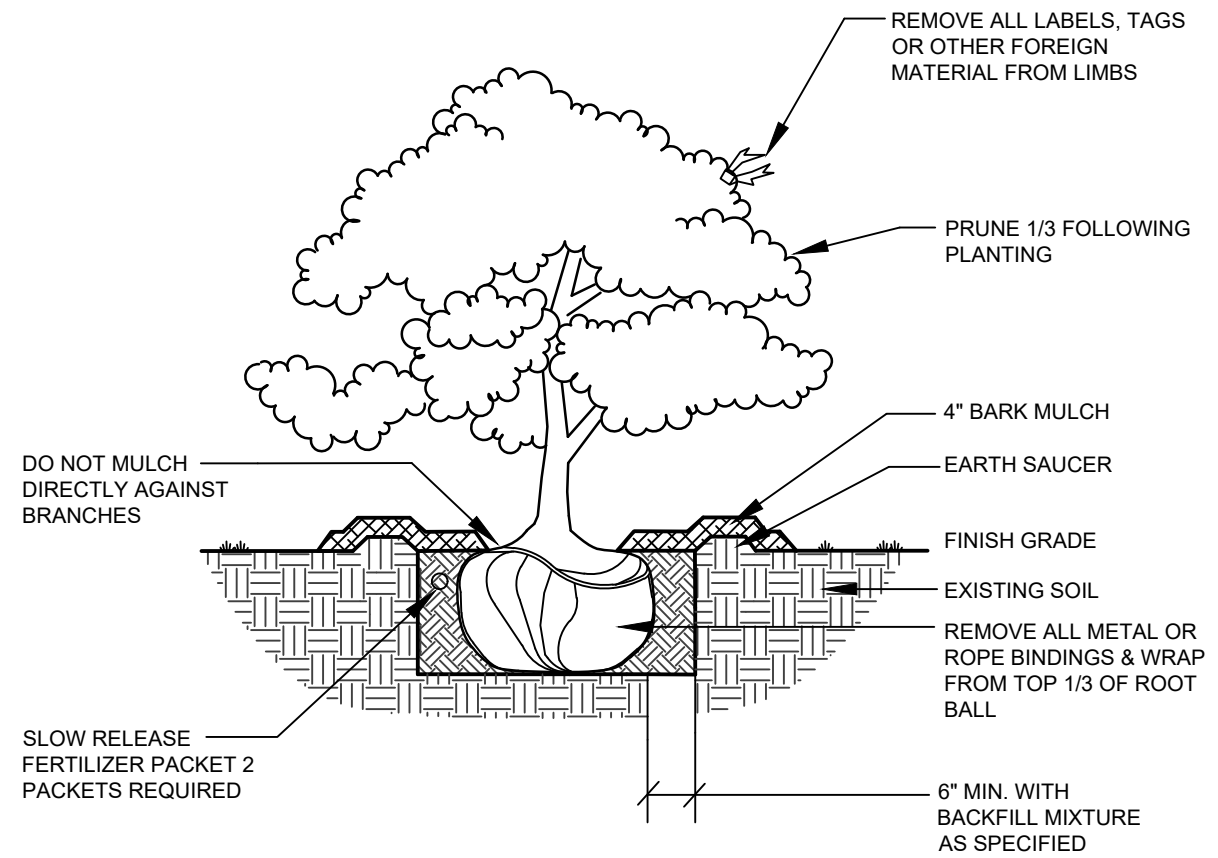
- NOTES:**
1. COMPACT GRAVEL SUBBASE AND BASE COURSES TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
 2. HOT MIX ASPHALT SURFACE COARSE SHALL BE COMPACTED TO 95% OF ITS THEORETICAL MAXIMUM DENSITY (ASTM D-2041). BASE COARSE SHALL BE COMPACTED TO 95% ±2.5% OF ITS THEORETICAL MAXIMUM DENSITY (ASTM D-2041).
 3. APPLY TACK COAT BETWEEN SUCCESSIVE LIFTS OF BITUMINOUS PAVEMENT.
 4. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.
 5. PAVEMENT REPAIR AND/OR REPLACEMENT SHALL MATCH EXISTING PAVEMENT AND GRAVEL AGGREGATE DEPTHS.
 6. MILL AND OVERLAY PAVEMENT WHERE APPLICABLE.

TYPICAL PAVEMENT SECTION
NOT TO SCALE

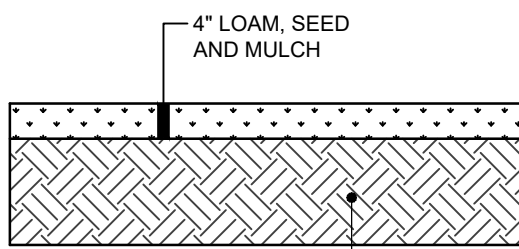


- NOTES:**
1. THE TREE IS OF SUBSTANTIAL SIZE.
 2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
 3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
 4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS & EVERGREEN SHRUB
NOT TO SCALE



LOAM & SEED SECTION
NOT TO SCALE

- NOTES:**
1. BIKE RACK SHALL EQUAL DERO BIKE HITCH AS MANUFACTURED BY DERO BIKE RACKS. INSTALL BIKE RACKS AS RECOMMENDED BY THE MANUFACTURER.
 2. INSTALL BIKE RACKS MINIMUM OF 36" FROM ANY BUILDING ENTRYWAY AND 24" FROM SIDE OF BUILDING.

BICYCLE RACK
NOT TO SCALE

LANDSCAPE NOTES

1. 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 "US 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 SPAGNUM 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.

NOT FOR
CONSTRUCTION



ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION	
REV. BY	DATE
A. CAB	05-04-2020
STATUS:	
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.	



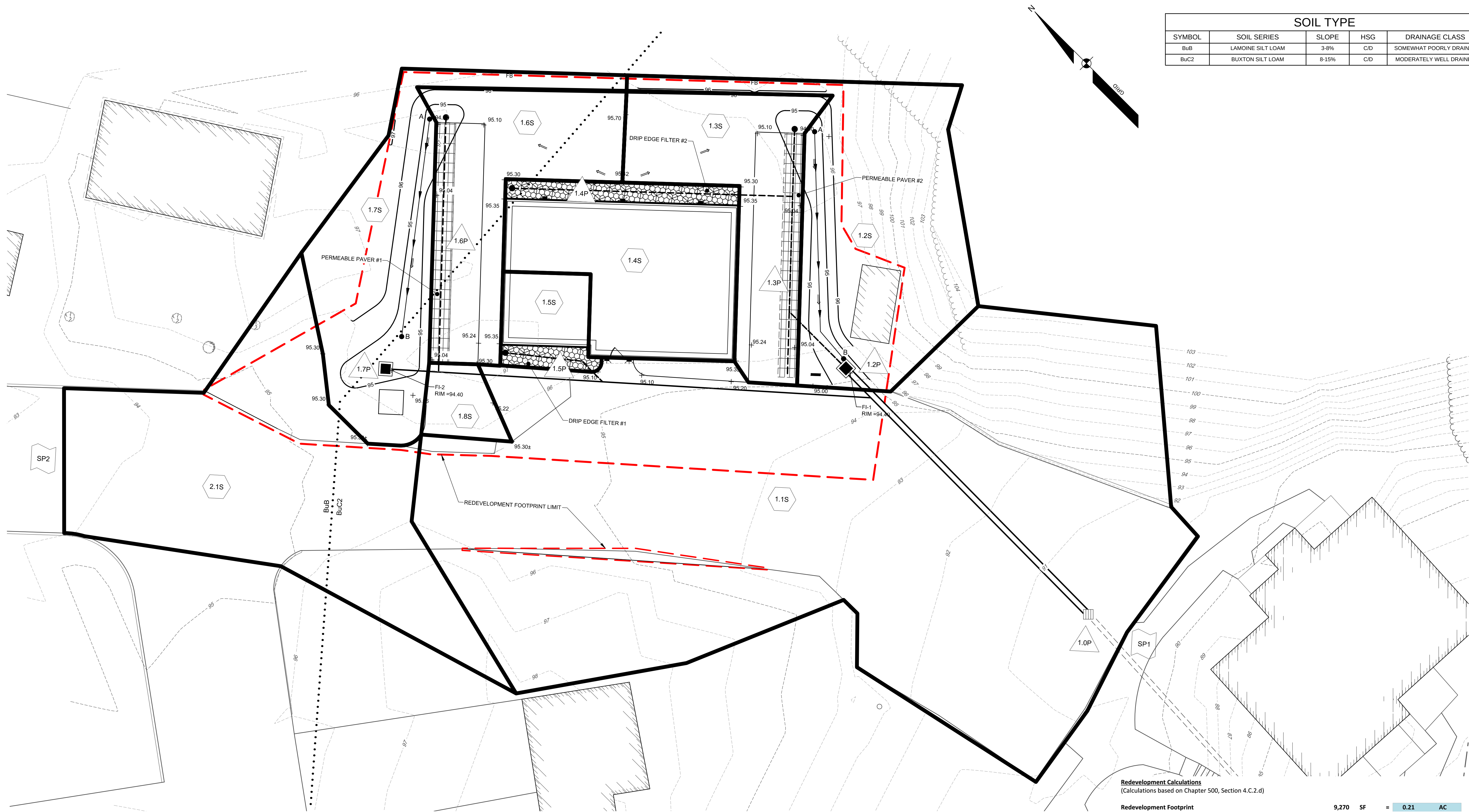
DETAILS
OF:
BIRCHLANE 3- UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	N.T.S.
PROJECT	18519-01

SHEET 9 OF 9



REPRODUCTION OR REUSE OF THIS
DOCUMENT WITHOUT THE
EXPRESSED WRITTEN CONSENT
OF BH2M INC. IS PROHIBITED



SOIL TYPE				
SYMBOL	SOIL SERIES	SLOPE	HSG	DRAINAGE CLASS
BuB	LAMOINE SILT LOAM	3-8%	C/D	SOMEWHAT POORLY DRAINED
BuC2	BUXTON SILT LOAM	8-15%	C/D	MODERATELY WELL DRAINED

PROPOSED CONDITIONS LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION
- REACH
- SUBCATCHMENT LABEL
- REACH
- STUDY POINT
- STORMWATER TREATMENT/DETENTION POND
- SOILS BOUNDARY

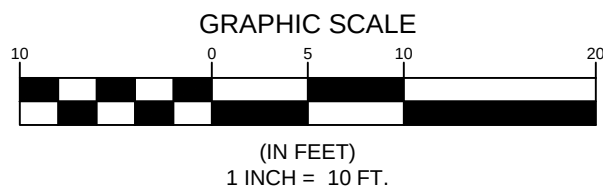


Table 1: MDEP GENERAL STANDARD CALCULATIONS
Birchlane 3-Unit Apartment
Job #: 18519-01

AREA ID	WATERSHED SIZE (S.F.)	EXISTING ONSITE IMPERVIOUS AREA TO REMAIN (S.F.)	NEW ONSITE IMPERVIOUS AREA (S.F.)	EXISTING ONSITE LANDSCAPED AREA TO REMAIN (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
1.1	9,740	6,600	60	1,850	0	60	8,450	NO	0	0	0	
1.2	2,065	120	0	785	700	700	905	NO	0	0	0	
1.3	1,240	0	515	0	725	1,240	0	YES	515	725	1,340	PER-2
1.4	1,425	0	1,425	0	0	1,425	0	YES	1,425	0	1,425	DEF-2
1.5	360	0	360	0	0	360	0	YES	360	0	360	DEF-1
1.6	1,295	0	500	0	795	1,295	0	YES	500	795	1,295	PER-1
1.7	1,520	0	25	355	1,140	1,165	355	NO	0	0	0	
1.8	215	0	215	0	0	215	0	NO	0	0	0	
2.1	3,090	2,470	0	620	0	0	3,090	NO	0	0	0	
TOTAL (S.F.)	20,950	9,190	3,100	3,610	3,360	6,460	12,800		2,800	1,520	4,320	

TOTAL NEW IMPERVIOUS AREA (S.F.)	3,100	TOTAL DEVELOPED AREA (S.F.)	6,460
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (S.F.)	2,800	TOTAL AREA RECEIVING TREATMENT (S.F.)	4,320
% OF IMPERVIOUS AREA RECEIVING TREATMENT	90.32%	% OF AREA RECEIVING TREATMENT	66.87%

*60% Treatment Required For Redevelopment

Redevelopment Calculations
(Calculations based on Chapter 500, Section 4.C.2.d)

Redevelopment Footprint 9,270 SF = 0.21 AC

Per Table 2: Pollutant Impact Rankings of Various Redevelopment Land Uses

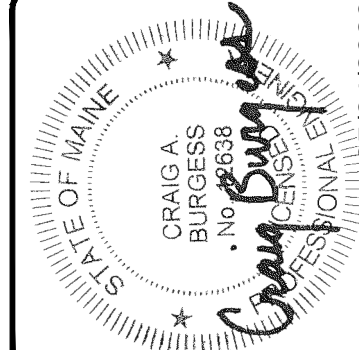
Existing Use	Existing Area (SF)	Existing Area (AC)	Pollutant Ranking	Weighted Avg. Impact
Existing Pavement	2,435	0.06	3	0.17
Existing Roof	120	0.00	2	0.01
Grassed Areas	4,615	0.11	2	0.21
Existing Gravel	2,100	0.05	2	0.10
	9,270		Sum	0.48
Proposed Use	Proposed Area (SF)	Proposed Area (AC)	Pollutant Ranking	Weighted Avg. Impact
Building	1,500	0.03	2	0.07
Existing Roof	120	0.00	2	0.01
New/ Existing Pavement	3,600	0.08	3	0.25
Concrete Pads	50	0.00	2	0.00
New/ Existing Grassed Areas	4,000	0.09	2	0.18
	9,270		Sum	0.51

* Light use building pollutant ranking for metal roof (other rooftop classification)
** No vehicular traffic

- Existing Impact Rating = 0.48
- Proposed Impact Rating = 0.51
- Existing Impact Rating per Acre of Development = 2.26
- Proposed Impact Rating per Acre of Development = 2.39
- Redevelopment Rating Difference = 0.13

Therefore 60% of Developed Area must be treated
(per Table 3 - Treatment Levels for Redevelopment Projects)

NOT FOR CONSTRUCTION



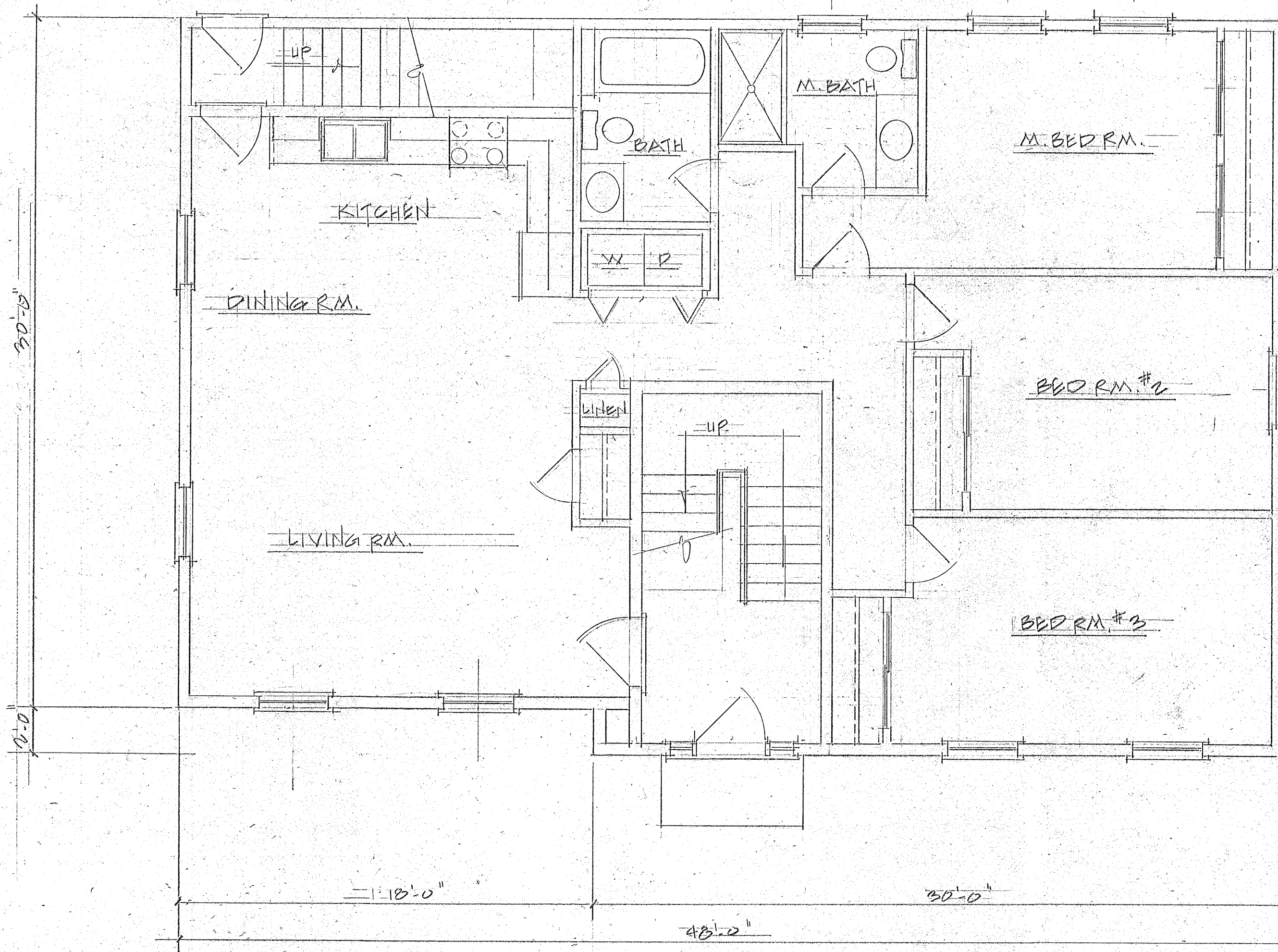
ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION	DATE: 05-04-2020	STATUS: A
BY: CRAIG A. BURGESS	DATE: 05-04-2020	STATUS: A
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHINCS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHINCS, INC.		

SEBAGO TECHINCS
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100
WWW.SEBAGOTECHINCS.COM

PROPOSED CONDITIONS WATERSHED PLAN
OF:
BIRCHLANE 3-UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 10'
PROJECT	18519-01

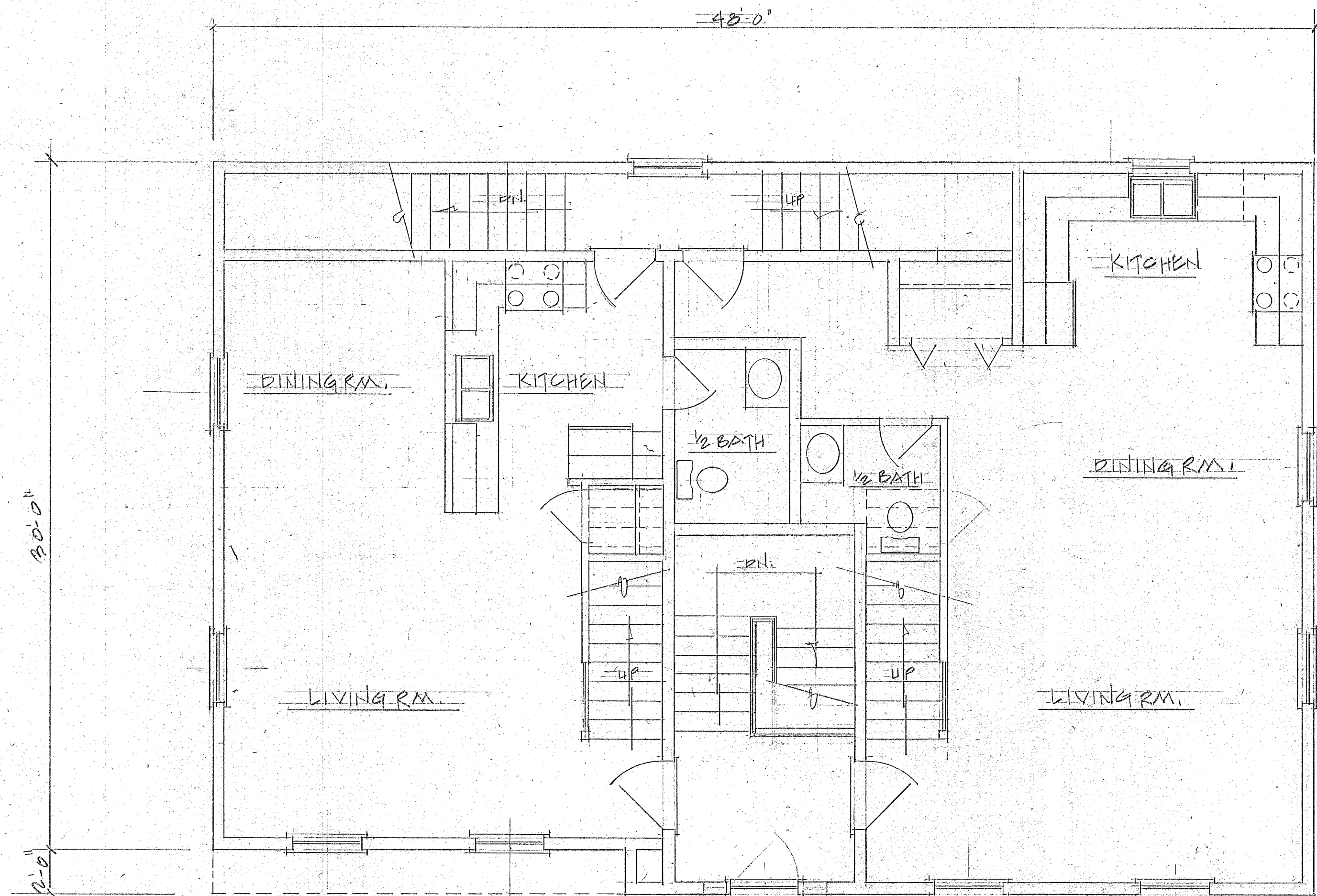
SHEET 2 OF 2



FIRST FL. PLAN

1/4" = 1'-0"

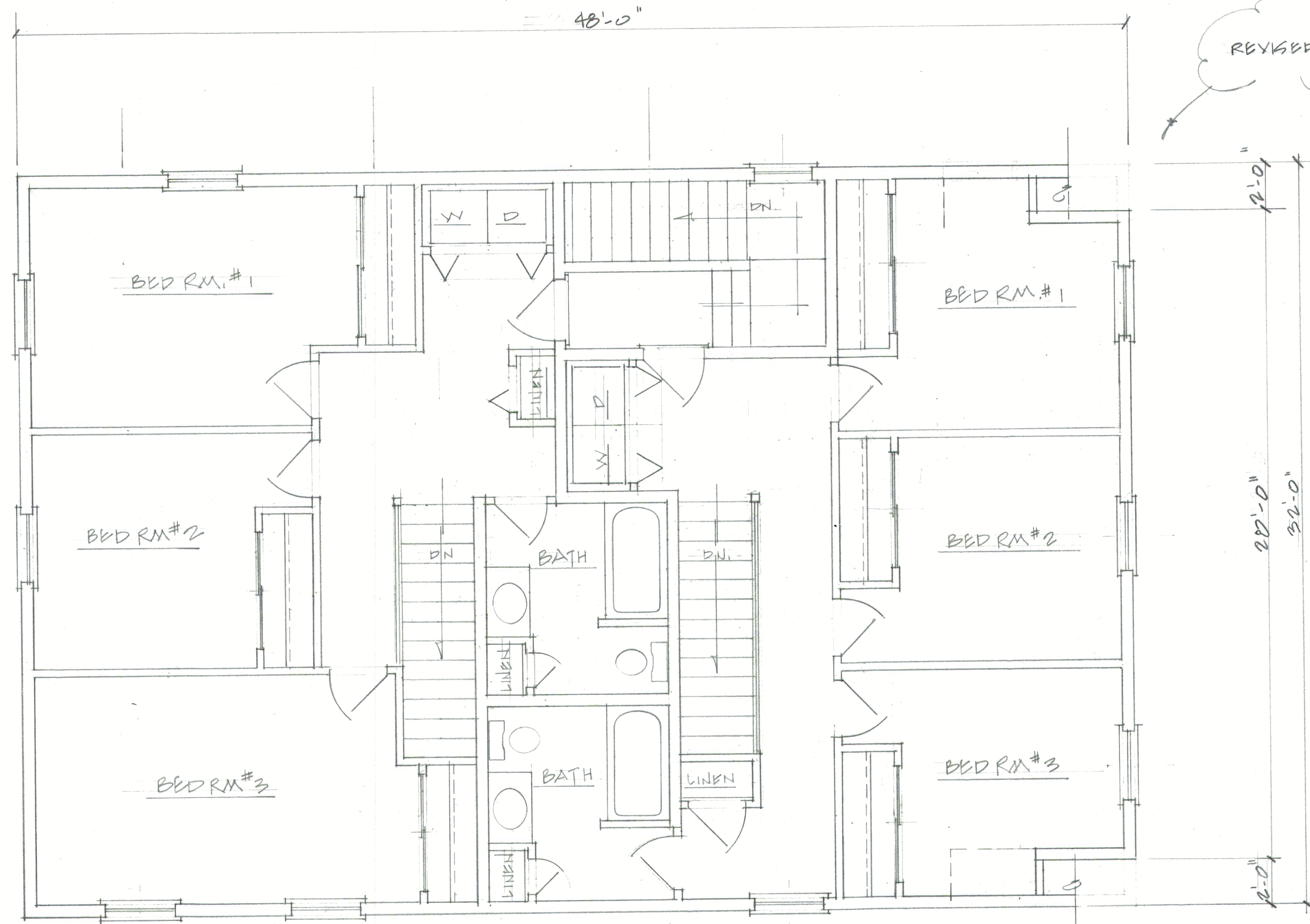
KING REAL ESTATE		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: RJP
DATE: 11-18-19		REVISED
WHITE BIRCH		
PORTLAND, ME.		
FIRST FL. PLAN		DRAWING NUMBER 2 of 4



SECOND FL. PLAN

1/4" = 1'-0"

KING REAL ESTATE		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: RJP
DATE: 11-18-19	REVISD	
WHITE BIRCH PORTLAND, ME.		
SECOND FL. PLAN		DRAWING NUMBER 3 of 4



THIRD FL. PLAN
1/4" = 1'-0"

KING REAL ESTATE		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY RIP
DATE: 11-10-19		REVISED
WHITE BIRCH PORTLAND ME.		
THIRD FL. PLAN		DRAWING NUMBER 4 of 4



REAR ELEVATION

KING REAL ESTATE		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY RIP
DATE: 12-10-19		REVISED
WHITE BIRCH PORTLAND, ME.		
REAR ELEVATION		DRAWING NUMBER



LEFT SIDE ELEV.



RIGHT SIDE ELEV.

KING REAL ESTATE		
SCALE: 1/4" = 1'-0"	APPROVED BY:	DRAWN BY: RJP
DATE: 12-5-19		REVISED
WHITE BIRCH PORTLAND, ME		
L & R ELEVATIONS		DRAWING NUMBER

September 7, 2020

Craig Burgess
Sebago Technics
75 John Roberts Rd #4a
South Portland, ME 04106

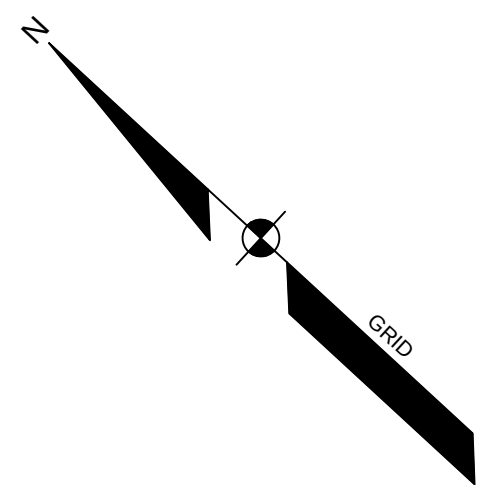
RE: 52 MAPLEWOOD STREET PORTLAND, ME

SUBJECT: FENCE BUFFER

We permit the use of our existing white, vinyl, privacy fencing to be used as a property line buffer, provided the existing available material is enough to span the full length of the designated buffer line per sheet 3 of the attached document. The fence line buffer is to be set back 22'-0" per sheet 3 of the attached document.

Thank you,

Evan & Michelle Glassman
52 Maplewood St. Portland, ME 04103



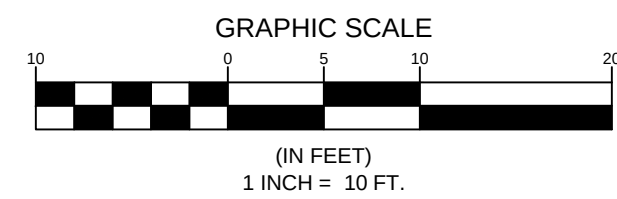
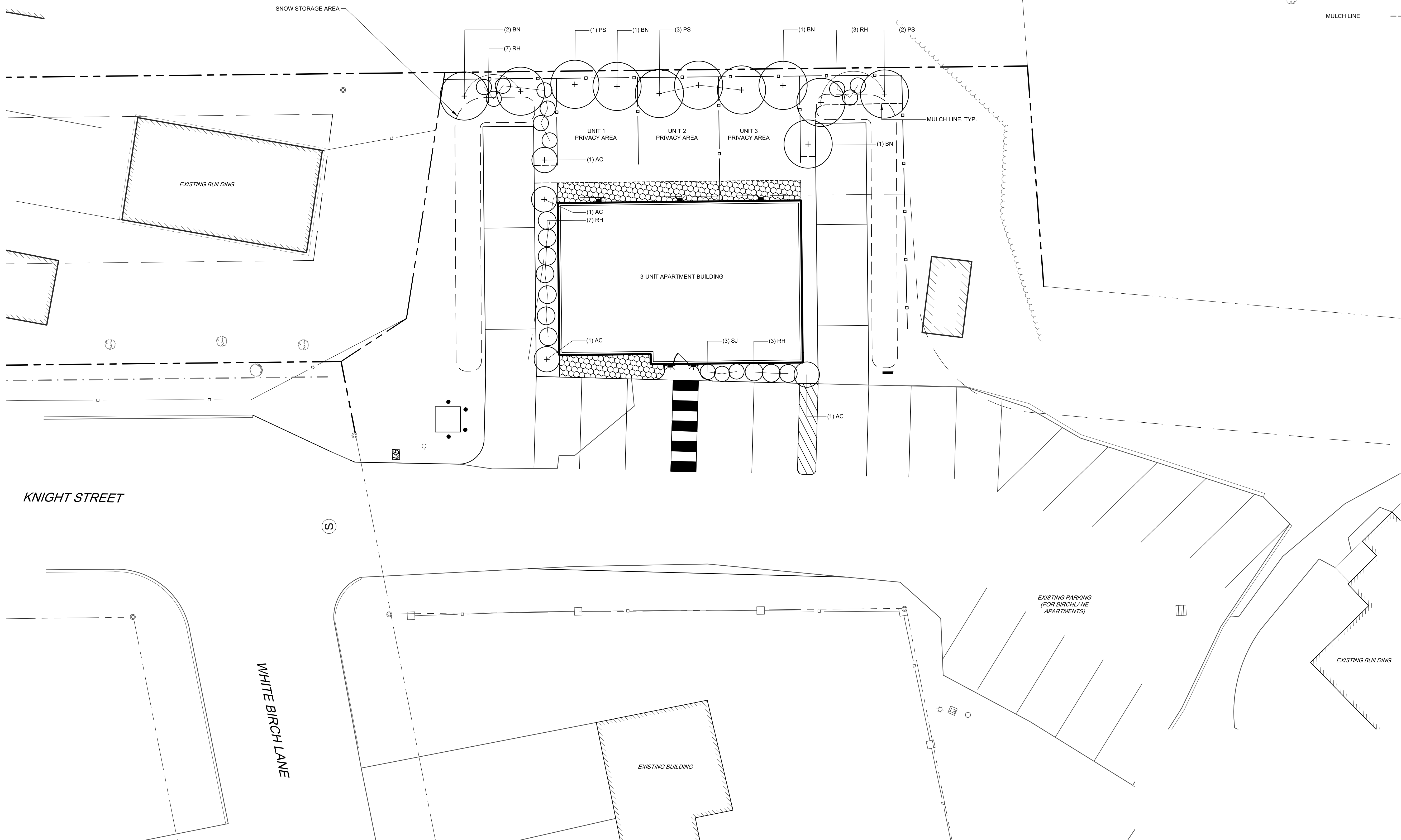
PLANTING SCHEDULE

KEY	BOTANIC NAME	COMMON NAME	SIZE/NOTES
AC	AMELANCHIER x GRANDIFLORA 'AUTUMN BRILLIANCE'	SERVICE BERRY	4-6' HGT
BN	BETULA NIGRA	RIVER BIRCH	1.5" CAL. (2-3 CLUMP)
PS	PINUS STROBUS	WHITE PINE	8' HGT
RH	RHODODENDRON PJM ELITE	PJM ELITE RHODODENDRON 24' HGT	
SJ	SPIREA JAPONICA	DOUBLE PLAY SPIREA	#5 CONT.

NOTE:
- LOAM AND SEED ALL DISTURBED AREAS.

LEGEND

EXISTING	PROPOSED
	PROPERTY LINE/R.O.W.
	ABUTTER LINE/R.O.W.
	SETBACK
	BUILDING
	TREELINE
	STOCKADE FENCE
	DECIDUOUS TREE
	CONIFEROUS TREE
	MULCH LINE



NOT FOR
CONSTRUCTION



REV	BY	DATE	STATUS
A	CAB	05-04-2020	ISSUED TO CITY FOR LEVEL III SITE PLAN APPLICATION

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SEBAGO
T E C H N I Q S
www.sebagotechniqs.com
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LANDSCAPE PLAN
OF:
BIRCHLANE 3- UNIT APARTMENT
KNIGHT STREET
PORTLAND, MAINE
FOR:
KING REAL ESTATE
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

DESIGNED	MKO
DRAWN	MKO
CHECKED	CAB
DATE	05/04/2020
SCALE	1" = 10'
PROJECT	18519-01

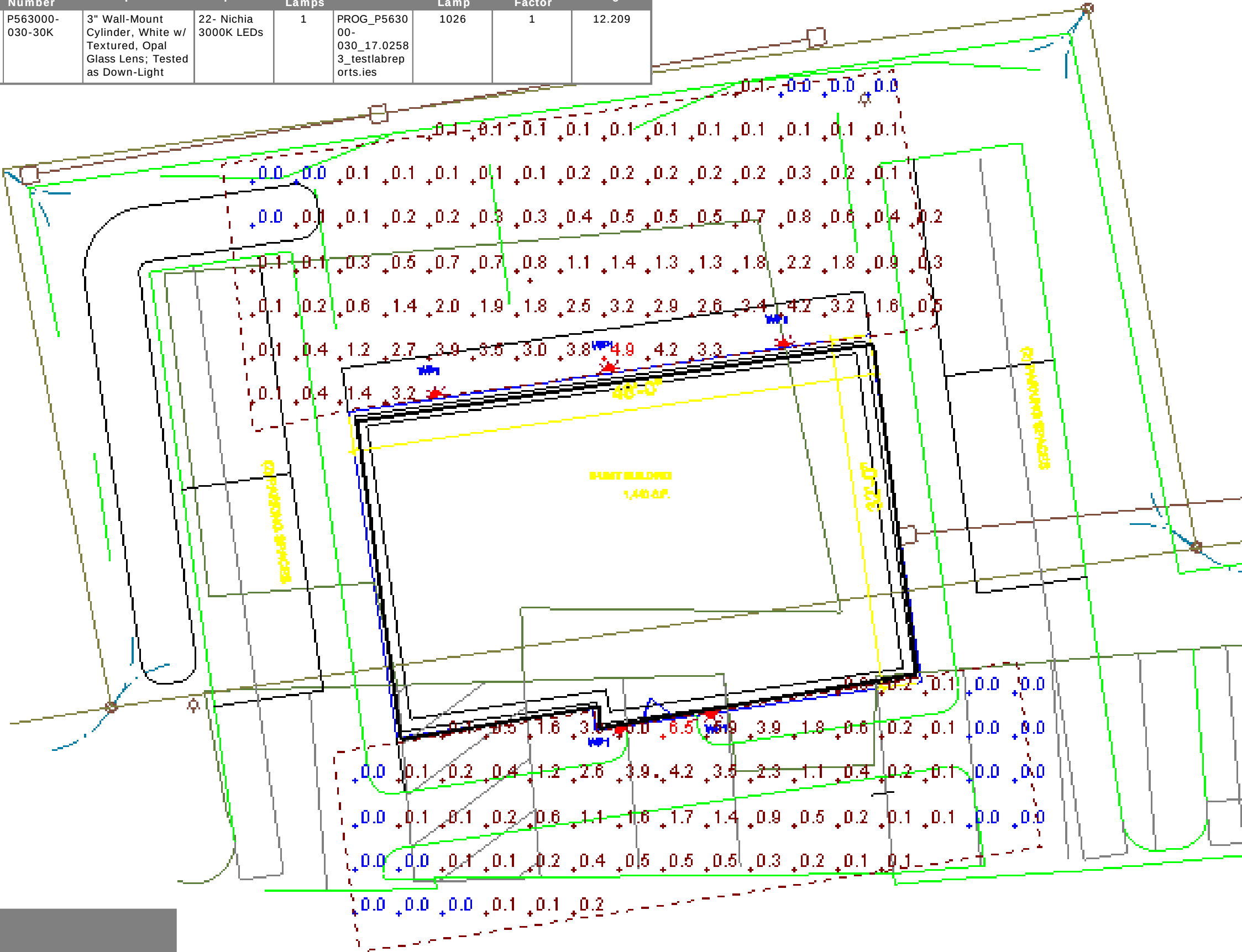
SHEET 6 OF 10

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	WP1	5	PROGRESS	P563000-030-30K	3" Wall-Mount Cylinder, White w/ Textured, Opal Glass Lens; Tested as Down-Light	22- Nichia 3000K LEDs	1	PROG_P563000-030_17.02583_testlabreports.ies	1026	1	12.209

Note

1.WP1 wall mounted light fixtures are mounted 10 feet above finish grade.

2.Lighting calculations are only for the front & rear entry into the building



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.0 fc	4.9 fc	0.0 fc	N/A	N/A
Calc Zone #2	+	0.9 fc	6.5 fc	0.0 fc	N/A	N/A



White Birch Lane Apartment
Portland, Maine
Site Photometric for Front & Rear Entry

Designer
Seacoast Consulting Engineers

Date
6/11/2020

Scale
Not to Scale

Drawing No.

Summary



The map shows the location of the 'SITE' marked with a black dot. The site is situated at the intersection of Knight St and Washington Ave. Other nearby roads include Falmouth Rd, White Birch Ave, Forest Ave, and Forest Rd. The map also shows the Falmouth Foreside and Casco Bay. A north arrow is located in the top left corner.

LOCATION MAP

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCEL IS BIRCHLANE LLC BY DEED DATED JULY 31, 2003 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS ("CCRD") IN BOOK 19897, PAGE 1.
2. THE PROPERTY IS SHOWN AS LOT 46, BLOCK A MAP 437 AND LOT 46 BLOCK D, MAP 343 AND IS LOCATED IN THE R-3 AND R-5 ZONES.
3. SPACE AND BULK CRITERIA FOR THE R-3 AND R-5 ZONES ARE AS FOLLOWS:

	R-3	R-5
MINIMUM LOT SIZE:	6,500 SQ.FT.	6,000 SQ.FT
MINIMUM FRONT FRONTAGE:	50'	50'
MINIMUM FRONT YARD:	25*	20*
MINIMUM SIDE YARD:	20*	15*
MINIMUM REAR YARD:	25*	20*
MAXIMUM BUILDING HEIGHT:	35*	35*
MAXIMUM BUILDING COVERAGE:	35%	40%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION RELATED TO PLANNED RESIDENTIAL UNIT DEVELOPMENT 25' MINIMUM BUILDING SETBACK IN R-5 ZONE AND 20' MINIMUM BUILDING SETBACK IN R-3 ZONE.
4. TOTAL AREA OF PARCEL IS APPROXIMATELY 4.06 ACRES.
5. BOUNDARY AND OTHER SITE INFORMATION SHOWN HEREON IS BASED UPON PLAN REFERENCE A, BOUNDARY AND SITE INFORMATION FOR THE NEWLY ADDED LAND IS BASED OFF OF PLAN REFERENCE 6D.
6. PLAN REFERENCES:
 - A. "EXISTING CONDITIONS PLAN, LAND OF BIRCHLANE L.L.C., WHITE BIRCH LANE, PORTLAND, MAINE 04103" DATED MAY 2008 BY BH2M.
 - B. "BIRCH MEADOWS APARTMENTS A PLANNED UNIT RESIDENTIAL DEVELOPMENT, WHITE BIRCH LANE, PORTLAND, MAINE, OWNER DRAFT PRIME" DATED FEBRUARY 26, 1995 BY LAND PLAN ASSOCIATES AND RECORDED AT THE CCRD IN PLAN BOOK 150, PAGE 56.
 - C. "FIRST AMENDED SUBDIVISION PLAN OF BIRCH MEADOWS APARTMENTS", BY SEBAGO TECHINCS, INC., DATED APRIL 10, 2020.
 - D. "EXISTING CONDITIONS SURVEY OF GLASSMAN PROPERTY KNIGHT STREET, PORTLAND, MAINE", FOR KING REAL ESTATE, BY SEBAGO TECHINCS, INC., DATED JANUARY 16, 2020 JOB NUMBER 18519-01.
7. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NAVD83, BASED ON DUAL FREQUENCY GPS CONTROL POINTS.
8. UTILITY INFORMATION DEPICTED HEREON, ARE UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 22/ASCE 38-02. 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 WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
9. THE PROPOSED DEVELOPMENT WILL BE SERVED BY PUBLIC WATER, PUBLIC SEWER, GAS AND UNDERGROUND ELECTRIC AND TELECOMMUNICATION.
10. 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 230051-0007-C, HAVING AN EFFECTIVE DATE OF DECEMBER 8, 1998. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE UNSHAD X, AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN.
11. WETLAND INFORMATION SHOWN HEREON IS BASED ON PLAN REFERENCE A.
12. THE PURPOSE OF THIS PLAN IS TO AMEND THE NUMBER OF UNITS AND THE BOUNDARY OF THE EXISTING PLANNED DEVELOPMENT TO INCLUDE THE PROPOSED LAND TO BE SOLD TO BIRCH LANE, LLC FROM EVAN AND MICHELLE GLASSMAN.

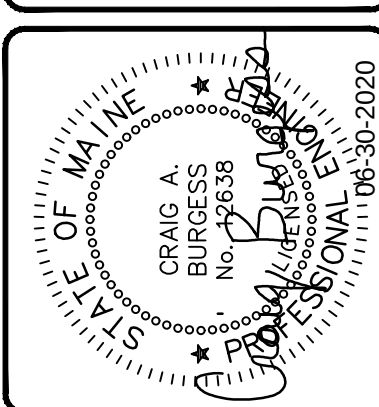
NET RESIDENTIAL DENSITY CALCULATIONS

NET RESIDENTIAL DENSITY CALCULATIONS (R-5 ZONE)

TOTAL PARCEL AREA:	2.35 ACRES (102.575 S.F.)
1. WETLANDS:	0
2. 25% OR GREATER SLOPES:	4.178 S.F.
TOTAL LAND AREA AVAILABLE:	98.397 S.F.
ALLOWABLE DENSITY :	98.397 / 3,000 S.F. = 32.79
ALLOWABLE UNITS:	33 UNITS
EXISTING UNITS:	25 UNITS
MAX ALLOWABLE PERCENT COVERAGE:	40%
EXISTING PERCENTAGE COVERAGE:	10.54%

NET RESIDENTIAL DENSITY CALCULATIONS (R-3 ZONE)

TOTAL PARCEL AREA:	1.71 ACRES (74,663 S.F.)
1. WETLANDS:	6,923 S.F.
2. 25% OR GREATER SLOPES:	1,390 S.F.
TOTAL LAND AREA AVAILABLE:	47,569 S.F.
ALLOWABLE DENSITY :	47,569 / 6,500 S.F. = 7.32
ALLOWABLE UNITS:	7 UNITS
EXISTING UNITS:	5 UNITS
MAX ALLOWABLE PERCENT COVERAGE:	35%
EXISTING PERCENTAGE COVERAGE:	4.55%

[illegible]

SECOND AMENDED SUBDIVISION PLAN
OF:
BIRCH MEADOWS APARTMENTS
6 WHITE BIRCH LANE
PORTLAND, MAINE

FOR: **KING REAL ESTATE**
198 SACO AVENUE
OLD ORCHARD BEACH, MAINE 04064

PROJECT NO.	SCALE
18519	1"=30'

SHEET 1 OF 1

18519-01ASB.dwg,



PLANNING BOARD REPORT PORTLAND, MAINE

Amendment to Previous IZ Approval
75 Chestnut Street
Level III Site Plan & Subdivision Amendment; IZ Conditional Use
PL-001343-2020
75 Chestnut Street Owner, LLC, Applicant

Submitted to: Portland Planning Board
Public Hearing Date: October 27, 2020

Prepared by: James Dealaman, Planner
Date: October 23, 2020

I. INTRODUCTION

75 Chestnut Street Owner LLC seeks an amendment to the previously-approved Inclusionary Zoning conditional use approval for a mixed-use development at 75 Chestnut Street to facilitate the payment of an in-lieu fee to the Housing Trust Fund instead of providing six workforce housing units on the development site. The previous Inclusionary Zoning approval was a component of the project's Level III Site Plan Application, which also included site plan and subdivision review.



Fig. 1 - Development Site - Plan View

II. BACKGROUND

75 Chestnut Street was originally approved by the Planning Board at its December 13, 2016 meeting under application #PEZ.2016.184; at that time, the development program included a new 7 story mixed use building with 54 residential rental units and one commercial unit (described as a live-work space), as well as including a landscaped amenity area. 54 parking spaces were proposed to be leased from the abutting parking garage. The original proposal was required to provide a minimum of five (5) on-site workforce units. To meet this requirement, the applicant proposed to provide six (6) workforce units on-site in order to meet the Inclusionary Requirements set forth in Section 14-487.

Following the original approval, the project returned to the board on February 14, 2017 to address a design-related condition, and again on April 17, 2018 for an amendment (#2018-046) to their original site plan/subdivision approval to reduce the number of residential units to 52, eliminating two (2) one-bedroom units and altering how the design related to the right-of-way. The applicant now seeks to make the 52 previously approved residential units into condominium units, none of which would be workforce units. As per Section 14-487(e)(4) of the Land Use Code the applicant has the option to pay an in-lieu fee to meet City requirements rather than provide workforce units onsite.

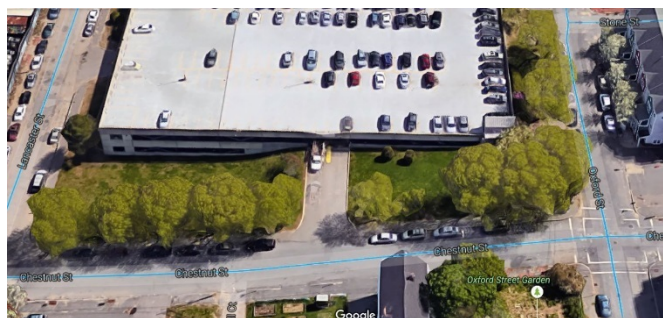


Fig. 2 - Proposed Development Site - Oblique View

Current Applicant: 75 Chestnut Street Owner LLC
Agent and Engineer: Walsh Engineering (Bill Walsh and Celina Daniell)
Architect: Archetype, PA (Katherine Detmer)

III. Required Reviews for the Amendment:

Review	Applicable Standards
Conditional Use – Inclusionary Zoning	Section 14-487

IV. PROJECT DATA

SUBJECT	DATA
Existing Zoning	B-7
Existing Use	Vacant Lot
Proposed Use	52 residential units & 1 commercial unit
Parcel Size	21,451 sq ft
Impervious Surface Area	
--Existing	2,518 sq ft
--Proposed	13,457 sq ft
--Net Change	+10,939 sq ft
Total Disturbed Area	21,451 sq ft
Building Footprint	
--Proposed	9,763 sq ft
Building Floor Area	
--Existing	0 sq ft
--Proposed	75,350 sq ft
Residential	
- # of Existing Res. Units	0
- # of proposed Res. Units	52
- # of lots	1
- # of affordable housing units	0
Proposed Bedroom Mix	
-Efficiency Units	2
One-Bedroom Units	12
Two-Bedroom Units	38
Three-Bedroom Units	0
Parking Spaces	54 via lease from adjacent garage
Handicapped Spaces	3
Bicycle parking Spaces	44 (36 inside; 8 outside) (none existing)

V. NOTICING/PUBLIC COMMENT

This public hearing item was noticed to 152 neighbors and interested parties and public notice appeared in the Portland Press-Herald on October 17th and October 18th 2020. The Planning Division received no public comment regarding the current amendment.

VI. CONDITIONAL USE – INCLUSIONARY ZONING

As required by the City's Inclusionary Zoning ordinance, residential developments with ten or more units are required to provide a minimum of ten percent of the dwelling units as Workforce Housing units, and the units themselves must contain in total, ten percent of the total bedroom count for the entire development. Alternatively, the applicant also has the option to pay a fee-in-lieu for those units.

The City's Housing Program Manager reviewed the application (Attachment 1). With the project proposing 52 residential units, the applicant must provide a minimum of 6 units of workforce housing on-site or pay a

proportional fee-in-lieu alternative. The applicant has elected to pay a fee-in-lieu of \$565,687 (5.2 x \$108,786) to meet the requirement. Housing staff have reviewed the proposal and recommend that the standards can be met in this way and offer the following condition of approval:

Prior to the Issuance of a Certificate of Occupancy

1. *The applicant shall pay an agreed upon fee-in-lieu of \$565,687 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy.*

The following provisions within the previous conditions of approval will become null and void upon being updated by the aforementioned new condition:

- i. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.*
- ii. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 75 Chestnut Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.*

VII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, and pursuant to the waivers and conditions previously approved by the Planning Board on December 13, 2016 (#2016-184), February 14, 2017, and April 17, 2018 (#2018-046), all of which will remain in force, Planning Division staff recommend that the Planning Board approve the proposed site plan amendment.

VIII. PLANNING BOARD MOTIONS

A. CONDITIONAL USE – INCLUSIONARY ZONING

On the basis of the application, plans, reports, and other information submitted by the applicant, findings and recommendations contained in Planning Board Report for application PL-001343-2020 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 all applicable provisions of the land use code, subject to the following conditions to be met as noted:

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

1. The applicant shall pay an agreed upon fee-in-lieu of \$565,687 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy.

IX. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Inclusionary Zoning review (memo from Victoria Volent, 10.21.2020)
2. Planning Board Approval Letter, Report and Attachments (approved 12.13.2016)
3. Planning Board Approval Letter, Report and Attachments (approved 02.14.2017)
4. Planning Board Approval Letter, Report and Attachments (approved 04.17.2018)

APPLICANT'S SUBMITTALS

- A. Cover Letter, dated 10.09.2020

PLANS

- Plan 1. Existing Conditions and Removals
- Plan 2. Site Plan
- Plan 3. Site Grading & Utility Plan
- Plan 4. Draft Site Recording Plat



To: Sean Dundon, Chair, Portland Planning Board

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: September 17, 2020

Subject: 75 Chestnut Street – Inclusionary Zoning Conditional Use Amendment

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. As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. 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 April 17, 2018, the Planning Board considered the Level III Subdivision and Site Plan application for an amendment to the proposals approved on December 13, 2016 and February 14, 2017. The amended proposals included a new 7-story building comprising of 52 residential apartments (rental), and one commercial unit at 75 Chestnut Street. The Inclusionary Zoning conditions approved by the Planning Board on December 13, 2016 (#2016-184) remain in force. During the December 13, 2016 Planning Board hearing, the applicant proposed the creation of 55 units of rental housing with six on-site workforce units (two studio units/one one-bedroom unit/three two-bedroom units). The Planning Board voted unanimously (7-0) that the conditional use was in conformance with the standards of the land use code and approved the conditional use application, subject to the following conditions of approval:

- i. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.
- ii. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 75 Chestnut Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

The Applicant is now requesting the Planning Board amend the Inclusionary Zoning Conditional Use approval to allow the applicant to fulfill the Inclusionary Zoning requirements by paying a fee-in-lieu based on the creation of 52 dwelling units. The proposed project would thus be required to pay a total fee of \$565,687 (5.2 x \$108,786) into the City's Housing Trust Fund in-lieu of the creation of actual housing units for workforce households. As such, the project has met the minimum requirements set forth in Section 14-487.

Staff recommends the Planning Board Approve the amended Inclusionary Zoning Conditional Use provided the Applicant agrees to pay a fee-in-lieu of \$565,687 into the City's Housing Trust Fund on or before the date upon which a certificate of occupancy is issued.

Revised Motion for the Board to Consider:

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October __, 2020 for application #CU-XX-XXXX (75 Chestnut Street) 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 condition of approval:

Prior to the Issuance of a Certificate of Occupancy

1. The applicant shall pay an agreed upon fee-in-lieu of \$565,687 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy.

Attachment

Amended Site Plan- note 20

CITY OF PORTLAND, MAINE

PLANNING BOARD

Elizabeth Boepple, Chair
 Sean Dundon, Vice Chair
 Carol Morrisette
 David Eaton
 Kristien Nichols
 Lisa Whited
 Maggie Stanley

December 16, 2016

Lou Woods
 A&M Partners Inc
 120 Exchange Street
 Portland ME 04101

Thomas S Greer, P.E.
 Pinkham & Greer, Civil Engineers
 28 Vannah Avenue
 Portland ME 04103

Project Name: **Westerlea View Lofts: 54 unit residential development plus 1 commercial space**
 Project ID: #2016-184 (Subdivision & Site Plan) and
 #2016-185 (Conditional Use Inclusionary Zoning)
 Address: 75 Chestnut Street CBL: 26/E/10
 Applicant: A&M Partners Inc
 Planner: Jean Fraser

Dear Sirs:

On December 13, 2016, the Planning Board considered a proposal for a new 7 story building comprising 54 residential apartments (rental), and one commercial unit, totaling approximately 75,800 sq ft, located at 75 Chestnut Street. One parking space per residential unit is proposed to be located in the existing abutting parking garage for the tenants of the new building, and the project also includes a landscaped amenity area. The Planning Board reviewed the proposal for conformance with the standards of the Subdivision, Site Plan, B-7 Zone and Inclusionary Zoning.

The Planning Board voted 7-0 to approve the application with the following waiver and conditions as presented below:

A. WAIVER

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. The planning board voted 7-0 that it finds that the applicant has demonstrated that site constraints prevent the planting of all required street trees in the right-of-way. The planning board waives the site plan standard (*Section 14-526 (b) (iii)*) requiring one street tree per unit for multi-family development and concludes that the applicant shall contribute \$6,400 to Portland's tree fund.

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board voted 7-0 that the plan is in conformance with the subdivision standards of the land use code and approves the application, subject to the following conditions of approval, which must be met prior to the signing of the plat:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority;
- ii. The applicant shall provide drafts of all necessary easements, including but not limited to:
 - a. Temporary construction easement from the City of Portland to Westerlea View Lofts;
 - b. License from the City of Portland to Westerlea View Lofts for building footings;
 - c. Easement(s) for the deck extensions above the existing parking garage structures (air rights);
 - d. Access easement for sidewalks that are on the site property;
 - e. Easement or other legal document to secure required parking for the residential units;for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

C. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in planning board report for the public hearing on December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board voted 7-0 that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That final proposals shall comply with the B7 Design Standards A-2, A-5, C-2, E-1 and E-3, particularly addressing:
 - a. Articulated roofline;
 - b. Massing and scale to transition and integrate with the residential context on Chestnut Street;
 - c. Pedestrian experience on Chestnut Street; and
 - d. Materiality;to be reviewed and approved by the Planning Board.
- ii. That the project is subject to the submitted Transportation Demand Management Plan dated October 2016, to include annual monitoring studies that comply with the requirements set out in the comments of the Traffic Engineering reviewer Tom Errico dated 12.9.2016; and
- iii. That the applicant submit a revised and more detailed plan for the amenity area between the building and Lancaster Street that demonstrates that the safety and security of the area meets CPTED standards eg re lighting, visual surveillance and similar issues including landscape features; and

- iv. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan dated 9.30.2016 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and
- v. That plans showing details for the areas listed below shall be submitted to the Planning Authority for review and approval prior to the issuance of a building permit:
 - a. Patio/entrances on Oxford Street
 - b. Doors for entrance to parking garage on Chestnut Street
 - c. Decks over parking lot
 - d. Live-work unit
 - e. Parking layout (dimensioned) for ADA spaces and demonstration that it meets applicable state and federal standards regarding ADA van parking.
- vi. That the applicant shall revise plans and provide design details for the following elements in the City's Right of Way, for review and approval prior to the issuance of a building permit:
 - a. Driveway aprons on Oxford Street and Lancaster Street, noting a pedestrian accessibility route with a maximum 2% cross-slope, and whether full or partial adjustment to the grade of the driveway apron is required;
 - b. Grading adjustments for the sidewalk ramp construction at the corner of Chestnut Street and Lancaster Street to address the ponding of water that currently impacts the pedestrian walking route; and
 - c. The provision of an underground lighting conduit as part of the sidewalk reconstruction along the lot frontage on Oxford Street.
- vii. That the applicant shall submit details of the location, design and screening of façade and rooftop external heating, ventilation and other mechanical equipment, and associated information to document the sound levels meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority; and
- viii. That the applicant address the Fire Department comments dated 9.7.2016; and
- ix. That the proposed building mounted wall sconces shall be installed so that the light is directed downward.

D. 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 December 13, 2016 for application 2016-185 (75 Chestnut Street) 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 voted 7-0 that the Conditional Use is in conformance with the standards of the land use code and approves the application, subject to the following conditions of approval: *(continued)*

- i. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.
- ii. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 75 Chestnut Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

The approval is based on the submitted plans and the findings related to site plan review standards as contained in the Planning Report for application #2016-184 and #2016-185, which is attached.

STANDARD CONDITIONS OF APPROVAL

Please note the following standard conditions of approval and requirements for all approved site plans:

1. **Subdivision Recording Plat** A revised recording plat listing all conditions of subdivision approval must be submitted for review and signature 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 and the plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval).
3. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
4. **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 Inspection Division.
5. **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.
6. **Subdivision Plan Expiration** The subdivision approval is valid for up to three years from the date of Planning Board approval.
7. **Performance Guarantee and Inspection Fees** A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and six (6) final sets of plans must be submitted to and approved by the Planning Division and Public Works Department prior to the release of a subdivision plat for recording at the Cumberland County Registry of Deeds, and 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.
8. **Defect Guarantee** A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

9. **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 Work's 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.
10. **Department of Public Works Permits** If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
11. **As-Built Final Plans** Final sets of as-built plans shall be submitted digitally to the Planning Division, on a CD or DVD, in AutoCAD format (*.dwg), release AutoCAD 2005 or greater.
12. **Mylar Copies** Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to the Public Works Department prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser at (207) 874- 8728.

Sincerely,



Elizabeth Boepple, Chair
Portland Planning Board

Attachments:

1. Final B7 Design Review comments dated December 5, 2016
2. Fire Department comments dated December 13, 2016
3. Planning Board Report
4. City Code, Chapter 32
5. Sample Stormwater Maintenance Agreement
6. Performance Guarantee Packet

Electronic Distribution:

Jeff Levine, AICP, Director of Planning and Urban Development
Stuart O'Brien, City Planning Director
Barbara Barhydt, Development Review Services Manager
Jean Fraser, Planner
Philip DiPierro, Development Review Coordinator, Planning
Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Inspections Division
Jonathan Rioux, Inspections Division Deputy Director
Jeanie Bourke, Plan Reviewer/CEO, Inspections Division
Chris Branch, Director of Public Works
Katherine Earley, Engineering Services Manager, Public Works
Bill Clark, Project Engineer, Public Works

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Greg Vining, Associate Engineer, Public Works
Michelle Sweeney, Associate Engineer, Public Works
John Low, Associate Engineer, Public Works
Rhonda Zazzara, Field Inspection Coordinator, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Public Works
Keith Gautreau, Fire Department
Danielle West-Chuhta, Corporation Counsel
Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File



Planning and Urban Development Department Planning Division

Subject: B7 Design Review – 75 Chestnut Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, December 5, 2016

Design Review Criteria:

The project must meet the B-7 *Mixed Use Urban District Zone Design Principles & Standards* (Appendix 4 of the Design Manual).

Findings of the Design Review:

Below are the standards relevant to the Planning Board comments from the September 13, 2016 and October 18, 2016 workshops with staff comment. Those standards not listed in this memo are either met or not applicable.

Staff recommends a condition of approval that states: That final compliance with Design Standards A-2, A-5, C-2, D-1, D-4, E-1, E-3, E-4 shall be reviewed and approved by Planning staff to address the staff design comments dated 12.9.16 which primarily relate to material placement and design of the pedestrian realm.

Principle A: Urban Design

All development in Bayside shall be designed to create a strong urban identity and sense of place. Buildings may be a variety of architectural styles, particularly those that are innovative and express the aesthetic of the time in which they were built, and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. These principles shall . . . ensure sensitive transitions to surrounding neighborhoods, enhance the physical amenities of the neighborhood, and create a pedestrian oriented environment with safe and vital streets.

A-2: Edges and Transitions – *Transitions between larger scale, mixed use buildings and smaller-scale residential uses shall be designed so that there is a seamless connection to adjacent residential neighborhoods to ensure that these zones remain stable, quiet, and secure. This shall be achieved through the mitigation of height, massing, setbacks, materials, and details and design of the façade at the pedestrian level. . . . Larger scale developments may use public open spaces to provide transitions to lower scale uses.*

- To address the standard and the board comment, the applicant modified the massing on the Oxford Street façade. The revisions result in a graduated massing that places a four-story mass at the street, of similar scale and proportion to the residential architecture around it. The changes in plane are accentuated with changes in material. The façade continues to have a “secondary” presence on the street – Chestnut Street being the principal façade with the primary residential entrance. The secondary aspect of the façade is reflected in the design of the door and the smaller, elevated windows at the street to indicate the private use.
- On Chestnut Street, the detail and design of the façade at the pedestrian level should be strengthened to improve the sense of scale through revisions to material placement and the addition of articulation elements that relate to the pedestrian realm experience (Standards E-1, E-3, E-4).

A-5: Pedestrian Environment – *Development on public streets or public spaces shall be human scale at the pedestrian level and enhance the pedestrian environment through the use of elements at the first floor such as . . . fully functioning entries oriented to the street; active windows and storefronts; awnings and weather protection; outdoor seating and sales displays; adequately sized sidewalks; gathering spaces; trees and landscaping; street furniture; . . .*

- The project uses fenestration at the ground levels, entrances emphasize with canopies and material change, and open space at the end of the block.
- Where the standard is still not met is the detail and design of the building façade at the ground level. Little to no massing or façade variation is used to differentiate the ground floor – the result is a flat façade for the full 6 stories of the building. The staff recommends that the architecture team further articulate and detail the pedestrian level to create a sense of enclosure and the placement of materials to reflect the uses rather than arbitrary placement. These comments also apply to Standard E-1 Architectural Design, E-3 Massing, and E-4 Articulation.

A-7: Building Orientation – *The primary facades and entrances of buildings shall be oriented to streets, major pedestrian routes, or open spaces in order enhance the pedestrian-oriented environment.*

- The project faces onto two streets and is set close to the property line.
- Chestnut Street is treated like the primary façade with the primary residential entrance. Oxford Street is the secondary façade but addresses the street with a minor residential entrance, some visual interest and massing variation, and a maintenance of the street wall.

Principle C: Parking, Loading and Service Areas

C-2: Parking Entrances – *The entrance to parking garages shall respect the pedestrian realm and minimize the visual impact of the garage . . .*

- For CPTED concerns, staff recommended that the design of the “tunnel” to the garage entrance on Chestnut Street be revised – the applicant has addressed the concern by adding a gate at the façade. However, the design of that gate and vehicle entrance/exit should be clarified so as to not encroach on the sidewalk/pedestrian path. Car stacking should also be considered in the placement of the gate.

Principle D: Open Space and the Public Realm

D-1: Open Space Design – *Publicly-accessible parks, plazas, and other open space shall be accessible from sidewalks and surrounding buildings. . . . Pedestrian amenities such as seating, lighting, artwork, trash receptacles, etc. shall be compatible with the City’s Streetscape Standards for Bayside. . . . Solar access, wind protection, and landscaping shall be considered to enhance pedestrian comfort and provide a variety of sunny and shaded areas.*

- It is not clear whether the open space provided is accessible from the sidewalk. The space shown as plaza and seating is visible from the sidewalks, streets, and buildings as required by the standard. The amenity provided appears to be a paved area with seating that is under shade, and additional landscaping throughout the space. No lighting is proposed.

D-4: Pedestrian Amenities – *Pedestrian amenities shall comply with the City’s Technical Manual at a minimum, and also with the streetscape standards selected for Bayside.*

- Seating: One linear foot of seating for each thirty (30) square feet of open space, or 30 linear feet of pedestrian route shall be provided within publicly accessible open space.
- It is not clear whether the seating proposed in the open space meets this standard – what kind of seating and what linear feet of seating are proposed?

Principle E: Architectural Design

New development shall create a mixed-use, pedestrian-friendly setting that contributes to the context of the surrounding urban fabric and provides a sensitive transition to adjacent residential neighborhoods. . . . The scale, massing, and fenestration of new development shall reflect its context, . . .

E-1: Architectural Design – *New development in Bayside may be a variety of architectural styles, . . . and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. A respectful integration of contemporary design within the existing context shall complement, reinforce, and enhance the prevailing patterns and proportions of adjacent buildings without requiring imitation or repetition.*

- Overall, staff does not find the placement of materials to be contextual. In some cases, the materials correspond to the massing or use, but in other cases, materials change at corners or in arbitrary ways that result in a patchwork quilt effect that does not benefit the overall design nor does it relate to the pattern or use of materials in the context. Staff recommends a simplification of material placement (example below). Visual interest should be achieved through articulation rather than a material pastiche.

E-2: Height – *Heights along the edges of the B-7 Zone shall transition to the scale of adjacent neighborhood development through design elements such as variations in massing; articulation of the facades in intervals that reflect existing structures or platting pattern, stepping the architecture to adjacent buildings and/or contextual proportions of building elements, use of architectural style and details such as roof lines, belt courses, cornices, or fenestration, and color or materials that derive from the less intensive zone.*

- The Planning Board's concerns regarding transition of height have been addressed by the revisions to the Oxford Street façade.

E-3: Massing – *Large expanses of undifferentiated façade or uniform cladding is not allowed along public rights of way. . . . The composition of a proposed building façade shall be defined by horizontal and vertical articulation, with vertical articulation being predominant, in keeping with the local context of the urban form.*

- As stated above, little to no massing or façade variation is used to differentiate the ground floor – the result is a flat façade for the full 6 stories of the building.

New buildings that are four stories or higher shall have three components: base, middle, and top.

- The base of the building should be more consistently defined, especially on the Chestnut Street side. At this point, that can best be achieved through articulation, material placement and detailing. The corner, double-height live-work unit could also be more substantially differentiated from the other masses of the building.

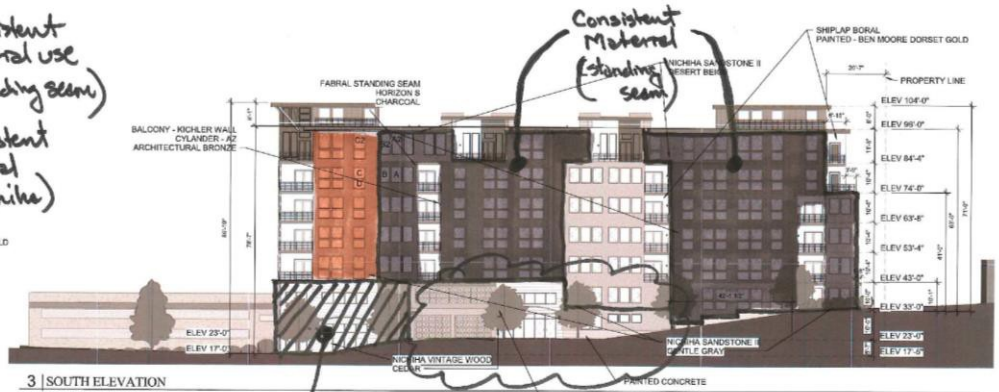
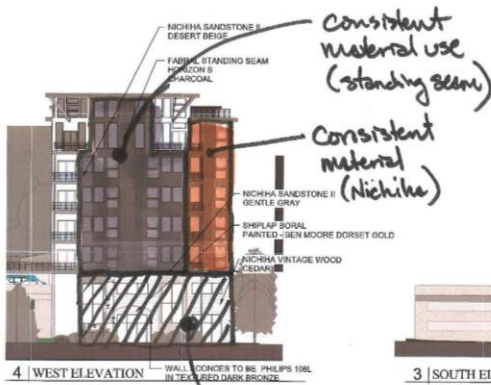
E-4: Articulation – *Facades visible from public rights of way shall incorporate design elements that break the facades into components scaled to the pedestrian, and to the context of other buildings on the street. This may be accomplished through an expression of the building's base, middle and top, vertical fenestration, variation in the planes of the façade, architectural details such as windows, doors, bays, balconies, cornices, reveals, expansion joints, trim, changes in color, texture, and material, permanent artwork, etc.*

- The project uses fenestration at the ground levels, entrances emphasize with canopies and material change, recessed bays at the upper floors, and open space at the end of the block.

The base of the building which relates to the pedestrian realm shall be designed with a high level of detailing and material quality utilizing the options listed above. . . . Buildings which are six and seven stories shall meet this standard on the first 24 feet, or the first two floors at a minimum.

- The level of detail and articulation on the Chestnut Street elevation is not sufficient, especially at the street level. Material changes are mostly arbitrary and other than at the entrance, do not correspond to uses or plane changes. Revisions to meet this standard could come in form of enclosure; articulation and detail (reveals, dimensional trim, material transitions, detail); placement of material that corresponds with uses

[see sketch next page]



Consistent material use differentiating this corner unit

Ped level articulation + match floor plans

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2016-184

Date: 12/13/2016

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in. We will NOT be requiring this vertical clearance as emergency vehicles will not be entering the parking garage

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016
Premises Identification

The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

If the building entry faces a different street, both the street name and number should be large enough to read from the street

Address numbers must be a minimum of 4 inches high.

The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty")

Color: Addresses should be in a color that contrasts with the background.

Whenever possible, should be illuminated.

Provide additional address signs at entrances to the property when the building address is not legible from the public street.

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

Emergency vehicle access is two sides only, Chestnut and Oxford. This is acceptable to the Fire Dept although because of the arrangement and height of the building I would like to require the overhead power line on Chestnut Street going to the transformer to be underground. This will drastically restrict the Aerial Ladder trucks operation at this proposed site.

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

I would like to see a letter from the Portland Water District of their ability to serve domestic and fire protection demand for the proposed high rise building.

Comments Submitted by: Keith Gautreau/Fire on 12/12/2016

I have received the Ability to Serve letter from PWD and the Authority Having Jurisdiction accepts.



PLANNING BOARD REPORT PORTLAND, MAINE

Westerlea View Lofts: 54 unit residential development plus 1 commercial space

75 Chestnut Street

Level III Subdivision and Site Plan
Conditional Use Inclusionary Zoning

A&M Partners Inc, Applicant

Project #2016-184 (Subdivision & Site Plan) Project
#2016-185 (Conditional Use Inclusionary Zoning) CBL:
26/E/10

Submitted to: Portland Planning Board Public Hearing Date: December 9 th , 2016	Prepared by: Jean Fraser, Planner Date: December 13 th , 2016
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I. INTRODUCTION

A&M Partners Inc have requested a final review of the proposed Westerlea View Lofts on Chestnut Street. A preliminary Level III Site Plan and Subdivision application was submitted at the end of July and the Planning Board has held two Workshops (9.13.16 and 10.18.16)

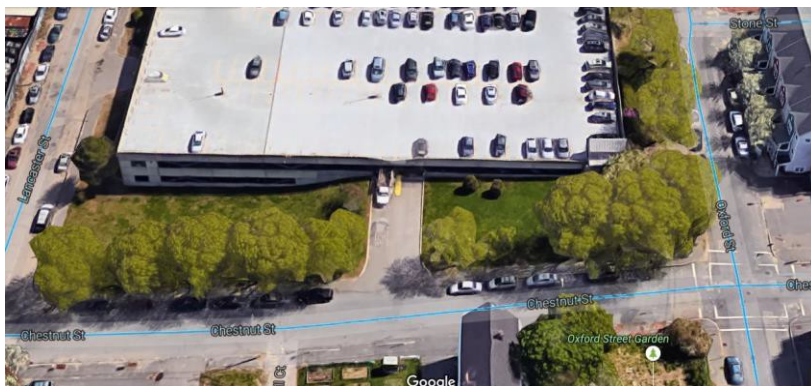
The project is located at the corner of Chestnut Street and Lancaster Street in the B7 zone. The proposal is for a 7 story 54 unit residential building (plus one commercial unit) to be constructed on part of the open area surrounding the Chestnut Street parking garage.

The proposal is subject to the Inclusionary Zoning ordinance and a separate conditional use application was submitted for review which proposes 5 units to meet the definition of workforce housing units.

The site abuts the R6 zone along Chestnut and Oxford Streets and is currently an amenity area comprising 10 mature locust street trees and an access drive to the middle level of the parking garage. The building would be constructed over the garage access.

Applicant: Lou Wood, A & M Partners, Inc
Agent and Engineer: Tom Greer, Pinkham & Greer
Architect: William Hopkins, Archetype

Required reviews and waivers:



Applicant's Proposal	Applicable Standards
New structure of 54 dwelling units	Subdivision Review
Multifamily building of 75,800 sq ft	Level III Site Plan Review and B-7 Design Review
New structure of 54 dwelling units	Inclusionary Zoning Section "Ensuring Workforce Housing" 14-487

Waiver Requests	Applicable Standards
Street trees – project includes 22 street trees, less than required (this application came in prior to the Amendment to the waiver provisions)	Site Plan Standard, <i>Section 14-526(b)2.b(iii)</i> and Technical Manual, <i>Section 4.6.1</i> . All multi-family development shall provide one street tree per unit. Waiver permitted where site constraints prevent it, to allow contribution of a proportionate amount to Tree Fund. <i>54 units less 22 street trees proposed or existing = 32 street trees required; contribution of \$6400 recommended, as the submission was prior to the new ordinance and technical standards regarding street trees.</i>

II. PROJECT DATA

SUBJECT	DATA
Existing Zoning	B-7
Existing Use	Parking garage and open, landscaped surrounds
Proposed Use	54 residential units & 1 commercial unit
Parcel Size	92,202 sq ft
Impervious Surface Area	
--Existing	53,832 sq ft
--Proposed	64,796 sq ft
--Net Change	10,964 sq ft
Total Disturbed Area	22,309 sq ft
Building Footprint	
--Existing	49,326 sq ft
--Proposed	59,126 sq ft
--Net Change	9,800 sq ft
Building Floor Area	
--Existing	147,978 sq ft (existing garage)
--Proposed	223,778 sq ft
-Net Change	75,800 sq ft
Residential	
- # of Existing Res. Units	0
- # of proposed Res. Units	54
- # of lots	2
- # of affordable housing units	6
Proposed Bedroom Mix	
-Efficiency Units	2
One-Bedroom Units	14
Two-Bedroom Units	38
Three-Bedroom Units	0
Parking Spaces	446 existing in garage, of which 54/55 spaces (1:1) proposed for tenants
Handicapped Spaces	2
Bicycle parking Spaces	44 (36 inside; 8 outside) (none existing)
Estimated Cost of the project:	\$5,850,000

III. EXISTING CONDITIONS

The proposal site abuts the west side of the 2-3 story parking garage, with the main frontage of the new building along Chestnut Street. The site slopes downhill about 20 feet from Oxford Street to Lancaster Street.

The building is proposed to be at the “top” of the slope at the corner of Chestnut and Oxford Streets and next to the pedestrian steps leading to the top deck of the parking garage- see photos right and below.



Corner of Oxford and Chestnut Streets



Looking towards site from garage deck

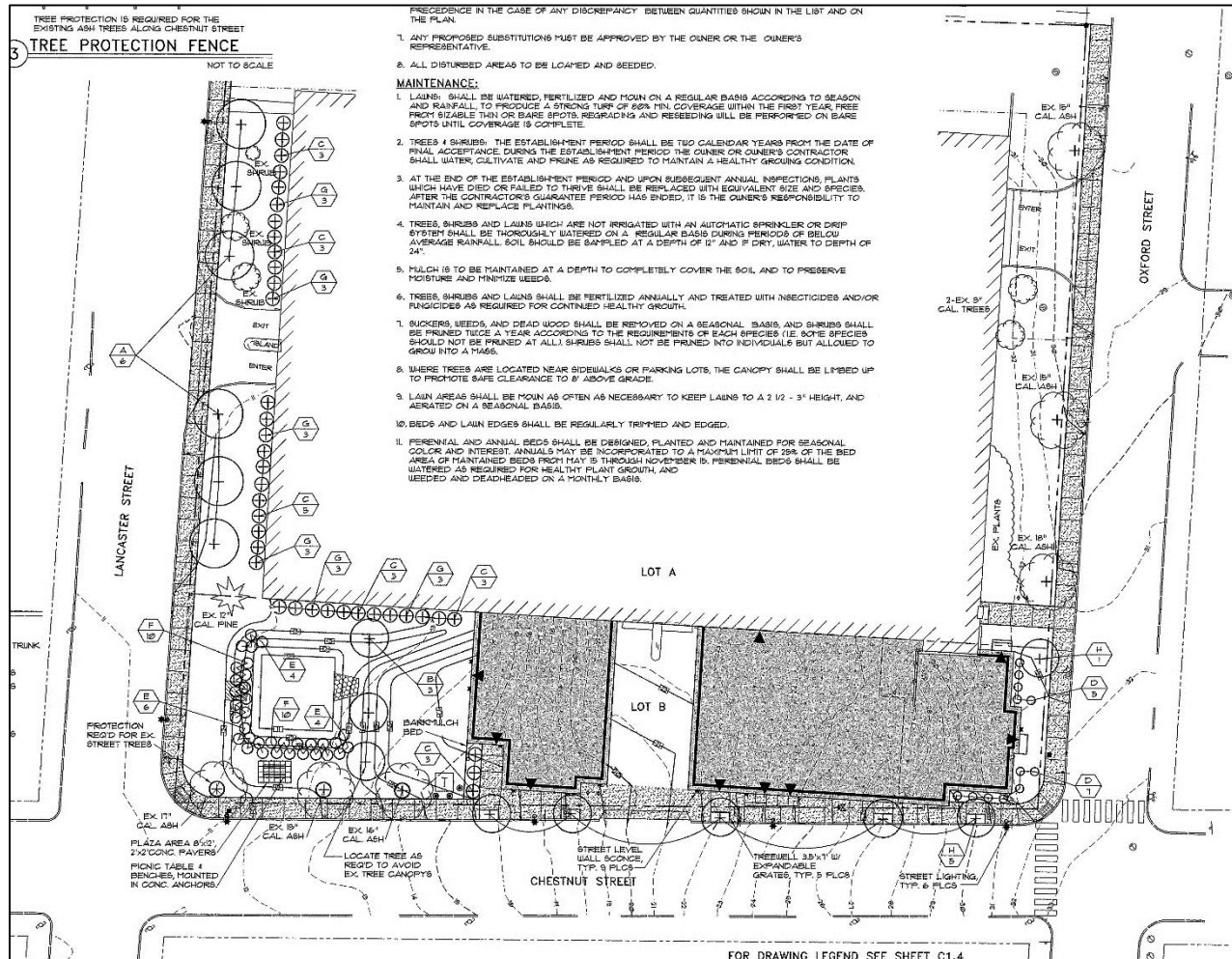
IV. PROPOSED DEVELOPMENT

The proposals in terms of the site layout have changed slightly by relocating the footprint 10 feet further away from Oxford Street ([Plan P4 Site Plan](#)). The proposed 7 story building abuts the parking garage and is built over the drive access to the garage. The main entrance to the building faces Chestnut Street and is located just uphill from the garage access drive. There is also an entrance from the parking lot to the elevator lobby and seven secondary entrances to specific units or rooms (eg community room) ([see Floor Plan in Plan P14](#)).

The sidewalk along Lancaster, Chestnut and Oxford Streets (ie whole of the lot) is proposed to be rebuilt in concrete based on the City’s new sidewalk materials standard. It was widened to 8 feet as recommended by staff and supported by the Board at the first Workshop. Seven of the ten existing mature trees along Chestnut would be removed ([Plan P2](#)) but the revised proposals add in 15 street trees along Lancaster, Chestnut and Oxford Streets.

The new building would provide 54 apartment units; these are understood to be market-rate apartments with the exception of 6 units proposed to meet the definition of “Work Force” housing. In addition, there is a 2-level unit next to the garage access drive that is considered commercial although it has been suggested it may be a “live-work”. It totals approximately 3550 sq ft., with an entrance on Chestnut Street and from the common amenity space on the north side. The first full level of apartments (floor 3) have cantilevered decks out over the top deck of the parking garage ([see elevations, Plan P13](#)), and a total of 42 units have balconies.

Final Landscape Plan (Plan P6):



V. PUBLIC COMMENT AND WORKSHOP DISCUSSIONS

This hearing was noticed to 160 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on December 5 & 6, 2016. The applicant held a Neighborhood Meeting on August 31, 2016. The Planning Division received two public comments from Louis Christen (PC1 and PC2) who is concerned that the building does not respect the nearby much lower buildings and should be lower.

As indicated in the table below the applicant has addressed most of the neighbor, staff and Planning Board comments although the footprint, general massing and maximum height have not been revised.

Issues raised at Workshops	Information/revisions submitted/included
Building needs better engagement with the community/street	Community room identified in ground level; re-orientation of entrance to live/work space so from Chestnut
Concern re height in context of neighborhood-transition to surrounding lower heights and public comment request to remove one floor	Neighborhood Architectural Overview (Attachment M) with sections and renderings and floorplans- overall massing has not changed except for stepbacks on Oxford Street elevation
Concern re siting and massing of building re R6; Oxford elevation seems like the "back"	Moved 10 ft from Oxford Street with additional stepbacks at upper levels on Oxford St elevation
Concern about design- using colors to break up bulk; lack of urban scale at street	Updated re entrances and one color for apartment walls (see Att. M)
Windows/apartments at ground level - Oxford facing apartments might better be a different use	Remain as apartments, but with entrances direct from Oxford Street sidewalk.
Street trees	Removing 7 existing and replaced with 5 new ones on Chestnut, plus adding 10 additional street trees on the lot

Site Landscape- screen blank wall of garage	Added viburnum along base of garage
Site landscape- outdoor recreational space- design and security	Added steel slatted picnic table on paved area
Site landscape- adding green elements	Trees and planting have been added- see Plan P6 .
Traffic safety analysis Lancaster and Chestnut	Submitted
Information about parking supply /demand /management	Attachment O provides additional information
Sidewalks- need to be widened to at least 8 feet	Sidewalks widened to 8 feet
Sidewalks- extend replacement to Lancaster & Oxford	Concrete sidewalk (as allowed under new standards, all at 8 ft wide) extended along all street frontages of larger (garage) site)
Street lighting	Added 6 street lights (Bayside medium) along Chestnut and Lancaster
ROW- ADA ramps at corners	Revised to meet staff recommendations
Stormwater - Peer Engineer comments	Addressed all comments except re PWD capacity letter
Clarification of external mechanicals on facades	Not specifically addressed
Parking- allow residents without car to have a rebate instead of parking space	The Traffic engineering reviewer considers this has been addressed (Attachment 5).
Bike parking- some inside and some on street for visitors	36 inside; 8 outside

VI. STAFF REVIEW

A. ZONING ASSESSMENT

The proposed development is on the edge of the B7 zone and faces the R6 zone on Chestnut and Oxford Streets. The B7 zone includes a number of unique requirements concerning setbacks and the length of the building wall.

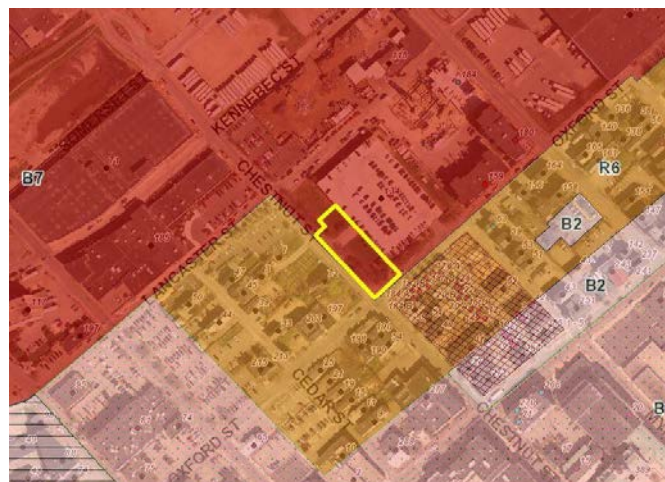
The applicant has not confirmed the use of the “commercial” space between the garage entrance and Lancaster Street on the lowest floor and staff request details be submitted when available to ensure there are no zoning or site plan issues (see suggested condition of approval).

The applicant has submitted a Zoning Analysis ([Attachment C](#)) and staff consider that the proposed development meets all of the dimensional requirements of this zone. The

Bayside Height Overlay Map (2006) identifies the site as within the “Intermediate Height District” of 3 floors minimum and a maximum of 105 ft. The R6 zoned areas across Chestnut and Oxford Streets are identified as “Traditional Neighborhood Height” with a minimum of 2 floors and a maximum height of 55 feet.

[Plan P13](#) Building Elevations show the calculation for the average grade which is used to calculate the height based on the zoning definition of height. The average grade is 24.125 feet and top most roof structure is 104.0 feet (both from same datum) so the zoning height is 79.875 feet. A table of heights per zoning compared to “absolute” heights is included in section VI D to provide information in the context of the discussion of height transition from this site to abutting buildings.

The B7 Zoning ordinance also specifically requires compliance with the *B7 Design Principles and Standards*, which includes requirements for access and circulation, sidewalks and crosswalks, and lighting in addition to building design. The relevant building design standards are included in section VI D.



B. SUBDIVISION STANDARDS

14-496. Subdivision Plat Requirements

The applicant has submitted a draft plat which has been revised to address preliminary staff comments and will be finalized prior to signature in accordance with the standard condition of approval. The location of the five identified easements on the plat is one of the staff concerns.

14-497. General Requirements (a) Review Criteria

Water, Air Pollution and Soil Erosion

A revised Erosion Control Plan has been submitted (Plan 7) and staff find this is acceptable (Attachment X). The Portland Water District has just issued a water capacity letter and this will be available at the Hearing.

Traffic

The applicant has submitted the requested Traffic Assessments (Attachment H) and these are acceptable to the Traffic Engineering Reviewer (Attachment 5).

Parking

The applicant has noted that there is a 450 space parking garage abutting the project and in principle the parking supply is adequate. Under Zoning and Site Plan ordinances there is a requirement for additional information and this is discussed below.

Sanitary Sewer/Soils

The application has been reviewed by the consulting Peer Engineer (Attachments 4) and is acceptable subject to confirmation of wastewater capacity. The wastewater capacity letter has been received (Attachment G).

Storm water

The applicant proposes to manage stormwater impacts by collecting the stormwater and directing it to an underdrained soil filter at the corner of the site near Lancaster/Chestnut Streets. The revised submissions additional detail and address the Peer Engineer comments (Attachments 4).

Scenic Beauty and Street Trees

The proposal results in the removal of 7 of the 10 mature trees at the back of the sidewalk on Chestnut Street (Plan P2). The Landscape Plan has been revised to add 5 new maple street trees along Chestnut Street and 10 new trees elsewhere on the site. The street tree requirement is discussed under the Site Plan review.

Comprehensive Plan

The project is consistent with the Housing Goals and Policies of the Comprehensive Plan.

Electrical Service

The Subdivision ordinance requires electrical service to be underground and the proposals have been revised to place the services crossing Chestnut Street underground (Plan P5).

C. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing

Staff have confirmed that they concur with the submitted traffic data and that no further action is required (Att. 5).

Right of Way

The applicant is proposing to reconstruct the sidewalk at least 8 feet in width and in concrete along the Chestnut, Oxford and Lancaster Streets in accordance with the Council's current materials policy. Staff recommend that this addresses the Technical Standards, but have noted that some details need to be revised to address drainage, slopes of the sidewalks where they cross aprons, and lighting requirements (Attachment 5). A suggested condition addresses this comment.

Public Transit Access - these do not apply to this project.

Parking

The applicant is proposing the provision of parking on a one to one ratio within the parking garage and has submitted a TDM ([Attachment N.](#)) and additional parking information ([Attachment O](#)) to clarify the proposed parking provision and how adequate spaces will be available for tenants including ADA spaces. The Planning Board is required to establish the parking requirement based on a submitted parking analysis. The Traffic Engineer Tom Errico has confirmed that both the number of spaces provided and the information is acceptable, subject to the TDM being implemented with annual monitoring studies that are carried out in accordance with specification included in the suggested condition of approval ([Attachment 5](#)). Further clarification regarding ADA required parking is also the subject of a suggested condition of approval.

Bicycle Parking

The proposals show 44 bicycle parking spaces (8 outside near the commercial space; 36 inside the parking garage) on the site plan and this meets the requirement of 2 bicycle parking spaces for every 5 dwelling units.

Snow Storage

This requirement does not apply.

Transportation Demand Management

The Site Plan ordinance requires that all Level III development in the B7 zone shall design and implement a Transportation Demand Management (TDM) Plan. The applicant has submitted a TDM Plan ([Attachment N](#)) and this is considered by staff to be acceptable subject to the annual monitoring studies being carried out in accordance with the reviewer's recommendations ([Attachment 5](#)). A suggested condition of approval reflects the reviewer comments.

Landscape Preservation / Site Landscaping and Screening

The proposals include viburnum planting around the base of the parking garage planting around the base of the building and around the rain garden, and 9 new street trees ([Plan P6](#)). Staff are concerned at the lack of detail regarding hardscape materials, character of the planting re CPTED issues, and boundary fencing along Oxford Street and in the amenity area; suggested conditions require further detail for review and approval by staff.

Street Trees

The proposals retain 7 existing street trees, add 5 street trees in the Chestnut Street ROW, and add 10 trees on the site near the ROW, giving a total of 22 street trees provided as part of the proposal.

Water quality, Stormwater Management and Erosion Control - see discussion under Subdivision Review above.

Public Safety

The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The proposals bring the gated entrance to the parking garage (under the building) near to Chestnut Street and this addresses concerns regarding the previous proposal for a closed "tunnel" which limited surveillance and access control. The proposed amenity area between the building and Lancaster Street is not lit and includes grass and shrub planting. Staff are concerned that this area may not have any immediate surveillance from the building (as its next to the commercial space) and suggest a condition that allows for further consideration and review of the design details of this area to ensure it is as safe and secure as possible.

Fire Prevention

The Fire Department has provided comments which are subject of a suggested condition of approval ([Attachment 3](#).) One comment requested sight of the PWD capacity letter; this was provided this week and further comments are awaited.

Public Utilities

The Peer Engineer has reviewed the utilities and these are considered acceptable ([Attachment 4](#)).

Massing, Ventilation and Wind Impact

The Site Plan ordinance includes the following requirement in respect of wind impacts:

- a. *The bulk, location or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.*

The submissions do not include any detailed information regarding the wind conditions anticipated to be created by the proposed 7 story building at this location. Staff do not consider that the proposed building would result in any problems or unsafe conditions.

Shadows

The applicant has submitted a Shadow Study ([Attachment J](#)). The shadows created by the building largely affect the parking garage.

Historic Resources- this does not apply to this project.

Exterior Lighting including Street Lighting

Building mounted lighting is proposed within the balconies and in sconces near the entrances; the specifications are included in [Attachment L](#). Staff consider these meet the technical requirements, subject to the sconces being mounted so they direct the light downward. This requirement is specified in a suggested condition of approval.

As noted in the discussion of public safety, the absence of pole lighting in the amenity area may present security and safety issues and a suggested condition requires that this be reviewed further.

Regarding street lighting in the ROW, the applicant has added three street lights to meet the staff requests regarding lighting in Chestnut Street and Lancaster Street. Technically the applicant could be requested (per Technical Standards and B7 *Design Standards*) to replace the street light fixtures along Oxford Street, but staff recommend that the applicant be requested to provide just the underground lighting conduit as part of the reconstruction of the sidewalk in order to allow for LED lighting in the future. The City has issued an RFP to update the street lighting, so the city would prefer to have the conduit for the future upgrades.

Noise and Vibration

The applicant has confirmed that rooftop appurtenances will be located on the roof without screening (set back) and staff assume this will include HVAC mechanicals. A public comment also asked about whether any mechanical devices would be protruding from the sides of the building. The suggested conditions address concerns about noise, screening and mechanical fixtures on the facades.

D. DESIGN STANDARDS

B-7 Zone Design Principles and Standards

The applicant has submitted an updated narrative explaining how the design has been revised to mitigate the height on the Oxford Street elevation, break up the roof line generally and modify entrances/uses at ground level ([Attachment M.](#)). These address the comments from the two PB Workshops (including public comments), which generally related to:

- Building needs better engagement with the community/street
- Concern re height in context of neighborhood- transition to surrounding lower heights
- Concern re siting and massing of building re R6
- Concern about design- using colors to break up bulk; lack of urban scale at street

The “Neighborhood Architectural Overview” in [Attachment M](#) also provides birds eye aerials, renderings, sections, floor plans and elevations to illustrate how the proposed building integrates into the existing urban fabric.

Both members of the public and the Board have focused on assessing the way the building “*ensures sensitive transitions to surrounding neighborhoods*” (B7 Design Standards- Principle A as extracted below) as this requires a sensitivity to existing buildings as well as to the zoning maximums for each zone. This issue is not only related to height, but also to the material placement and design of the pedestrian realm.

Height

The following tables have been prepared to help frame the final review of this issue in the context of the proposals where heights are shown based on two different ways of measuring height: the zoning height (height above the average grade) and the absolute height (height of the building at a particular point in relation to the grade at that location).

The absolute height of the proposed building (from Oxford Street) is shown as 71 feet on the elevation in Plan P13; this would be about 35 feet higher than the roof ridge of the townhouses opposite on Oxford Street, and 30-40 feet higher than the Pearl Place buildings further east on the same side of Oxford Street.

Table of proposed heights: (see Plan P13)

Heights of proposed elements of new building	Per zoning definition (height from average grade)	Absolute height (from grade at that location)	Maximum height allowed by zoning
Mezzanine at Oxford St facade	79.875 ft	71 ft approx	105 ft
Mezzanine at Lancaster St end	79.875 ft	86 ft 10 in	
Top of highest main floor at Oxford St end	71.875 ft	63 ft approx	
Top of highest floor at Lancaster St end	71.875 ft	78 ft 7 in	
Lowest stepback at Oxford St facade	59.875 ft	41 ft approx	

Table of Surrounding Zoning Heights allowed and Absolute Heights of existing buildings:

Surrounding zones on opposite side of street from the development	Maximum zone height allowed on opposite side of street	Absolute height of existing buildings nearby as noted
Chestnut Street	55 ft	40 ft approx. (one building on opposite side of Chestnut St)
Oxford Street	55 ft	35 ft approx. (row of buildings on opposite side of Oxford St)
Lancaster Street	105 ft	Existing parking lot
(Other side is parking garage)	105 ft	30-40 ft approx. (Pearl Place buildings nearest Oxford St on other side of garage)

Pedestrian Realm and Materials

The City's Urban Designer has provided comments on the final design in the context of the standards (Attachment 2) and recommends the following condition of approval:

That final proposals comply with Design Standards A-2, A-5, C-2, D-1, D-4, E-1, E-3, E-4 and shall be reviewed and approved by Planning staff to address the staff design comments dated 12.9.16 which primarily relate to material placement and design of the pedestrian realm.

The suggested condition is based on the following comments from the Urban Designer that address other aspects of the issue of "sensitive transitions" (Attachment 2):

Principle A: Urban Design

All development in Bayside shall be designed to create a strong urban identity and sense of place. Buildings may be a variety of architectural styles, particularly those that are innovative and express the aesthetic of the time in which they were built, and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. These principles shall . . . ensure sensitive transitions to surrounding neighborhoods, enhance the physical amenities of the neighborhood, and create a pedestrian oriented environment with safe and vital streets.

A-2: Edges and Transitions – *Transitions between larger scale, mixed use buildings and smaller-scale residential uses shall be designed so that there is a seamless connection to adjacent residential neighborhoods to ensure that these zones remain stable, quiet, and secure. This shall be achieved through the mitigation of height, massing, stepbacks, materials, and details and design of the façade at the pedestrian level. . . . Larger scale developments may use public open spaces to provide transitions to lower scale uses.*

- To address the standard and the board comment, the applicant modified the massing on the Oxford Street façade. The revisions result in a graduated massing that places a four-story mass at the street, of similar scale and proportion to the residential architecture around it. The changes in plane are accentuated with changes in material. The façade continues to have a “secondary” presence on the street – Chestnut Street being the principal façade with the primary residential entrance. The secondary aspect of the façade is reflected in the design of the door and the smaller, elevated windows at the street to indicate the private use.
- On Chestnut Street, the detail and design of the façade at the pedestrian level should be strengthened to improve the sense of scale through revisions to material placement and the addition of articulation elements that relate to the pedestrian realm experience (Standards E-1, E-3, E-4).

A-5: Pedestrian Environment – *Development on public streets or public spaces shall be human scale at the pedestrian level and enhance the pedestrian environment through the use of elements at the first floor such as . . . fully functioning entries oriented to the street; active windows and storefronts; awnings and weather protection; outdoor seating and sales displays; adequately sized sidewalks; gathering spaces; trees and landscaping; street furniture; . . .*

- The project uses fenestration at the ground levels, entrances emphasize with canopies and material change, and open space at the end of the block.
- Where the standard is still not met is the detail and design of the building façade at the ground level. Little to no massing or façade variation is used to differentiate the ground floor – the result is a flat façade for the full 6 stories of the building. The staff recommends that the architecture team further articulate and detail the pedestrian level to create a sense of enclosure and the placement of materials to reflect the uses rather than arbitrary placement. These comments also apply to Standard E-1 Architectural Design, E-3 Massing, and E-4 Articulation.

A-7: Building Orientation – *The primary facades and entrances of buildings shall be oriented to streets, major pedestrian routes, or open spaces in order enhance the pedestrian-oriented environment.*

- The project faces onto two streets and is set close to the property line.
- Chestnut Street is treated like the primary façade with the primary residential entrance. Oxford Street is the secondary façade but addresses the street with a minor residential entrance, some visual interest and massing variation, and a maintenance of the street wall.

Principle C: Parking, Loading and Service Areas

C-2: Parking Entrances – *The entrance to parking garages shall respect the pedestrian realm and minimize the visual impact of the garage . . .*

- For CPTED concerns, staff recommended that the design of the “tunnel” to the garage entrance on Chestnut Street be revised – the applicant has addressed the concern by adding a gate at the façade. However, the design of that gate and vehicle entrance/exit should be clarified so as to not encroach on the sidewalk/pedestrian path. Car stacking should also be considered in the placement of the gate.

Principle D: Open Space and the Public Realm

D-1: Open Space Design – *Publicly-accessible parks, plazas, and other open space shall be accessible from sidewalks and surrounding buildings. . . . Pedestrian amenities such as seating, lighting, artwork, trash receptacles, etc. shall be compatible with the City’s Streetscape Standards for Bayside. . . . Solar access, wind protection, and landscaping shall be considered to enhance pedestrian comfort and provide a variety of sunny and shaded areas.*

- It is not clear whether the open space provided is accessible from the sidewalk. The space shown as plaza and seating is visible from the sidewalks, streets, and buildings as required by the standard. The amenity provided appears to be a paved area with seating that is under shade, and additional landscaping throughout the space. No lighting is proposed.

D-4: Pedestrian Amenities – *Pedestrian amenities shall comply with the City's Technical Manual at a minimum, and also with the streetscape standards selected for Bayside.*

- Seating: One linear foot of seating for each thirty (30) square feet of open space, or 30 linear feet of pedestrian route shall be provided within publicly accessible open space.
- It is not clear whether the seating proposed in the open space meets this standard – what kind of seating and what linear feet of seating are proposed?

Principle E: Architectural Design

New development shall create a mixed-use, pedestrian-friendly setting that contributes to the context of the surrounding urban fabric and provides a sensitive transition to adjacent residential neighborhoods. . . . The scale, massing, and fenestration of new development shall reflect its context, . . .

E-1: Architectural Design – *New development in Bayside may be a variety of architectural styles, . . . and shall be organized according to principles of urban design that integrate with the urban fabric of surrounding neighborhoods and Portland as a whole. A respectful integration of contemporary design within the existing context shall complement, reinforce, and enhance the prevailing patterns and proportions of adjacent buildings without requiring imitation or repetition.*

- Overall, staff does not find the placement of materials to be contextual. In some cases, the materials correspond to the massing or use, but in other cases, materials change at corners or in arbitrary ways that result in a patchwork quilt effect that does not benefit the overall design nor does it relate to the pattern or use of materials in the context. Staff recommends a simplification of material placement (example below). Visual interest should be achieved through articulation rather than a material pastiche.

E-2: Height – *Heights along the edges of the B-7 Zone shall transition to the scale of adjacent neighborhood development through design elements such as variations in massing; articulation of the facades in intervals that reflect exiting structures or platting pattern, stepping the architecture to adjacent buildings and/or contextual proportions of building elements, use of architectural style and details such as roof lines, belt courses, cornices, or fenestration, and color or materials that derive from the less intensive zone.*

- The Planning Board's concerns regarding transition of height have been addressed by the revisions to the Oxford Street façade.

E-3: Massing – *Large expanses of undifferentiated façade or uniform cladding is not allowed along public rights of way. . . . The composition of a proposed building façade shall be defined by horizontal and vertical articulation, with vertical articulation being predominant, in keeping with the local context of the urban form.*

- As stated above, little to no massing or façade variation is used to differentiate the ground floor – the result is a flat façade for the full 6 stories of the building.

New buildings that are four stories or higher shall have three components: base, middle, and top.

- The base of the building should be more consistently defined, especially on the Chestnut Street side. At this point, that can best be achieved through articulation, material placement and detailing. The corner, double-height live-work unit could also be more substantially differentiated from the other masses of the building.

E-4: Articulation – *Façades visible from public rights of way shall incorporate design elements that break the facades into components scaled to the pedestrian, and to the context of other buildings on the street. This may be accomplished through an expression of the building's base, middle and top, vertical fenestration, variation in the planes of the façade, architectural details such as windows, doors, bays, balconies, cornices, reveals, expansion joints, trim, changes in color, texture, and material, permanent artwork, etc.*

- The project uses fenestration at the ground levels, entrances emphasize with canopies and material change, recessed bays at the upper floors, and open space at the end of the block.

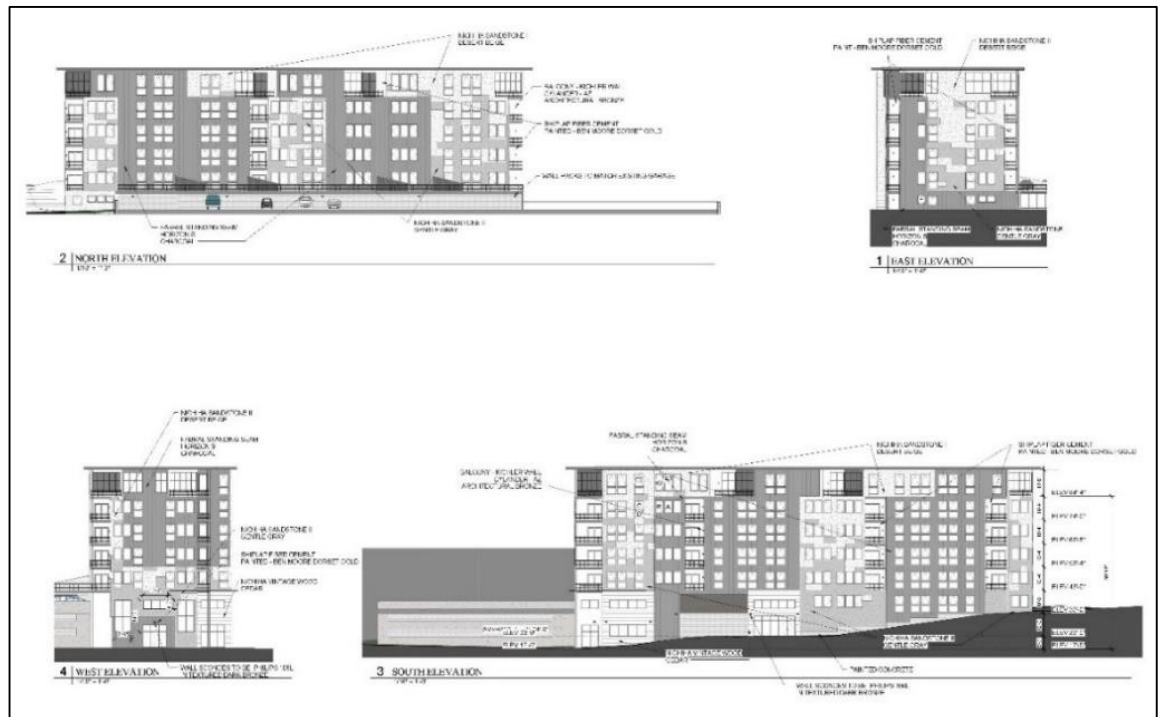
The base of the building which relates to the pedestrian realm shall be designed with a high level of detailing and material quality utilizing the options listed above. . . . Buildings which are six and seven stories shall meet this standard on the first 24 feet, or the first two floors at a minimum.

- The level of detail and articulation on the Chestnut Street elevation is not sufficient, especially at the street level. Material changes are mostly arbitrary and other than at the entrance, do not correspond to uses or plane changes. Revisions to meet this standard could come in form of enclosure; articulation and detail (reveals, dimensional trim, material transitions, detail); placement of material that corresponds with uses.

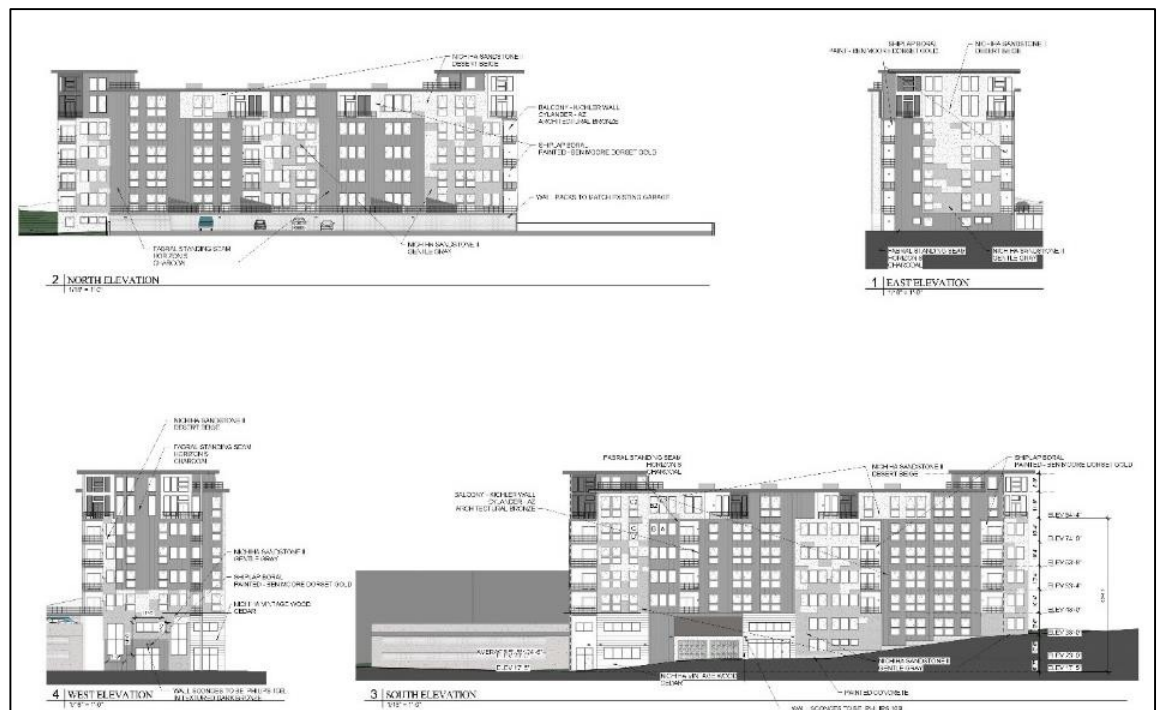
(see sketch in Attachment 2 annotating the elevations to clarify the comments)

The series of elevations below illustrates how the design has evolved from the original submissions to the final plans included in this Report:

Initial submitted Elevations:

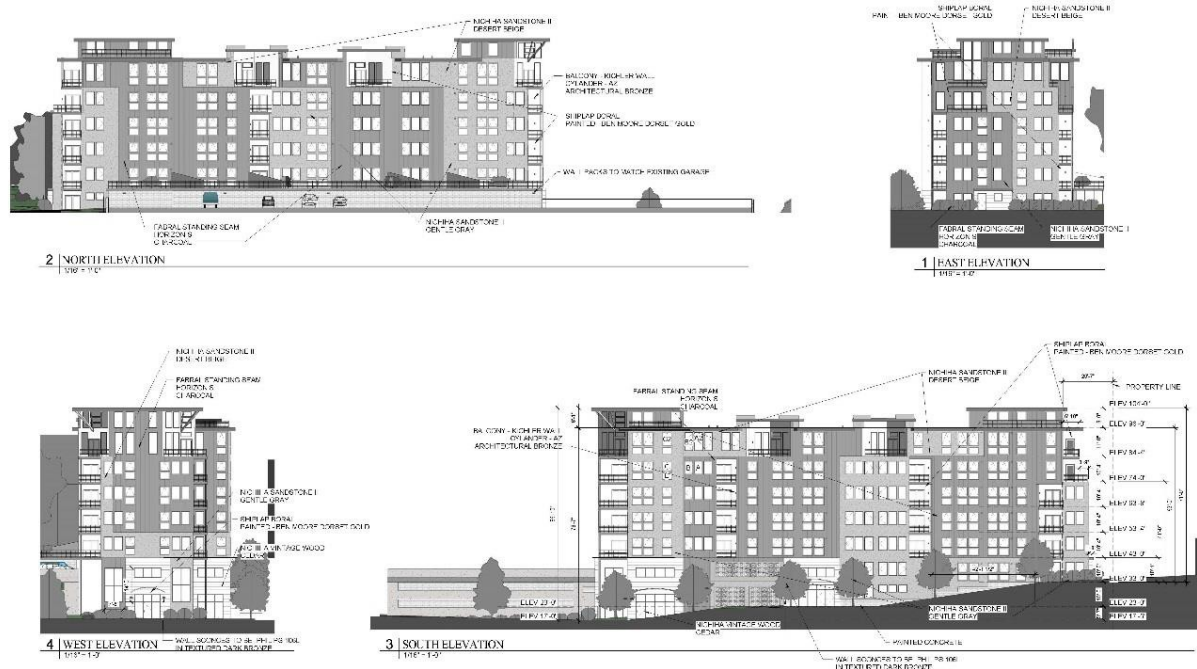


Elevations as presented to the first Workshop (see PB Memo 9.13.16):



[illegible]

FINAL ELEVATIONS AND RENDERING (See Plan P13 & Attachment M)



AVERAGE GRADE ELEVATION CALC
4 CORNERS OF BUILDING (SEE SITE PLAN)
 $13.8' + 17.2' + 33.0' + 32.5' = 96.5'$
 $96.5'/4 = 24.125'$

$104.0' - 24.125' = 79.875'$ TO TOP OF MEZZANINE
 $79.875' - 8' = 71.875'$ TO TOP OF 7TH FLOOR ROOF

[illegible]

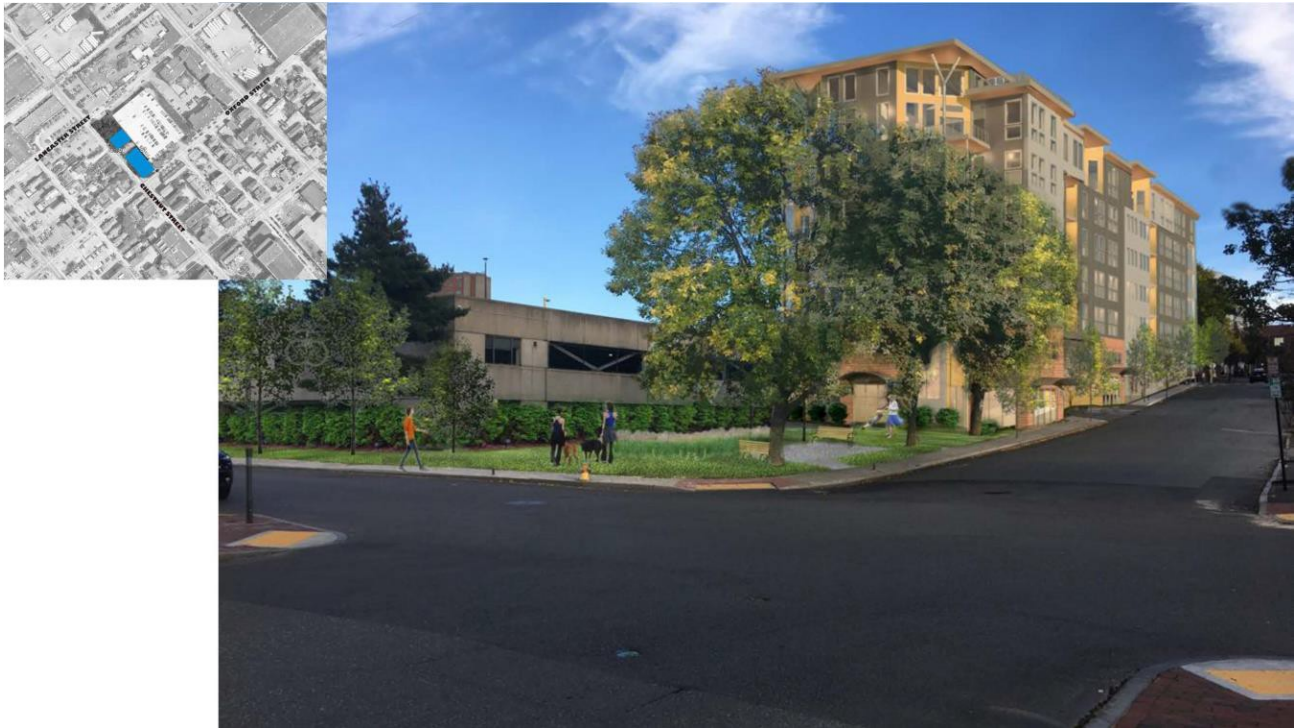
Final elevations



Final Oxford Street frontage:



Final from Lancaster Street:



Multi-family and Other Housing Types Design Standard

This design standard also applies to this proposal and most of the standards are already included in the B7 Standards above. However, the standard regarding open space is relevant:

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: 42 of the new units will have balconies, though about 5 of these are cantilevered over the top deck of the parking garage and may not serve an “open space function”. Clarification of the design and materials of the deck are requested and subject of a suggested condition of approval. The site includes an open amenity area near the corner of Chestnut Street and Lancaster Street, but this is partly taken up by the stormwater system and it is unclear how much of the area would serve as open space for resident/public access. A condition of approval requests further details of this area to ensure safety and security issues are addressed.

XII. INCLUSIONARY ZONING CONDITIONAL USE

Housing Planner Tyler Norod reviewed the Conditional Use for Affordable Housing application at 75 Chestnut Street. Conditional Use is authorized by Division 30, Section 14-487, Ensuring Workforce Housing, to secure the creation of Workforce Housing Units as part of new residential projects that propose 10 or more units. The ordinance requires a minimum of 10% of the project to be restricted for Workforce Households and that the number of bedrooms required under Section 14-487(e)3 be at least 10% of the total number of bedrooms made available as part of the project. The project located at 75 Chestnut Street proposes the creation of 54 residential rental units. Based on a total of a proposed 55 units (since the commercial unit has also been described as a live-work space), the project will be required to provide a minimum of five (5) on-site workforce units with a total of nine (9) bedrooms.

The project has proposed to provide six (6) workforce units on-site with a total of 9 bedrooms, the project has met the minimum requirements set forth in Section 14-487. These workforce units will be dispersed throughout the project with two (2) studios and two (2) two-bedroom units located on the second floor, one (1) one-bedroom unit located on the third floor, and one (1) two-bedroom unit located on the fifth floor.

The ordinance defines *Workforce housing unit for rent* to mean a dwelling unit which:

- (a) Is affordable to a household earning less than 100% of HUD AMI; and
- (b) Annual rent increases for that unit are limited by deed restriction or other legally binding agreement to the percentage increase in the HUD Greater Portland Metropolitan Statistical Area median income figures for a household of that size.

The memo from the Housing Planner confirms the project complies with the ordinance and includes a condition requiring an Affordable Housing Agreement to clarify and document the details of affordability restrictions. (Attachment 1).

XIII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the planning board approve the Site Plan, Subdivision and Conditional Use for the proposed residential development at 75 Chestnut Street (Westerlea View Lofts).

XIV. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

A. WAIVER

(This project was submitted before the recently adopted Street Tree Amendment that became effective on 12.7.2016)

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) 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** that the applicant has demonstrated that site constraints prevent the planting of all required street trees in the right-of-way. The planning board **waives/does not waive** the site plan standard (*Section 14-526 (b) (iii)*) requiring one street tree per unit for multi-family development and concludes that the applicant shall contribute \$6,400 to Portland's tree fund.

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval, which must be met prior to the signing of the plat:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority;
- ii. The applicant shall provide drafts of all necessary easements, including but not limited to:
 - a. Temporary construction easement from the City of Portland to Westerlea View Lofts;
 - b. License from the City of Portland to Westerlea View Lofts for building footings;
 - c. Easement(s) for the deck extensions above the existing parking garage structures (air rights);
 - d. Access easement for sidewalks that are on the site property.

for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

C. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in planning board report for the public hearing on December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is / is not** in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That final proposals comply with Design Standards A-2, A-5, C-2, D-1, D-4, E-1, E-3, E-4 and shall be reviewed and approved by Planning staff to address the staff design comments dated 12.9.16 which primarily relate to material placement and design of the pedestrian realm; and
- ii. That the project is subject to the submitted Transportation Demand Management Plan dated October 2016, to include annual monitoring studies that comply with the requirements set out in the comments of the Traffic Engineering reviewer Tom Errico dated 12.9.2016; and
- iii. That the applicant submit a revised and more detailed plan for the amenity area between the building and Lancaster Street that demonstrates that the safety and security of the area meets CPTED standards eg re lighting, visual surveillance and similar issues including landscape features; and
- iv. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan dated 9.30.2016 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and
- v. That plans showing details for the areas listed below shall be submitted to the Planning Authority for review and approval prior to the issuance of a building permit:
 - a. Patio/entrances on Oxford Street
 - b. Doors for entrance to parking garage on Chestnut Street
 - c. Decks over parking lot
 - d. Live-work unit
 - e. Parking layout (dimensioned) for ADA spaces and demonstration that it meets applicable state and federal standards regarding ADA van parking.
- vi. That the applicant shall revise plans and provide design details for the following elements in the City's Right of Way, for review and approval prior to the issuance of a building permit:
 - a. Driveway aprons on Oxford Street and Lancaster Street, noting a pedestrian accessibility route with a maximum 2% cross-slope, and whether full or partial adjustment to the grade of the driveway apron is required;
 - b. Grading adjustments for the sidewalk ramp construction at the corner of Chestnut Street and Lancaster Street to address the ponding of water that currently impacts the pedestrian walking route; and
 - c. The provision of an underground lighting conduit as part of the sidewalk reconstruction along the lot frontage on Oxford Street.
- vii. That the applicant shall submit details of the location, design and screening of façade and rooftop external heating, ventilation and other mechanical equipment, and associated information to document the sound levels meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority; and
- viii. That the applicant address the Fire Department comments dated 9.7.2016; and
- ix. That the proposed building mounted wall sconces shall be installed so that the light is directed downward.

D. 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 December 13, 2016 for application 2016-185 (75 Chestnut Street) relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the planning board hearing, the planning board finds that the Conditional Use **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval:

- i. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.
- ii. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 75 Chestnut Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

ATTACHMENTS TO THIS REPORT:

Attachments

1. Final Housing & Comm Dev Review of IZ
2. Final Design Review comments
3. Final Fire Department comments
4. Final Engineering Review comments
5. Final Traffic Engineering review comments
6. Final City Arborist comments

Public Comments (all received since project submitted)

- PC1. Louis Christen 9.12.16
PC2. Louis Christen 10.17.16

Applicants Final Submittal

- A. Cover Letter and Subdivision/Site Plan Applic. w/revised data sheet
- B. Cover letter & Inclusionary Zoning Cond. Use Applic.
- C. Zoning analysis
- D. B-7 Design Standards Compliance narrative
- E. Right, title and Interest
- F. Financial Capability letter
- G. Utility letters of capacity
- H. Traffic Assessments
- I. Stormwater Reports
- J. Shadow Study
- K. Neighborhood Meeting Certification
- L. Updated Lighting Specifications
- M. Updated Neighborhood Architectural Overview including revised perspectives
- N. TDM Plan
- O. Additional Parking Information

Final Plans

- P1. Boundary Survey
 - P2. Existing Conditions and Demolition Plan
 - P3. Draft Subdivision Plat
 - P4. Site Plan
 - P5. Grading and Utilities Plan
 - P6. Landscape Plan
 - P7. Erosion Control Plan
 - P8. Details
 - P9. Details
 - P10. Details
 - P11. Details
 - P12. Drainage analysis
 - P13. Building Elevations
 - P14. Floor Plans
- (Note- Perspectives and Renderings are in Att. M.)

CHAPTER 32 STORM WATER

Art. I. Prohibited Discharges, §§ 32-1--32-15

Art. II. Prohibited Discharges, §§ 32-16--32-35

Art. III. Post-Construction Stormwater Management, §§32-36-32-40

ARTICLE I. IN GENERAL

Sec. 32-1. Definitions.

For the purposes of this article, the terms listed below are defined as follows:

Applicant. "Applicant" means a person with requisite right, title or interest or an agent for such person who has filed an application for a project that is a post-construction stormwater management plan under this article.

Best management practices ("BMP"). "Best management practices" or "BMPs" means schedules or activities, combinations of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spills or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act. "Clean Water Act" means the federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.* also known as the "Clean Water Act"), and any amendments thereto.

Discharge. "Discharge" means any spilling, leaking, pumping, pouring, emptying, dumping, disposal or other addition of pollutants to "waters of the state." "Direct discharge" or "point source" means any discernable, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, roll tank, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Enforcement authority. "Enforcement authority" means the person(s) or entity authorized under section 32-3 of this article to administer and enforce this article.

Exempt person or discharge. "Exempt person or discharge" means any person who is subject to a multi-sector general permit for industrial activities, a permit for construction activity, a general permit for the discharge of storm water from the Maine department of transportation and the Maine turnpike authority.

municipal separate storm sewer systems, or a general permit for the discharge of storm water from state or federally owned authority municipal separate storm sewer system facilities; and any non-storm water discharge permitted under a NPDES permit, waiver, or waste discharge license or order issued to the discharger and administered under the authority of the U.S. environmental protection agency ("EPA") or the Maine department of environmental ion ("DEP"). City of Portland

Municipality. "Municipality" means the city of Portland.

Municipal separate storm sewer system, or MS4. "Municipal separate storm sewer system" or "MS4," means conveyances for storm water, including, but not limited to, roads with systems, municipal streets, catch basins, curbs, , ditches, human-made channels or storm (other than publ owned treatment works and combined sewers) owned or by ity, sewer or sewage district, fire district, state agency or federal agency or other public entity that discharges ly to surface waters of the state.

National pollutant discharge elimination system (NPDES) storm water discharge permit. "National pollutant discharge elimination system (NPDES) storm water discharge permit" a permit issued by the EPA or by the DEP that authorizes the of pollutants to waters of the United States, whether the . . icable on an individual, group, or general area-wide basis.

Non-storm water discharge. "Non-storm water discharge" means any discharge to an MS4 that is not composed entirely of storm water.

Person. "Person" means any individual, firm, corporation, municipality, quasi-municipal corporation, state agency or federal agency or other legal entity which creates, initiates, originates or maintains a dis . . of storm water or a non-storm water discharge

Pollutant. "Pollutant" means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, , sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or by-products, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Post-construction stormwater management plan. "Post-construction stormwater management plan" means BMPs by a development project to meet the stormwater standards of Section V of the department of and urban 's Technical and Design Standards and Guidelines.

Premises. "Premises" means any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and , located within the muni from which di into the storm drainage system are or may be initiated, or maintained.

Qualified post-cons on stormwater tor. "Qualified post-construction stormwater inspector" means a person who conducts post-construction stormwater best management ice inspections for compensation and who has received the appropriate training for the same from DEP or otherwise meets DEP to perform said inspections

Regulated small MS4. " small means any small MS4 regulated by the State of Maine "general for the dis of storm water from small municipal separate storm sewer systems" dated July 1, 2008 ("general permit") or the general permits for the discharge of storm water from the Maine department of transportation and Maine turnpike authority small MS4s or state or federally owned or operated small MS4s, including all those located partially or entire within an urbanized area (UA).

Small municipal separate storm sewer system or small MS4. "Small l storm sewer system", or "small MS4," means any MS4 that is not covered by the I MS4 storm water program including municipally owned or operated storm sewer systems, state or federally-owned systems, such as colleges, universities, prisons, Maine department of transportation and Maine turnpike authority road and facilities, and mil bases and facilities.

Storm dra system. "Storm system" means the City of Portland's small MS4 and other conveyances for storm water located in areas outside the UA that drain into the regulated small MS4.

Storm water. "Storm water" means any storm water runoff, snowmelt runoff, and surface runoff and ; "Stormwater" has the same , as "storm water".

Urbanized area ("UAN). "Urbanized area" or "UA" means the areas of the State of Maine so defined by the latest decennial (2000) census by the U.S. Bureau of Census.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-2. Reserved.

Sec. 32-3. Reserved.

Sec. 32-4. Reserved.

Sec. 32-5. Reserved.
Sec. 32-6. Reserved.
Sec. 32-7. Reserved.
Sec. 32-8. Reserved.
Sec. 32-9. Reserved.
Sec. 32-10. Reserved.
Sec. 32-11. Reserved.
Sec. 32-12. Reserved.
Sec. 32-13. Reserved.
Sec. 32-14. Reserved.
Sec. 32-15. Reserved.

ARTICLE II. PROHIBITED DISCHARGES

Sec. 32-16. Applicability.

This Article shall apply to all persons discharging storm water and/or non-storm water discharges from any ses into the storm drainage system.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-17. Responsibility for administration.

The department of public services is the enforcement authority who shall administer, implement, and enforce the provisions of this article.

(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-18. Prohibition of non-storm water discharges.

(a) *General prohibition.* Except as allowed or exempted herein, no person shall create, initiate, originate or maintain a non-storm water discharge to the storm drainage system. Such non-storm water discharges are prohibited notwithstanding the fact that the city may have approved the connections, drains or conveyances by which a person di un-allowed non-storm water discharges to the storm drainage system.

(b) *Allowed non-storm water discharges.* The creation, initiation, origination and maintenance of the following non-storm water discharges to the storm drainage system is allowed:

- (1) Landscape irrigation; diverted stream flows; rising ground waters; uncontaminated flows from foundation drains; air conditioning and compressor condensate; irrigation water; flows from uncontaminated ; uncontaminated water from crawl space pumps; uncontaminated flows from footing drains; lawn runoff; flows from riparian habitats and wetlands; residual street wash water (where spills/leaks of toxic or hazardous materials have not

occurred, unless all spilled material has been removed and detergents are not used); hydrant flushing and fighting act runoff; water line flushing and discharges from water sources; individual residential car washing; and de-chlorinated swimming dis s.

- (2) Discharges specified in writing by the enforcement authority safety. as be necessary to protect public health and
- (3) . with verbal notification to the enforcement authority prior to the time of the test.

(c) *person or discharge.* This article shall not apply to an exempt person or dis that the enforcement authority may request from exempt persons and persons with exempt dis s of permits, notices of intent, licenses and orders from the EPA or DEP that authorize the discharge(s).
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-19. Suspension of access to the city's small MS4.

The enforcement authority may, without notice, physically suspend discharge access to the storm drainage system to a person when such suspension is necessary to stop an actual or threatened non-storm water dis to the storm drainage system which presents or may present imminent and substantial to the environment, or to the health or welfare of persons, or to the storm drainage s or which may cause the to violate the terms of its environmental permits. Such suspension may include, but is not limited to, blocking pipes, constructing dams or taking other measures, public ways or public property, to physically block the dis or minimize a non-storm water discharge to the storm dra system. If a person fails to comply with a suspension order issued in an emergency, the enforcement authority may take such s as deemed necessary to or minimize to the storm s or to to persons.
(Ord. No. 85-08/09, 10-20-08; Ord. 8-17-09)

Sec. 32-20. Monitoring of discharges.

In order to determine compliance with this article, the enforcement may enter upon and es subject to this article at reasonable hours to ct the and connections thereon to the storm drainage system; and to conduct monitoring, sampling and te of the discharge to the storm drainage system
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-21. Enforcement.

It shall be unlawful for any person to violate any sion of or to fail to comply with any of the requirements of this article. Whenever the enforcement authority believes that a person has violated this , the enforcement may enforce this article in accordance with 30-A M.R.S.A. § 4452.

- (a) *Notice of violation.* Whenever the enforcement authority believes that a person has violated this article, the enforcement authority may order compliance with article by written notice of violation to that person indicating the nature of the violation and the action necessary to correct it, including, without limitation:
- (1) The elimination of non-storm water discharges to the storm drainage system, including, but not limited to, disconnection of the premises from the MS4.
 - (2) The cessation of discharges, practices, or operations in violation of this article
 - (3) At the Person's expense, the abatement or remediation (in accordance with best management ices in DEP rules and regulations) of non-storm water discharges to the storm drainage system and the restoration of any affected property; and/or
 - (4) The payment of fines, of the city's remediation costs and of the city's reasonable administrative costs and attorneys' fees and costs. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the imposition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the 's s fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates this section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to attorneys' fees and costs, incurred by the city for violation of federal and State environmental laws and

regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any fines, penalties, or injunctive relief imposed under this section.

- (c) *Consent agreement.* The enforcement authority may, with the approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *1 of notice of violation.* Any person receiving a notice of violation or suspension notice may appeal the determination of the enforcement authority to the city manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the appeal within 30 days from the date of receipt of the notice of appeal, except that such hearing may be delayed by agreement of the city manager and the appellant. The city manager may affirm, reverse or modify the decision of the enforcement authority. A suspension under Section 32-5 of this article remains in effect unless or until lifted by the city manager or by a reviewing court. A person aggrieved by the decision of the city manager may appeal that decision to the Maine superior court within 45 days of the date of the city manager's decision pursuant to Rule BOB of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or, in the event of an appeal to the city manager, within 45 days of a decision of the manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the corporation counsel's office file an enforcement action in a Maine court of jurisdiction under Rule BOK of the Maine Rules of Civil Procedure.
- (f) *Ultimate responsibility of discharger.* The standards set forth herein are minimum standards; therefore this article does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants into waters of the U.S. caused by said person. This article shall not create liability on the part of the city, or any officer or employee thereof for any act that

result from any person's reliance on this article or any administrative decision lawfully made hereunder.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-22. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or of this article or the ication thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions, clauses, sentences, or paragraphs or ication of this article.
(Ord. No. 85-08/09, 10-20-08; Ord. No. 35-09/10, 8-17-09)

Sec. 32-23. Reserved.
Sec. 32-24. Reserved.
Sec. 32-25. Reserved.
Sec. 32-26. Reserved.
Sec. 32-27. Reserved.
Sec. 32-28. Reserved.
Sec. 32-29. Reserved.
Sec. 32-30. Reserved.
Sec. 32-31. Reserved.
Sec. 32-32. Reserved.
Sec. 32-33. Reserved.
Sec. 32-34. Reserved.
Sec. 32-35. Reserved.

ARTICLE III. POST-CONSTRUCTION STORMWATER MANAGEMENT.

Sec. 32-36. Applicability.

This article applies to all development projects that require a stormwater management plan pursuant to section V of the department of planning and urban development's Technical and Design Standards and Guidelines.
(Ord. No. 35-09/10, 8-17-09)

Sec. 32-37. Post-construction stormwater management plan approval.

Notwithstanding any ordinance sion to the no icant for a ect to which this article is applicable shall for that development project unless the also receives approval for its post-construction stormwater management plan and for the best management practices (nBMPs") for that development project.
(Ord. No. 35-09/10, 9-17-09)

**Sec. 32-38. Post-construction stormwater management plan
compliance.**

Any person owning, operating, or otherwise having control over a BMP required by a post construction stormwater management plan shall maintain the BMPs in accordance with the approved plan and shall demonstrate compliance with that plan as follows:

- (a) *Inspections.* The owner or operator of a BMP shall hire a qualified post-construction stormwater professional to at least annually, inspect the BMPs, including but not limited to any impervious areas, catch basins, swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) *Maintenance and repair.* If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective action(s) to the department of public services ("DPS") in the annual report.
- (c) *Annual Certification.* The owner or operator of a BMP or a qualified post-construction stormwater professional hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification to DPS in a form provided by DPS, certifying that the person has inspected the BMP(s) and that the BMP(s) are properly maintained and functioning as intended by the approved post-construction stormwater management plan, that the person has performed maintenance or repair, and that the record of the deficiency and corrective action(s) taken.
- (d) *Filing fee.* Any person required to file an annual certification under this section shall include with the annual certification a filing fee established by DPS to pay the administrative and technical costs of review of the annual certification.
- (e) *Right of entry.* In order to determine compliance with this article and with the post-construction stormwater management plan, DPS may enter upon the property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs.

Sec. 32-39. Enforcement.

It shall be unlawful for any person to violate any provision of or to fail to comply with any of the _____s of this article or of the post-construction stormwater management plan. Whenever the enforcement _____ believes that a _____on has violated this article, DPS may enforce this article in accordance with 30-A M.R.S.A. § 4452. Each day on which a violation exists shall constitute a _____ violation for purposes of this section.

- (a) *Notice of violation.* Whenever DPS believes that a person has violated this article or the post-construction stormwater management plan, DPS may order compliance by written notice of _____ to that person _____ the nature of the violation and _____ eh action necessary to correct it, including, without limitation:
- (1) The abatement of violations, and the cessation of _____ practices or _____ in violation of this article or of the post-construction stormwater management plan;
 - (2) At the person's expense, compliance with BMPs required as a condition of _____ of the development project, the _____ r of BMPs and/or the restoration of any affected property; and/or
 - (3) The _____ of fines, of the City's remediation costs and of the City's reasonable administrative costs and attorneys' fees and costs.
 - (4) If abatement of a violation, compliance with BMPs, repair of BMPs and/or restoration of affected property is required, the notice shall set forth a deadline within which such abatement, compliance repair and/or restoration must be completed.
- (b) *Penalties/fines/injunctive relief.* In addition to the _____ sition of any other costs or penalties provided for herein, any person who violates this section shall be subject to fines, penalties and orders for injunctive relief and shall be responsible for the city's attorney's fees and costs, all in accordance with 30-A M.R.S.A. § 4452. Each day such violation continues shall constitute a separate violation. Moreover, any person who violates _____ s section also shall be responsible for any and all fines, penalties, damages and costs, including, but not limited to

attorneys' fees and costs, incurred by the city for violation of federal and state environmental laws and regulations caused by or related to that person's violation of this article; this responsibility shall be in addition to any _____s, fines or _____unctive relief _____ed under this section.

- (c) *Consent agreement.* The enforcement authority may, without approval of the city manager, enter into a written consent agreement with the violator to address timely abatement of the violation(s) of this article for the purposes of eliminating violations of this article and of recovering fines, costs and fees without court action.
- (d) *Appeal of notice of violation.* Any person _____ a notice of violation or suspension notice may appeal the determination of the enforcement authority to the _____ manager or his or her designee. The notice of appeal must be received within 30 days from the date of receipt of the notice of violation. The city manager shall hold a hearing on the _____ within 30 _____ from the date of rece _____ of the notice of _____ that such _____ may be del _____ by _____ of the _____ manager and the appellant. The _____ ty manager may affirm, reverse or modify the decision of the DPS. A party aggrieved by the decision of the manager may appeal that decision to the Maine superior court within forty-five (45) days of the date of the manager's decision pursuant to Rule BOB of the Maine Rules of Civil Procedure.
- (e) *Enforcement measures.* If the violation has not been corrected _____ to the requirements set forth in the notice of violation, or _____, in the event of an appeal to the _____ manger, within _____ five (45) days of a decision of the city manager affirming the enforcement authority's decision, then the enforcement authority may recommend that the _____ counsel's office file an enforcement action in a Maine court of _____ jurisdiction under Rule BOK of the Maine Rules of Civil Procedure.

(Ord. No. 35-09/10, 8-17-09)

Sec. 32-40. Severability.

The provisions of this article are _____ declared to be severable. If any _____ ion, clause, sentence, or _____ of this article or the _____ ication thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other _____ sions, clauses, sentences, or paragraphs or application of this article.

(Ord. No. 35-09/10, 8-17-09)

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

For SUBDIVISIONS

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed _____ (name of developments and project number) shown on the Subdivision Plat (Exhibit A) recorded in Cumberland Registry of Deeds in Plan Book ____, Page ____ submitted by _____, and associated Grading, Drainage & Erosion Control Plan (*insert correct name of plan*) (Exhibit B) prepared by _____ (engineer/agent) of _____ (address) dated and pursuant to a condition thereof, _____ (name of owner), a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of _____, 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 _____ (*details of the system such as underdrained subsurface sand filter BMP system, rain gardens, storm drain pipes, underdrain pipes, catch basins*), (hereinafter collectively referred to as the “stormwater system”), as shown on the _____ Plan in Exhibit B and in strict compliance with the approved Stormwater Maintenance and Inspection Agreement (*insert correct name of document*) prepared for the Owner by _____ (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. 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 said premises and abutters thereto; further, that the said City of Portland and 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 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 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 record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further 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 Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

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

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

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

Dated at Portland, Maine this ____ day of _____, 2014.

(name of company)

(representative of owner, name and title)

STATE OF MAINE
CUMBERLAND, ss.

Date: _____

Personally appeared the above-named _____ (name and title), 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: Subdivision Plat as recorded

Exhibit B: Approved Grading and Drainage Plan (name of the plan showing the Stormwater System in detail)

Exhibit C: Approved Stormwater Maintenance and Inspection Agreement



Performance Guarantee and Infrastructure Financial Contribution Packet

The municipal code requires that all development falling under site plan and/or subdivision review in the City of Portland be subject to a performance guarantee for various required site improvements. The code further requires developers to pay a fee for the administrative costs associated with inspecting construction activity to ensure that it conforms with plans and specifications.

The performance guarantee covers major site improvements related to site plan and subdivision review, such as paving, roadway, utility connections, drainage, landscaping, lighting, etc. A detailed itemized cost estimate is required to be submitted, which upon review and approval by the City, determines the amount of the performance guarantee. The performance guarantee will usually be a letter of credit from a financial institution, although escrow accounts are acceptable. The form, terms, and conditions of the performance guarantee must be approved by the City through the Planning Division. The performance guarantee plus a check to the City of Portland in the amount of 2.0% of the performance guarantee or as assessed by the planning or public works engineer, must be submitted prior to the issuance of any building permit for affected development.

Administration of performance guarantee and defect bonds is through the Planning Division. Inspections for improvements within existing and proposed public right-of-ways are the responsibility of the Department of Public Services. Inspections for site improvements are the responsibility of the Development Review Coordinator in the Planning Division.

Performance Guarantees will not be released by the City until all required improvements are completed and approved by the City and a Defect Bond has been submitted to and approved by the City.

If an infrastructure financial contribution is required by the City as part of a development approval, please complete the contribution form and submit it along with the designated contribution to the Planning Division. Please make checks payable to the City of Portland.

Attachments

1. Cost Estimate of Improvements Form
2. Performance Guarantee Letter of Credit Form (with private financial institution)
3. Performance Guarantee Escrow Account Form (with private financial institution)
4. Performance Guarantee Form with the City of Portland
5. Infrastructure Financial Contribution Form with the City of Portland

SUBDIVISION/SITE DEVELOPMENT
Cost Estimate of Improvements to be covered by Performance Guarantee

Date: _____

Name of Project: _____

Address/Location: _____

Application ID #: _____

Developer: _____

Form of Performance Guarantee: _____

Type of Development: Subdivision _____ Site Plan (Level I, II or III) _____

TO BE FILLED OUT BY THE APPLICANT:

PUBLIC

PRIVATE

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Subtotal</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Subtotal</u>
1. STREET/SIDEWALK						
Road/Parking Areas	_____	_____	_____	_____	_____	_____
Curbing	_____	_____	_____	_____	_____	_____
Sidewalks	_____	_____	_____	_____	_____	_____
Esplanades	_____	_____	_____	_____	_____	_____
Monuments	_____	_____	_____	_____	_____	_____
Street Lighting	_____	_____	_____	_____	_____	_____
Street Opening Repairs	_____	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____	_____
2. EARTH WORK						
Cut	_____	_____	_____	_____	_____	_____
Fill	_____	_____	_____	_____	_____	_____
3. SANITARY SEWER						
Manholes	_____	_____	_____	_____	_____	_____
Piping	_____	_____	_____	_____	_____	_____
Connections	_____	_____	_____	_____	_____	_____
Main Line Piping	_____	_____	_____	_____	_____	_____
House Sewer Service Piping	_____	_____	_____	_____	_____	_____
Pump Stations	_____	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____	_____
4. WATER MAINS	_____	_____	_____	_____	_____	_____
5. STORM DRAINAGE						
Manholes	_____	_____	_____	_____	_____	_____
Catchbasins	_____	_____	_____	_____	_____	_____
Piping	_____	_____	_____	_____	_____	_____
Detention Basin	_____	_____	_____	_____	_____	_____
Stormwater Quality Units	_____	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____	_____

6. SITE LIGHTING	_____	_____	_____	_____	_____	_____
7. EROSION CONTROL						
Silt Fence	_____	_____	_____	_____	_____	_____
Check Dams	_____	_____	_____	_____	_____	_____
Pipe Inlet/Outlet Protection	_____	_____	_____	_____	_____	_____
Level Lip Spreader	_____	_____	_____	_____	_____	_____
Slope Stabilization	_____	_____	_____	_____	_____	_____
Geotextile	_____	_____	_____	_____	_____	_____
Hay Bale Barriers	_____	_____	_____	_____	_____	_____
Catch Basin Inlet Protection	_____	_____	_____	_____	_____	_____
8. RECREATION AND OPEN SPACE AMENITIES	_____	_____	_____	_____	_____	_____
9. LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)	_____	_____	_____	_____	_____	_____
10. MISCELLANEOUS	_____	_____	_____	_____	_____	_____
TOTAL:	_____				_____	
GRAND TOTAL:	_____				_____	

INSPECTION FEE (to be filled out by the City)

	PUBLIC	PRIVATE	TOTAL
A: 2.0% of totals:	_____	_____	_____
<u>or</u>			
B: Alternative Assessment:	_____	_____	_____
Assessed by:	_____	_____	_____
	(name)	(name)	

SAMPLE FORM

SITE PLAN/SUBDIVISION PERFORMANCE GUARANTEE LETTER OF CREDIT [ACCOUNT NUMBER]

[Date]

Jeff Levine
Director of Planning and Urban Development
City of Portland
389 Congress Street
Portland, Maine 04101

Re: [Insert: Name of Developer]
[Insert: Address of Project, Portland, Maine]
[Insert: Application ID #]

[Insert: Name of Bank] hereby issues its Irrevocable Letter of Credit for the account of [Insert: Name of Developer], (hereinafter referred to as “Developer”), held for the exclusive benefit of the City of Portland, in the aggregate amount of [Insert: amount of original performance guarantee]. These funds represent the estimated cost of installing site improvements as depicted on the [Insert: subdivision and/ or site plan], approved on [Insert: Date] and as required under Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §§46 through 65.

This Letter of Credit is required under Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §46 through 65 and is intended to satisfy the Developer’s obligation, under Portland Code of Ordinances Chapter 14 §§501, 502 and 525, to post a performance guarantee for the above referenced development.

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw on this Letter of Credit by presentation of a sight draft and the Letter of Credit and all amendments thereto, up to thirty (30) days before or sixty (60) days after its expiration, stating any one of the following:

1. the Developer has failed to satisfactorily complete the work on the improvements contained within the [Insert: subdivision and/ or site plan] approval, dated [Insert date]; or
2. the Developer has failed to deliver to the City a deed containing the metes and bounds description of any streets, easements or other improvements required to be deeded to the City; or

3. the Developer has failed to notify the City for inspections.

In the event of the Bank's dishonor of the City of Portland's sight draft, the Bank shall inform the City of Portland in writing of the reason or reasons thereof within three (3) business days of the dishonor.

After all underground work has been completed and inspected to the satisfaction of the Department of Public Services and Planning Division, including but not limited to sanitary sewers, storm drains, catch basins, manholes, electrical conduits, and other required improvements constructed chiefly below grade, the City of Portland Director of Planning and Urban Development or its Director of Finance as provided in Chapter 14 §501 of the Portland Code of Ordinances, may authorize the [Bank], by written certification, to reduce the available amount of the escrowed money by a specified amount.

This performance guarantee will automatically expire on **[Insert date between April 16 and October 30 of the following year]** ("Expiration Date") or on the date when the City determines that all improvements guaranteed by this Letter of Credit are satisfactorily completed, whichever is later. It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for period(s) of one year each from the current Expiration Date hereof, or any future Expiration Date, unless within thirty (30) days prior to any expiration, the Bank notifies the City by certified mail (restricted delivery to Ellen Sanborn, Director of Finance, City of Portland, 389 Congress Street, Portland, Maine 04101) that the Bank elects not to consider this Letter of Credit renewed for any such additional period.

In the event of such notice, the City, in its sole discretion, may draw hereunder by presentation of a sight draft drawn on the Bank, accompanied by this Letter of Credit and all amendments thereto, and a statement purportedly signed by the Director of Planning and Urban Development, at Bank's offices located at _____ stating that:

this drawing results from notification that the Bank has elected not to renew its Letter of Credit No. _____.

On its Expiration Date or on the date the City determines that all improvements guaranteed by this Letter of Credit are satisfactorily completed, this Performance Guarantee Letter of Credit shall be reduced by the City to ten (10) percent of its original amount and shall automatically convert to an Irrevocable Defect Letter of Credit. Written notice of such reduction shall be forwarded by the City to the Bank. The Defect Letter of Credit shall ensure the workmanship and durability of all materials used in the construction of the **[Insert: subdivision and/ or site plan]** approval, dated **[Insert: Date]** as required by City Code §14-501, 525 and shall automatically expire one (1) year from the date of its creation ("Termination Date").

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw on the Defect Letter of Credit by presentation of a sight draft and this Letter of Credit and all amendments thereto, at Bank's offices located at _____, prior to the Termination Date, stating any one of the following:

1. the Developer has failed to complete any unfinished improvements; or
2. the Developer has failed to correct any defects in workmanship; or
3. the Developer has failed to use durable materials in the construction and installation of improvements contained within the [**Insert: subdivision and/ or site improvements**].

Date: _____

By: _____

[Name]

[Title]

Its Duly Authorized Agent

SAMPLE FORM

SITE PLAN/SUBDIVISION
PERFORMANCE GUARANTEE
ESCROW ACCOUNT
[ACCOUNT NUMBER]

[Date]

Jeff Levine
Director of Planning and Urban Development
City of Portland
389 Congress Street
Portland, Maine 04101

Re: **[Insert: Name of Developer]**
[Insert: Address of Project, Portland, Maine]
[Insert: Application ID #]

[Insert: Name of Bank] hereby certifies to the City of Portland that **[Bank]** will hold the sum of **[Insert: amount of original performance guarantee]** in an interest bearing account established with the Bank. These funds shall be held for the exclusive benefit of the City of Portland and shall represent the estimated cost of installing site improvements as depicted on the **[Insert: subdivision and/or site plan]**, approved on **[Insert: date]** as required under Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §§46 through 65. It is intended to satisfy the Developer's obligation, under Portland Code of Ordinances Chapter 14 §§501, 502 and 525, to post a performance guarantee for the above referenced development. All costs associated with establishing, maintaining and disbursing funds from the Escrow Account shall be borne by **[Insert: Developer]**.

[Bank] will hold these funds as escrow agent for the benefit of the City subject to the following:

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw against this Escrow Account by presentation of a draft in the event that:

1. the Developer has failed to satisfactorily complete the work on the improvements contained within the **[Insert: subdivision and/ or site plan]** approval, dated **[Insert date]**; or
2. the Developer has failed to deliver to the City a deed containing the metes and bounds description of any streets, easements or other improvements required to be deeded to the City; or
3. the Developer has failed to notify the City for inspections.

In the event of the Bank's dishonor of the City of Portland's sight draft, the Bank shall inform the City of Portland in writing of the reason or reasons thereof within three (3) business days of the dishonor.

After all underground work has been completed and inspected to the satisfaction of the Department of Public Services and Planning Division, including but not limited to sanitary sewers, storm drains, catch basins, manholes, electrical conduits, and other required improvements constructed chiefly below grade, the City of Portland Director of Planning and Urban Development or its Director of Finance as provided in Chapter 14 §501 of the Portland Code of Ordinances, may authorize the [Bank], by written certification, to reduce the available amount of the escrowed money by a specified amount.

This performance guarantee will automatically expire on **[Insert date between April 16 and October 30 of the following year]** ("Expiration Date") or on the date when the City determines that all improvements guaranteed by this Letter of Credit are satisfactorily completed, whichever is later. It is a condition of this agreement that it is deemed to be automatically extended without amendment for period(s) of one year each from the current Expiration Date hereof, or any future Expiration Date, unless within thirty (30) days prior to any expiration, the Bank notifies the City by certified mail (restricted delivery to Ellen Sanborn, Director of Finance, City of Portland, 389 Congress Street, Portland, Maine 04101) that the Bank elects not to consider the Escrow Account renewed for any such additional period.

In the event of such notice, the City, in its sole discretion, may draw against the Escrow Account by presentation of a sight draft drawn on the Bank and a statement purportedly signed by the Director of Planning and Urban Development, at Bank's offices located at _____ stating that:

this drawing results from notification that the Bank has elected not to renew its Letter of Credit No. _____.

On its Expiration Date or on the date the City determines that all improvements guaranteed by this Escrow Account are satisfactorily completed, this Performance Guarantee shall be reduced by the City to ten (10) percent of its original amount and shall automatically convert to an Irrevocable Defect Guarantee. Written notice of such reduction shall be forwarded by the City to the Bank. The Defect Guarantee shall ensure the workmanship and durability of all materials used in the construction of the **[Insert: subdivision and/ or site plan]** approval, dated **[Insert: Date]** as required by City Code §14-501, 525 and shall automatically expire one (1) year from the date of its creation ("Termination Date").

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw on the Defect Guarantee by presentation of a sight draft at Bank's offices located at _____, prior to the Termination Date, stating any one of the following:

1. the Developer has failed to complete any unfinished improvements; or
2. the Developer has failed to correct any defects in workmanship; or
3. the Developer has failed to use durable materials in the construction and installation of improvements contained within the [**Insert: subdivision and/ or site improvements**].

Date: _____

By: _____

[Name]

[Title]

Its Duly Authorized Agent

Seen and Agreed to: [**Applicant**]

By: _____

**PERFORMANCE GUARANTEE
with the City of Portland**

Developer's Tax Identification Number: _____

Developer's Name and Mailing Address: _____

City Account Number: _____

Application ID #: _____

Application of _____ **[Applicant]** for _____ **[Insert street/Project Name]** at _____ **[Address]**, Portland, Maine.

The City of Portland (hereinafter the "City") will hold the sum of \$ _____ **[amount of performance guarantee]** on behalf of _____ **[Applicant]** in a non-interest bearing account established with the City. This account shall represent the estimated cost of installing _____ **[insert: subdivision and/ or site improvements (as applicable)]** as depicted on the subdivision/site plan, approved on _____ **[date]** as required under Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §§46 through 65. It is intended to satisfy the Applicant's obligation, under Portland Code of Ordinances Chapter 14 §§501, 502 and 525, to post a performance guarantee for the above referenced development.

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw against this Escrow Account in the event that:

1. the Developer has failed to satisfactorily complete the work on the improvements contained within the _____ **[insert: subdivision and/ or site improvements (as applicable)]** approval, dated _____ **[insert date]**; or
2. the Developer has failed to deliver to the City a deed containing the metes and bounds description of any streets, easements or other improvements required to be deeded to the City; or
3. the Developer has failed to notify the City for inspections in conjunction with the installation of improvements noted in paragraph one.

The Director of Planning and Urban Development may draw on this Guarantee, at his/her option,

either thirty days prior to the expiration date contained herein, or s/he may draw against this escrow for a period not to exceed sixty (60) days after the expiration of this commitment; provided that the Applicant, or its representative, will give the City written notice, by certified mail (restricted delivery to Ellen Sanborn, Director of Finance, City of Portland, 389 Congress Street, Room 110, Portland, Maine) of the expiration of this escrow within sixty (60) days prior thereto.

After all underground work has been completed and inspected to the satisfaction of the Department of Public Works and Planning, including but not limited to sanitary sewers, storm drains, catch basins, manholes, electrical conduits, and other required improvements constructed chiefly below grade, the City of Portland Director of Planning and Urban Development or its Director of Finance as provided in Chapter 14 §501 of the Portland Code of Ordinances, may authorize the City to reduce the available amount of the escrowed money by a specified amount.

This Guarantee will automatically expire on [**Insert date between April 16 and October 30 of the following year**] (“Expiration Date”) or on the date when the City determines that all improvements guaranteed by this Performance Guarantee are satisfactorily completed, whichever is later. At such time, this Guarantee shall be reduced by the City to ten (10) percent of its original amount and shall automatically convert to an Irrevocable Defect Guarantee. Written notice of such reduction and conversion shall be forwarded by the City to [**the applicant**]. The Defect Guarantee shall expire one (1) year from the date of its creation and shall ensure the workmanship and durability of all materials used in the construction of the [**Insert: Subdivision and/ or site plan**] approval, dated [**Insert: Date**] as required by City Code §14-501, 525.

The City, through its Director of Planning and Urban Development and in his/her sole discretion, may draw on the Defect Guarantee should any one of the following occur:

1. the Developer has failed to complete any unfinished improvements; or
2. the Developer has failed to correct any defects in workmanship;
or
3. the Developer has failed to use durable materials in the construction and installation of improvements contained within the [**Insert: subdivision and/ or site improvements**].

Seen and Agreed to:

By: _____
[Applicant]

Date: _____

By: _____
****Planning Division Director

Date: _____

By: _____
Development Review Coordinator

Date: _____

Attach **Letter of Approval and Estimated Cost of Improvements** to this form.

Distribution

1. This information will be completed by Planning Staff.
2. The account number can be obtained by calling Cathy Ricker, ext. 8665.
3. The Agreement will be executed with one original signed by the Developer.
4. The original signed Agreement will be scanned by the Planning Staff then forwarded to the Finance Office, together with a copy of the Cash Receipts Set.
5. ****Signature required if over \$50,000.00.

Infrastructure Financial Contribution Form
Planning and Urban Development Department - Planning Division

Amount \$

City Account Number: 710-0000-236-98-00

Project Code: _____

(This number can be obtained by calling Cathy Ricker, x8665)

Project Name:

Application ID #:

Project Location:

Project Description:

Funds intended for:

Applicant's Name:

Applicant's Address:

Expiration:

☐ If funds are not expended or encumbered for the intended purpose by _____, funds, or any balance of remaining funds, shall be returned to contributor within six months of said date.

☐ Funds shall be permanently retained by the City.

☐ Other (describe in detail) _____

Form of Contribution:

☐ Escrow Account

☐ Cash Contribution

Interest Disbursement: Interest on funds to be paid to contributor only if project is not commenced.

Terms of Draw Down of Funds: The City shall periodically draw down the funds via a payment requisition from Public Works, which form shall specify use of City Account # shown above.

Date of Form:

Planner:

- Attach the approval letter, condition of approval or other documentation of the required contribution.
- One copy sent to the Applicant.

Electronic Distribution to:

Peggy Axelsen, Finance Department
Catherine Baier, Public Services Department
Barbara Barhydt, Planning Division
Jeremiah Bartlett, Public Services Department
Michael Bobinsky, Public Services Department
Diane Butts, Finance Department
Philip DiPierro, Planning Division
Katherine Earley, Public Services Department
Michael Farmer, Public Services Department
Alex Jaegerman, Planning Division
David Margolis Pineo, Public Services Department
Matt Rancourt, Public Services Department
Jeff Tarling, Public Services Department
Planner for Project

CITY OF PORTLAND, MAINE

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 Maggie Stanley

February 15, 2017

Lou Woods
 A&M Partners Inc
 120 Exchange Street
 Portland ME 04101

Thomas S Greer, P.E.
 Pinkham & Greer, Civil Engineers
 28 Vannah Avenue
 Portland ME 04103

Project Name: **Site Plan Condition i: Westerlea View Lofts: 54 unit residential development plus 1 commercial space**
 Project ID: #2016-184 (Subdivision & Site Plan) and #2016-185 (Conditional Use Inclusionary Zoning)
 Address: 75 Chestnut Street CBL: 26/E/10
 Applicant: A&M Partners Inc
 Planner: Jean Fraser

Dear Sirs:

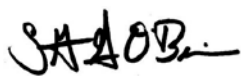
On February 14, 2017 the Planning Board voted unanimously that the applicant has met Site Plan condition of approval (i) from the approval letter dated December 16, 2016, requiring that the final proposals shall comply with the B7 Design Standards A-2, A-5, C-2, E-1, E-3 particularly addressing: a. Articulated roofline; b. Massing and scale to transition and integrate with the residential context on Chestnut Street; c. Pedestrian experience on Chestnut Street; and d. Materiality; To be reviewed and approved by the Planning Board.

The Board also voted unanimously that a revised Landscape Plan shall be submitted for review and approval by the Planning Authority that shows a replacement street tree. Please address this condition prior to the issuance of a building permit.

Please note that the conditions of approval and requirements for your approved Subdivision, Site Plan, and Inclusionary Zoning enumerated in your original approval letter dated December 16, 2016, still apply. This letter is attached for reference.

If there are any questions, please contact Jean Fraser at (207) 874-8728.

Sincerely,



Elizabeth Boepple, Chair
 Portland Planning Board

Attachments: 1. Original Approval Letter (12/16/16)

cc. *Archetype* (attn. Bill Hopkins), 48 Union Wharf, Portland, ME 04101

Electronic Distribution:

cc.

Jeff Levine, AICP, Director of Planning and Urban Development
Stuart O'Brien, City Planning Director
Barbara Barhydt, Development Review Services Manager
Jean Fraser, Planner
Philip DiPierro, Development Review Coordinator, Planning
Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Inspections Division
Jonathan Rioux, Inspections Division Deputy Director
Jeanie Bourke, Plan Reviewer/CEO, Inspections Division
Chris Branch, Director of Public Works
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Bill Clark, Project Engineer, Public Works

Doug Roncarati, Stormwater Coordinator, Public Works
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John Low, Associate Engineer, Public Works
Rhonda Zazzara, Field Inspection Coordinator, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Public Works
Keith Gautreau, Fire Department
Danielle West-Chuhta, Corporation Counsel
Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File

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PLANNING BOARD

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Lisa Whited
Maggie Stanley

December 16, 2016

Lou Woods
A&M Partners Inc
120 Exchange Street
Portland ME 04101

Thomas S Greer, P.E.
Pinkham & Greer, Civil Engineers
28 Vannah Avenue
Portland ME 04103

Project Name: **Westerlea View Lofts: 54 unit residential development plus 1 commercial space**
Project ID: #2016-184 (Subdivision & Site Plan) and
#2016-185 (Conditional Use Inclusionary Zoning)
Address: 75 Chestnut Street CBL: 26/E/10
Applicant: A&M Partners Inc
Planner: Jean Fraser

Dear Sirs:

On December 13, 2016, the Planning Board considered a proposal for a new 7 story building comprising 54 residential apartments (rental), and one commercial unit, totaling approximately 75,800 sq ft, located at 75 Chestnut Street. One parking space per residential unit is proposed to be located in the existing abutting parking garage for the tenants of the new building, and the project also includes a landscaped amenity area. The Planning Board reviewed the proposal for conformance with the standards of the Subdivision, Site Plan, B-7 Zone and Inclusionary Zoning.

The Planning Board voted 7-0 to approve the application with the following waiver and conditions as presented below:

A. WAIVER

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to Portland's technical and design standards and other regulations; and the testimony presented at the planning board hearing:

1. The planning board voted 7-0 that it finds that the applicant has demonstrated that site constraints prevent the planting of all required street trees in the right-of-way. The planning board waives the site plan standard (*Section 14-526 (b) (iii)*) requiring one street tree per unit for multi-family development and concludes that the applicant shall contribute \$6,400 to Portland's tree fund.

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 December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the subdivision regulations; and the testimony presented at the planning board hearing, the planning board voted 7-0 that the plan is in conformance with the subdivision standards of the land use code and approves the application, subject to the following conditions of approval, which must be met prior to the signing of the plat:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority;
- ii. The applicant shall provide drafts of all necessary easements, including but not limited to:
 - a. Temporary construction easement from the City of Portland to Westerlea View Lofts;
 - b. License from the City of Portland to Westerlea View Lofts for building footings;
 - c. Easement(s) for the deck extensions above the existing parking garage structures (air rights);
 - d. Access easement for sidewalks that are on the site property;
 - e. Easement or other legal document to secure required parking for the residential units;for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

C. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in planning board report for the public hearing on December 13, 2016 for application 2016-184 (75 Chestnut Street) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board voted 7-0 that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That final proposals shall comply with the B7 Design Standards A-2, A-5, C-2, E-1 and E-3, particularly addressing:
 - a. Articulated roofline;
 - b. Massing and scale to transition and integrate with the residential context on Chestnut Street;
 - c. Pedestrian experience on Chestnut Street; and
 - d. Materiality;to be reviewed and approved by the Planning Board.
- ii. That the project is subject to the submitted Transportation Demand Management Plan dated October 2016, to include annual monitoring studies that comply with the requirements set out in the comments of the Traffic Engineering reviewer Tom Errico dated 12.9.2016; and
- iii. That the applicant submit a revised and more detailed plan for the amenity area between the building and Lancaster Street that demonstrates that the safety and security of the area meets CPTED standards eg re lighting, visual surveillance and similar issues including landscape features; and

- iv. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan dated 9.30.2016 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and
- v. That plans showing details for the areas listed below shall be submitted to the Planning Authority for review and approval prior to the issuance of a building permit:
 - a. Patio/entrances on Oxford Street
 - b. Doors for entrance to parking garage on Chestnut Street
 - c. Decks over parking lot
 - d. Live-work unit
 - e. Parking layout (dimensioned) for ADA spaces and demonstration that it meets applicable state and federal standards regarding ADA van parking.
- vi. That the applicant shall revise plans and provide design details for the following elements in the City's Right of Way, for review and approval prior to the issuance of a building permit:
 - a. Driveway aprons on Oxford Street and Lancaster Street, noting a pedestrian accessibility route with a maximum 2% cross-slope, and whether full or partial adjustment to the grade of the driveway apron is required;
 - b. Grading adjustments for the sidewalk ramp construction at the corner of Chestnut Street and Lancaster Street to address the ponding of water that currently impacts the pedestrian walking route; and
 - c. The provision of an underground lighting conduit as part of the sidewalk reconstruction along the lot frontage on Oxford Street.
- vii. That the applicant shall submit details of the location, design and screening of façade and rooftop external heating, ventilation and other mechanical equipment, and associated information to document the sound levels meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority; and
- viii. That the applicant address the Fire Department comments dated 9.7.2016; and
- ix. That the proposed building mounted wall sconces shall be installed so that the light is directed downward.

D. 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 December 13, 2016 for application 2016-185 (75 Chestnut Street) 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 voted 7-0 that the Conditional Use is in conformance with the standards of the land use code and approves the application, subject to the following conditions of approval: *(continued)*

- i. Provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) before a Building Permit may be issued.
- ii. The AHA will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 75 Chestnut Street property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

The approval is based on the submitted plans and the findings related to site plan review standards as contained in the Planning Report for application #2016-184 and #2016-185, which is attached.

STANDARD CONDITIONS OF APPROVAL

Please note the following standard conditions of approval and requirements for all approved site plans:

1. **Subdivision Recording Plat** A revised recording plat listing all conditions of subdivision approval must be submitted for review and signature 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 and the plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval).
3. **Develop Site According to Plan** The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
4. **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 Inspection Division.
5. **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.
6. **Subdivision Plan Expiration** The subdivision approval is valid for up to three years from the date of Planning Board approval.
7. **Performance Guarantee and Inspection Fees** A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and six (6) final sets of plans must be submitted to and approved by the Planning Division and Public Works Department prior to the release of a subdivision plat for recording at the Cumberland County Registry of Deeds, and 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.
8. **Defect Guarantee** A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

9. **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 Work's 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.
10. **Department of Public Works Permits** If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)
11. **As-Built Final Plans** Final sets of as-built plans shall be submitted digitally to the Planning Division, on a CD or DVD, in AutoCAD format (*.dwg), release AutoCAD 2005 or greater.
12. **Mylar Copies** Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to the Public Works Department prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser at (207) 874- 8728.

Sincerely,



Elizabeth Boepple, Chair
Portland Planning Board

Attachments:

1. Final B7 Design Review comments dated December 5, 2016
2. Fire Department comments dated December 13, 2016
3. Planning Board Report
4. City Code, Chapter 32
5. Sample Stormwater Maintenance Agreement
6. Performance Guarantee Packet

Electronic Distribution:

Jeff Levine, AICP, Director of Planning and Urban Development
Stuart O'Brien, City Planning Director
Barbara Barhydt, Development Review Services Manager
Jean Fraser, Planner
Philip DiPierro, Development Review Coordinator, Planning
Mike Russell, Director of Permitting and Inspections
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Keith Gautreau, Fire Department
Danielle West-Chuhta, Corporation Counsel
Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Rick Blackburn, Assessor's Department
Approval Letter File

CITY OF PORTLAND, MAINE

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April 18, 2018

Lou Woods
 A & M Partners Inc
 120 Exchange Street
 Portland, ME 04101

Bill Hopkins
Archetype Architects
 48 Union Wharf
 Portland, ME 04101

Project Name: Westerlea View Lofts (Amendment to 2016/2017 Approval)
 Project ID: #2018-046
 Address: 75 Chestnut Street, Portland
 CBL: 026 E010
 Applicant: A & M Partners, Inc Lou Woods
 Planner: Jean Fraser

Dear Mr. Woods:

On April 17, 2018, the Planning Board considered the Level III Subdivision and Site Plan application for an amendment to the proposals approved on December 13, 2016 and February 14, 2017 (design condition) (#2016-184). The amended proposal includes a new 7 story building comprising 52 residential apartments (rental), and one commercial unit, totaling approximately 75,350 sq ft, located at 75 Chestnut Street. The amendments comprise primarily design and footprint modifications to the approved proposals that reduce the unit count by two 1-BR units and alter way the design relates to the ROW.

The Planning Board reviewed the proposed amendments for conformance with the standards of the Subdivision, Site Plan and B-7 Zone ordinances in the land use code. The approved Waivers and Inclusionary Zoning conditions approved by the Planning Board on December 13, 2016 (#2016-184) remain in force. The approved motions outlined below are largely the same as the previous conditions of approval with respect to the Subdivision and Site Plan ordinances, with one previous condition removed (met in the revised plans) and two conditions added or revised.

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 April 17, 2018 for application 2018-046 relevant to Portland's site plan and subdivision ordinances, technical and design standards and other regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted unanimously 6-0 (Silk absent) to approve the application with the following conditions as presented below:

Subdivision

The Planning Board voted unanimously (6-0 Silk absent) that the plan is in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat unless otherwise stated:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, addressing the staff comments and reflecting the subdivision and site plan conditions of approval;
- ii. That a lease agreement for the required parking, as contemplated by the submitted Reciprocal Agreement, be submitted for review and approval by the Corporation Counsel, the Department of Public Works, and the Planning Authority, and executed prior to the issuance of a building permit. Such lease to include the term, number, location and accessibility of handicapped spots and other details to meet the City's parking requirements. The rules and regulations governing the use of the parking spaces, as referenced in Article 6 of the Reciprocal Agreement, shall be submitted prior to the approval of the aforementioned lease; and
- iii. The applicant shall provide drafts of all necessary easements, including but not limited to:
 - a. Temporary construction easement from the City of Portland to Westerlea View Lofts;
 - b. License from the City of Portland to Westerlea View Lofts for building footings;
 - a. Easement(s) for the deck extensions above the existing parking garage structures (air rights); and
 - c. Access easement for sidewalks that are on the site property; for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

Development Review

The Planning Board voted unanimously (6-0 Silk absent) that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That the project is subject to the submitted Transportation Demand Management Plan dated October 2016, to include annual monitoring studies that comply with the requirements set out in the comments of the Traffic Engineering reviewer Tom Errico dated 12.9.2016;
- ii. That the ROW plans along the Chestnut Street frontage be revised, for review and approval prior to the issuance of a building permit, to:
 - a. Provide a relatively straight 5 foot wide ADA clear sidewalk with no impediments (excepting tree grates in limited locations) within an overall width of a minimum of 8 feet sidewalk;
 - b. Provide at least 4 street trees in front of the building on Chestnut Street and 1 additional street tree nearby, taking into account the options suggested by the City Arborist dated 4.12.18; and
 - c. Show the locations and revised specifications for the four new street lamps to be installed by the applicant, to be coordinated with the street tree spacing.

- iii. That the applicant submit a revised and more detailed plan for the amenity area between the building and Lancaster Street that demonstrates that the safety and security of the area meets CPTED standards eg re lighting, visual surveillance and similar issues including landscape features;
- iv. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan dated 9.30.2016 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works;
- v. That plans showing details for the areas listed below shall be submitted to the Planning Authority for review and approval prior to the issuance of a building permit:
 - a. Patio/entrances on Oxford Street
 - b. Doors for entrance to parking garage on Chestnut Street
 - c. Decks over parking lot
 - d. Live-work unit
 - e. Parking layout (dimensioned) for ADA spaces and demonstration that it meets applicable state and federal standards regarding ADA van parking;
- vi. That the applicant shall submit details of the location, design and screening of façade and rooftop external heating, ventilation and other mechanical equipment, and associated information to document the sound levels meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority;
- vii. That the applicant address the Fire Department comments dated 9.7.2016; and
- viii. That the proposed building mounted wall sconces shall be installed so that the light is directed downward.

The approval is based on the submitted plans and the findings related to subdivision and site plan review standards contained in the Planning Board Report for application #2018-046, which is attached.

STANDARD CONDITIONS OF APPROVAL

Please Note: The following standard conditions of approval and requirements apply to all approved site plans:

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.

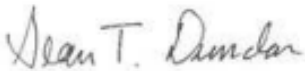
2. Subdivision Waivers Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice. The plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval.
3. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
4. 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.
5. 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.
6. Subdivision Expiration The subdivision approval is valid for up to three (3) years from the date of Planning Board approval.
7. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements, inspection fee payment of 2.0% of the guarantee amount and seven (7) 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.
8. Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
9. 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.

10. Construction Management Plans 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.
11. 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.)
12. As-Built Final Plans 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.
13. 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.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. please contact the Planning and Urban Development Department at 874-8719 or 874-8721 to arrange inspections. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser, Planner, at (207) 874-8728 or jf@portlandmaine.gov

Sincerely,



Sean Dundon, Chair
Portland Planning Board

Attachments:

1. Traffic Engineering reviewer Tom Errico comments dated 12.9.2016
2. City Arborist comments dated 4.12.18
3. Fire Department comments dated 9.7.2016
4. Planning Board Report
5. Portland City Code: Chapter 32
6. Sample Stormwater Maintenance Agreement
7. Performance Guarantee Packet

Electronic Distribution:

Jeff Levine, AICP, Director of Planning and Urban Development
Stuart G. O'Brien, City Planning Director, Planning and Urban Development
Barbara Barhydt, Development Review Services Manager, Planning and Urban Development
Jean Fraser, Planner, Planning and Urban Development
Philip DiPierro, DRC, Planning and Urban Development
Mike Russell, Director of Permitting and Inspections
Ann Machado, Zoning Administrator, Permitting and Inspections
Jonathan Rioux, Deputy Director, Permitting and Inspections
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Chris Branch, Director of Public Works
Keith Gray, Senior Engineer, Public Works
Doug Roncarati, Stormwater Coordinator, Public Works
Jane Ward, Engineering, Public Works
Rhonda Zazzara, Construction Engineering Coordinator, Public Works
Jeff Tarling, City Arborist, Public Works
Jeremiah Bartlett, Transportation Systems Engineer, Public Works
William Scott, Chief Surveyor, Public Works
Mike Thompson, Fire
Danielle West-Chuhta, Corporation Counsel
Jennifer Thompson, Corporation Counsel
Victoria Volent, Housing Program Manager, Housing and Community Development
Thomas Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard and Curran
Christopher Huff, Assessor

75 Chestnut Street - Final Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com>

Fri, Dec 9, 2016 at 8:00 AM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Jeff Tarling <jst@portlandmaine.gov>

Jean – The following is a status update of my previous comments and represents my final traffic comments.

November 3, 2016 Comments

- The City adopted a revised sidewalk materials policy and 75 Chestnut Street has two options for sidewalk material at this time:
 - Option 1: Continue to propose brick sidewalks and retain the bituminous material parking garage driveway aprons with required adjustments to provide a minimum 4-foot wide accessible route (maximum 2% cross slope) on the driveways.
 - Option 2: Provide concrete material sidewalks and continue the concrete material through the parking garage driveway aprons with provision of an accessible route as defined in Option 1.

Status: The applicant has revised the plans to concrete material or Option 2. Thus ALL site driveways (Lancaster and Oxford shall be included) shall be modified to concrete material according current City Policy.

Final Status: The applicant shall provide design details for driveway aprons on Oxford Street and Lancaster Street noting a pedestrian accessibility route with a maximum 2% cross-slope, and whether full or partial adjustment to the grade of the driveway apron is required.

- The plans should be revised to account for the following site plan street lighting requirements:

- The applicant is proposing four (4) street lights on Chestnut Street along the property frontage. It is suggested that the northern most light be located near the Lancaster Street corner and the remaining middle two (2) lights be spaced equidistant to all lights. It is also suggested that a greater separation between the light at the corner of Oxford Street and the tree box be provided.

Status: The plans have been revised and the light nearest Oxford Street shall be located as close to the corner as possible taking into account the corner sidewalk ramp.

Final Status: Jeff Tarling should confirm that adequate separation to the nearby tree is provided.

- Given the City's initiative to provide enhanced street illumination along Oxford Street, the applicant is not required to install lighting.

Status: I was incorrect in making my original comment. While standards require installation of street lights along the property frontage, the City is requesting that only underground conduit be installed for future light fixture installation due to reconstruction of the sidewalk by the applicant.

Final Status: The current plans do not include the requested conduit. A condition of approval shall be included noting that the applicant shall revise the plans to include lighting conduit for review and approval by the City.

- The applicant shall install street lights along the Lancaster Street property frontage. Given the likelihood of redevelopment on the opposite side of Lancaster Street, it is suggested that a staggered pattern be provided with 150-200 foot on center spacing.

Status: The plans propose one light near the Chestnut Street intersection. A second light fixture shall be installed on Lancaster Street near the easterly boundary.

Final Status: The plans have been revised and I have no further comment.

September 8, 2016

- The applicant shall conduct a traffic and safety assessment of the Chestnut Street/Lancaster Street intersection. The assessment shall consist of conducting intersection turning movement counts during the weekday AM and PM peak periods and evaluating crash information. The assessment should determine the appropriateness of the current two-way STOP configuration (which may cause confusion given other area intersection control conditions) and whether a four-way STOP condition is warranted.

Status: I reviewed the traffic data submitted and concur that no action is required of the applicant. I have no further comment.

Final Status: I have no further comment.

- The City Ordinance notes the following; *Where construction is proposed of new structures having a total floor area in excess of fifty thousand (50,000) square feet, the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.* Accordingly, A parking demand and management study shall be conducted that documents the projects expected parking demand according to ITE and/or local accepted data. The study shall also document how garage parking spaces will be managed including but not limited to: will spaces be specifically designated for the proposed tenants; will tenant parking spaces be bundled with each residential unit or an additional amenity; who currently uses the garage and are any users associated with an approved site plan. I would note that I do not expect any issues related to providing a sufficient off-street parking supply.

Status: The applicant shall provide the specific number of parking spaces being allocated to this project; specifically how many spaces are currently available for use in the garage; and if current parking leases are being terminated, documenting that none are associated with an approved site plan. As noted above, the applicant should provide details on how the parking garage will be managed at the point of project occupancy and in future time periods when parking demand may increase with tenant changes. The applicant has provided a TDM Plan and I generally find it to be acceptable. I would note that the annual monitoring shall also include information on parking demand for the project and where tenant parking occurs (in the garage or on-street). I'll provide additional direction on the monitoring program in advance of the public hearing.

Status:

- **The applicant has noted that the proposed project will require a need for 54 parking spaces and I find this estimate to be reasonable. I have no further comment.**

- **The applicant has provided sufficient documentation that under current conditions the existing garage has excess capacity for the additional 54 parked vehicles. I have no further comment.**
- **The annual monitoring study shall include a survey of existing tenants on automobile ownership and where they park their vehicles. The methods of the survey shall be reviewed and approved by the City's Planning Department. Other information related to the TDM plan shall also be included in the survey. The intent of the survey is to inform the TDM Plan and adjust action items for implementation. The applicant shall identify a target trip reduction goal for use in assessing TDM strategies. A factor to be determined from the survey is whether tenants of the development are using the garage (the goal is not to use on-street parking spaces), and if so what strategies should be considered to direct tenants with vehicles to the garage.**
- Sidewalks along the entire frontage of a project site shall meet City standards. The proposed project is currently proposing full sidewalk upgrades along Chestnut Street where the residential building is being constructed and disturbing the existing sidewalk. Existing sidewalks along the property frontage on Lancaster Street and Oxford Street do not meet the City sidewalk material policy. I would further note that during my field investigation the sidewalk on Lancaster Street is in poor condition with a uneven surface that creates ponding during rain events. DPW continues to review sidewalk conditions and requirements such that the project meets City standards.

Status: Refer to the above comments.

Final Status: Refer to previous comments for final status. I would also note that in conjunction with sidewalk ramp construction at the corner of Chestnut Street and Lancaster Street, the applicant shall incorporate grading adjustments to address the ponding of water that currently impacts the pedestrian walking route.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

TYLININTERNATIONAL

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Fwd: URGENT 75 Chestnut Street trees

1 message

Jean Fraser <jf@portlandmaine.gov>
To: "Fraser, Jean" <jf@portlandmaine.gov>

Thu, Apr 12, 2018 at 6:52 PM

From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Thu, Apr 12, 2018 at 5:08 PM
Subject: Re: URGENT 75 Chestnut Street trees
To: Jean Fraser <jf@portlandmaine.gov>

Jean -

We would like to see city sidewalks where possible accommodate our standard sidewalk plow which is 51" wide and 150" long. Currently this section of sidewalk is not cleared by the city but we like to build all future sidewalks to the standard in case someday we need to.

The proposed building angle with columns appears that it could be challenging for snow clearing and pedestrian travel. We note in the downtown that while tree grates are accessible ped traffic seems to avoid walking on them. Truly - the columns appear to pose the biggest challenge to an open, navigable with the closeness of the street trees.

Options include:

a) Adjust the spacing of the trees on the uphill side of Chestnut. Shown as H 6, by moving the second tree down from Oxford Street slightly uphill away from the nearby column. The concrete scoring joint marks could be adjusted to fit the new alignment.

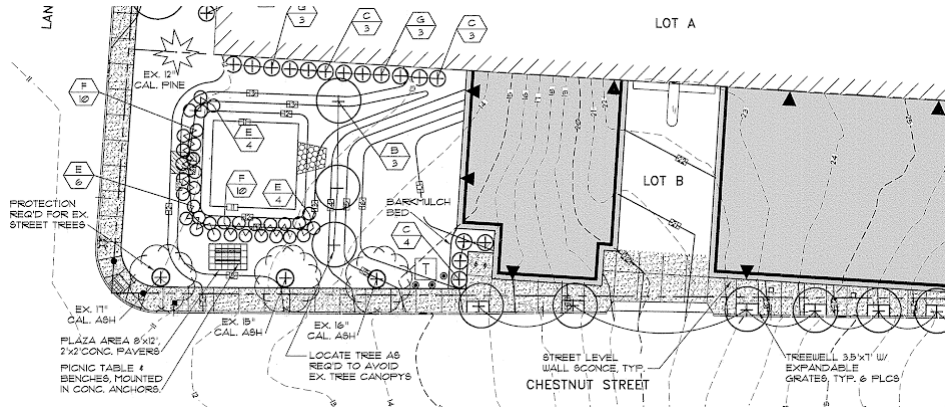
b) Remove (1) tree closest to the column and replant a new tree near the corner of Lancaster Street below the stormwater feature, on the lawn area. This would be between the F-10 & E-6 plant tags on the landscape plan, see below.

My preference would be the later as that space would provide a larger root zone to help the tree establish. From experience the street trees in the sidewalk cutouts have limitations due to lack for root space, (I am thinking the long term view from the tree perspective)

Thanks,

Jeff

See landscape plan:



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

MEMORANDUM

To: FILE

From: Jean Fraser

Subject: Application ID: 2016-184

Date: 12/9/2016

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

I would like to see a letter from the Portland Water District of their ability to serve domestic and fire protection demand for the proposed high rise building.

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

Emergency vehicle access is two sides only, Chestnut and Oxford. This is acceptable to the Fire Dept. although because of the arrangement and height of the building I would like to require the overhead power line on Chestnut Street going to the transformer to be underground. This will drastically restrict the Aerial Ladder trucks operation at this proposed site.

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

Fire Department Access shall have an unobstructed vertical clearance of not less than 13 ft 6 in. We will NOT be requiring this vertical clearance as emergency vehicles will not be entering the parking garage.

Comments Submitted by: Keith Gautreau/Fire on 9/7/2016

Premises Identification

The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

If the building entry faces a different street, both the street name and number should be large enough to read from the street.

Address numbers must be a minimum of 4 inches high.

The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty").

Color: Addresses should be in a color that contrasts with the background.

Whenever possible, should be illuminated.

Provide additional address signs at entrances to the property when the building address is not legible from the public street.



PLANNING BOARD REPORT PORTLAND, MAINE

Westerlea View Lofts: Amendment to previous approval for 54 unit residential development
and commercial space

75 Chestnut Street

Amendment to Level III Subdivision and Site Plan

#2018-046 (Amendment to #2016-184)

CBL: 026 E010002

A&M Partners Inc, Applicant

Submitted to Portland Planning Board Public Hearing Date: April 17 th , 2018	Prepared by: Jean Fraser Date: April 13 th , 2018
--	---

I. INTRODUCTION

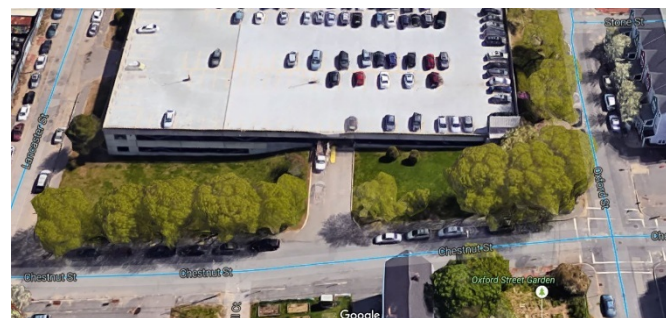
The applicant received approval for this project on December 13, 2016, subject to a condition of approval that the design be revised and reviewed by the Planning Board ([Attachment 1](#)). The Planning Board considered revised architectural plans on February 14, 2017 and approved the project based on the final designs ([Attachment 2](#)). The applicant submitted an amendment to the project that involves relatively substantial revisions to the design, along with some minor site plan amendments. The design amendments were considered by the Board on March 22, 2018 and were generally supported.

The previously approved project comprises a new 7 story building of 54 units at the corner of Oxford and Chestnut Streets, located over the Chestnut Street garage access and abutting the garage. The site will be divided into two condos, one for the parking garage and one for the proposed residential building. Parking for the new residential units is proposed to be located in the garage, and the approved proposals include a raingarden and amenity area to the north of the building. The site is located in the B7 zone which has extensive design standards both in the Zoning ordinance and in the Design Standards.

The site abuts the R6 zone along Chestnut and Oxford Streets and is currently an amenity area comprising 10 mature locust street trees and an access drive to the middle level of the parking garage.

In addition to the design amendments, the proposed amendments reduce the unit count by two 1-BR units and alter the footprint and the way the design relates to the ROW.

This Report includes a review of the elements that have changed, and where not specifically referenced the Report and associated Planning Board approval from December 2016 remains applicable.



Applicant: Lou Wood, A & M Partners, Inc

Agent and Engineer: Tom Greer, Walsh Engineering Associates, Inc

Architect: William Hopkins, Archetype

Required reviews for the Amendments:

Applicant's Proposal	Applicable Standards
New structure of 54 dwelling units	Subdivision Review
Multifamily building of 75,800 sq ft	Level III Site Plan Review and B-7 Design Review

II. PROJECT DATA (As amended)

<i>SUBJECT</i>	<i>DATA</i>
Existing Zoning	B-7
Existing Use	Parking garage and open, landscaped surrounds
Proposed Use	52 residential units & 1 commercial unit
Parcel Size	92,202 sq ft
Impervious Surface Area	
--Existing	53,832 sq ft
--Proposed	64,796 sq ft
--Net Change	10,964 sq ft
Total Disturbed Area	22,309 sq ft
Building Footprint	
--Existing	49,326 sq ft
--Proposed	59,089 sq ft
--Net Change	9,763 sq ft
Building Floor Area	
--Existing	147,978 sq ft (existing garage)
--Proposed	223,328 sq ft
-Net Change	75,350 sq ft
Residential	
- # of Existing Res. Units	0
- # of proposed Res. Units	52
- # of lots	2
- # of affordable housing units	6
Proposed Bedroom Mix	
-Efficiency Units	2
One-Bedroom Units	12
Two-Bedroom Units	38
Three-Bedroom Units	0
Parking Spaces	446 available in garage, of which 52 (1:1) committed to tenants
Handicapped Spaces	3
Bicycle parking Spaces	44 (36 inside; 8 outside) (none existing)
Estimated Cost of the project:	\$5,850,000

III. PLANNING BOARD AND WORKSHOP COMMENTS***Planning Board***

At the March Planning Board the applicant was requested to make one design revision: to move the screen at the garage entrance to be closer to the street. The Board also requested, in response to public comments, an additional rendering showing the Chestnut Street elevation in context (submitted as *Plan P25* and at right).



Public Comments

This Hearing was noticed to 154 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on April 9th and 10th, 2018. As of the completion of this PB Report the Planning Division has not received any written public comments. There were two public comments at the March PB workshop.

IV. BACKGROUND

The December 13, 2016 Planning Board Report includes a comprehensive description of the existing conditions, zoning and site plan and height/design analysis - it can be found at:

https://www.portlandmaine.gov/AgendaCenter/ViewFile/Agenda/_12132016-1879?html=true.

The February 14, 2017 Planning Board Report that reviewed the final design in the context of Condition 1 of the December 2016 approval can be found at:

https://www.portlandmaine.gov/AgendaCenter/ViewFile/Agenda/_02142017-1950?html=true

The site is located within the B7 zone and abuts the R6 zone along Chestnut and Oxford Streets. It is currently a grassed amenity area comprising 10 mature locust street trees and an access drive to the middle level of the parking garage. The proposed building would be constructed over the garage access.

The recent PB Workshop to consider the design amendments held on March 22, 2018 includes the design evolution of the building and can be found at:

https://www.portlandmaine.gov/AgendaCenter/ViewFile/Agenda/_03222018-2356?html=true



Looking north from corner Oxford and Chestnut Streets

V. PROPOSED AMENDMENTS

The amendment application includes the following revisions to the approved project; staff understand most of these are proposed at the request of a potential buyer:

- Reduction in the unit count to 52 dwellings, resulting from the omission of two one-BR units;
- Design changes as summarized in the cover letter from the architects (*Attachment B*), which include:
 - Smaller window openings
 - Modifications to the Oxford Street elevation (placement of balconies, massing)
 - Revisions to the garage opening
 - Revised entrance locations and design
- Revisions to the site plan, as partially identified in the cover letter from the civil engineers (*Attachment C*):
 - Revised footprint
 - Relocation of street trees (with one added) to take account of support columns in the sidewalk and the enlarged building along Chestnut Street
 - Revised patio, accesses and some utilities to accommodate revised architecture
 - Changes in the ROW, including some to address conditions of approval from the 2016 review.

VI. ZONING ASSESSMENT

The proposed amended building height is lower than that of the approved project and continues to meet the dimensional requirement of the B7 zone. The B7 ordinance includes extensive *Design Standards* which are discussed below.

VII. DESIGN AMENDMENTS

The Planning Board Memorandum considered on March 22, 2018 included a chronological analysis of the design review as a context for considering the amendments. The applicant has revised the screen at the garage opening as illustrated below:

Rendering of view from Lancaster Street looking south up Chestnut Street:

MARCH 2018 WORKSHOP:



APRIL 2018 HEARING:



The design review discussions in 2016/2017 centered on the integration of the building at street level, the roof line and compatibility with the surrounding residential area. Some neighbors considered the building too high. At the December 2016 Hearing the Board added the following condition to allow for further revision of the design:

That final proposals shall comply with the B7 Design Standards A-2, A-5, C-2, E-1, E-3 particularly:

- a. Articulated roofline;*
- b. Massing and scale to transition and integrate with the residential context on Chestnut Street;*
- c. Pedestrian experience on Chestnut Street; and*
- d. Materiality;*

To be reviewed and approved by the Planning Board.

The Workshop Memorandum reviewed the design amendments as included in *Plan Set B*; these can be compared to the approved design in *Plan Set A*. The City's Urban Designer, Caitlin Cameron, provided a detailed comment for the Workshop (*Attachment 4*) and has confirmed that staff finds the proposal submitted February 27, 2018 (as amended in

respect of the garage screen) meets the B-7 design standards as well as the Planning Board comments and areas of concern covered by the condition of approval.

VIII. SUBDIVISION AMENDMENTS

Further review of the amendments in respect of the Subdivision standards has been undertaken regarding the following where the amendments result in revisions:

Subdivision Plat

The applicant submitted a draft 2-sheet subdivision plat (*Plan P18*) and staff provided comments in March, 2018 (*Attachment 5*). A suggested condition of approval requires that the plat be finalized to address the staff comments and to reflect all of the easements, parking arrangements and other relevant conditions of any approval.

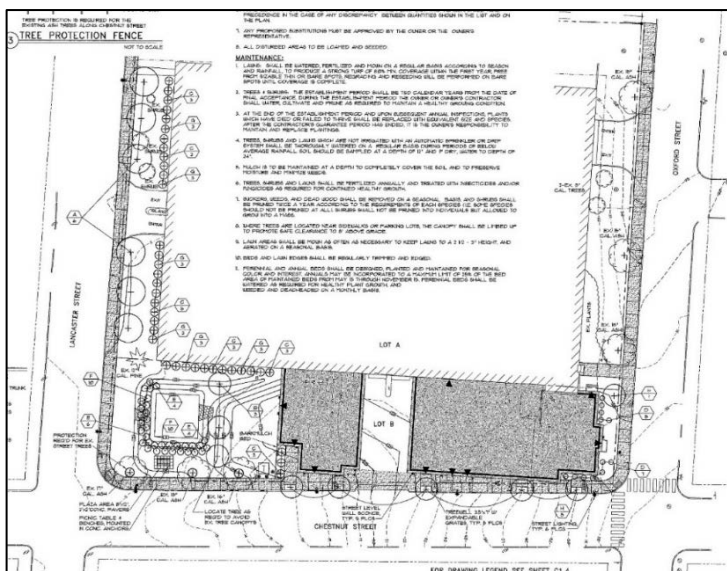
Scenic Beauty and Street Trees

The proposal results in the removal of 7 of the 10 mature trees at the back of the sidewalk on Chestnut Street (*Plan P10*). The approved Landscape Plan included 5 new maple street trees along Chestnut Street and 10 new trees elsewhere on the site, and at the time of the Landscape Plan approval the building columns were not part of the proposals. The amended Landscape Plan proposes 6 new trees along Chestnut Street but this number may not be possible due to conflicts with the building columns associated with the amended design and the need to provide a safe wide sidewalk. The options for meeting the site plan street tree requirement are discussed further under the Site Plan review below.

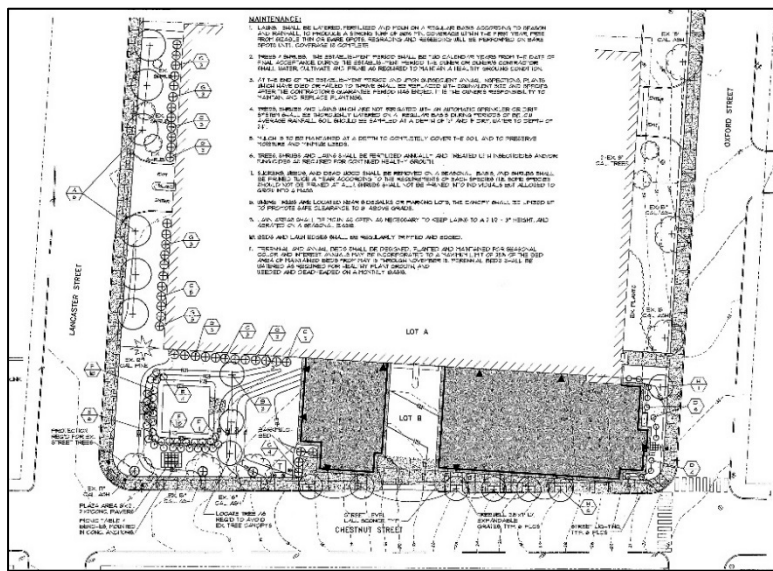
IX. SITE PLAN AMENDMENTS

Further review of the amendments in respect of the Site Plan standards has been undertaken regarding the following where the amendments result in revisions. It should be noted that the civil plans (see *Plans P9 and P10*) were originally approved in 2016 before the final design was approved which included columns on the Chestnut Street frontage. The amendments are generally minor, with the main impacts being on the ROW:

As Approved (2016):



As Amended (2018):

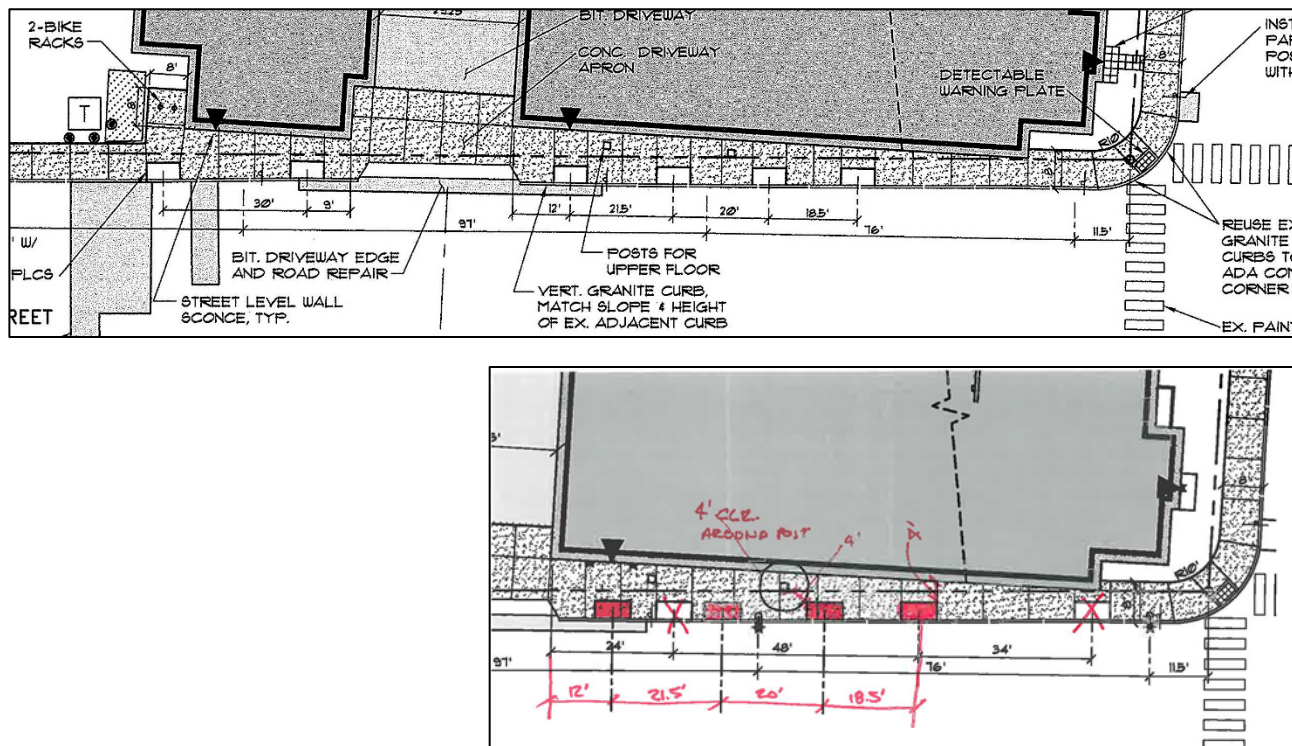


Right of Way – sidewalk, columns and street trees

The applicant is proposing to reconstruct the sidewalk and at the 2016 Hearing this was confirmed to be at least 8 feet in width and in concrete along the Chestnut, Oxford and Lancaster Streets in accordance with the Council's materials policy. At that time staff identified detailed revisions to meet Technical Standards and the amended site plans have addressed some of the conditions.

The 8 feet sidewalk incorporated in the original approved plans was a commitment from the applicant during the review and was welcomed as it is expected that this stretch of sidewalk will become a well-used pedestrian link between

The combination of the columns and the revised layout of the street trees creates a situation where the path of walking must keep changing direction to avoid the trees and the columns, as illustrated in these “amendment” plans submitted by the applicant (*Plan P19 & Attachment D*):



“...Site Plan sheet C1.2 should be revised to show a direct, intuitive and non-meandering clear width of no less than 5 ‘ of width of sidewalk without having to avoid obstacles”

The provision of an adequate sidewalk walking space, while also providing street trees, is a challenge and the suggested condition of approval anticipates further revisions that would include the requirement for the sidewalk area to include a 5 feet wide relatively straight walking path within the 8 foot wide sidewalk.

The staff comments (*Attachment 7*) also include comments regarding the sidewalk ramp details and street lighting specifications and these are referenced in a suggested condition of approval. Due to a technical error the plans reviewed by staff did not include the street light locations; the plans in the packet do show the locations but these need further review to ensure they are coordinated with the street tree locations.

The previous approval included conditions that relate to the parking provision being tied to the development, the TDM Plan and the location and accessibility of ADA parking—all as based on the 2016 recommendations of the City's

consultant Traffic Engineering Reviewer Tom Errico. Mr Errico has confirmed that the amendments do not alter the need for these conditions and recommend that the conditions be reiterated as part of this review (*Attachment 6*).

The proposed amendments have altered the access points between the new building and the parking garage, with some of the exits appearing to open into a parking space and with the ADA parking provision unclear (see the First Floor Plan (*Plan P15*)). A suggested condition of approval includes the requirement for further details of these aspects and related parking layout.

The applicant has submitted the signed *Reciprocal Agreement* between the condo unit that includes the parking garage, and the unit that include the proposed new housing (*Attachment F*). The city's Legal Advisor has commented that there should be a condition of approval that ensures that the final version of the parking lease agreement confirms the parking layout and access as well as the legal responsibilities and management/allocation (*Att. 8*).

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 amendments to the Westerlea View Lofts development at 75 Chestnut Street. Where staff do not consider that the amended proposals provide enough detail to address the previous conditions of approval, those conditions have been re- included in the Subdivision and Site Plan parts of the proposed Motion. One of the previous 2016 conditions has been removed as it has been met.

XI. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

EDITORS NOTE: The approved Waivers and Inclusionary Zoning conditions approved by the Planning Board on December 13, 2016 (#2016-184) remain in force. The following motions are largely the same as the previous conditions of approval with respect to the Subdivision and Site Plan ordinances, with one condition removed (met in the revised plans) and the underlined wording added or revised.

A. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on April 17, 2018 for application 2018-046 (75 Chestnut Street) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the amended plan [is/is not] in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat unless otherwise noted:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, addressing the staff comments and reflecting the subdivision and site plan conditions of approval;
- ii. That a lease agreement for the required parking, as contemplated by the submitted Reciprocal Agreement, be submitted for review and approval by the Corporation Counsel, the Department of Public Works, and the Planning Authority, and executed prior to the issuance of a building permit. Such lease to include the term, number, location and accessibility of handicapped spots and other details to meet the City's parking requirements. The rules and regulations governing the use of the parking spaces, as referenced in Article 6 of the Reciprocal Agreement, shall be submitted prior to the approval of the aforementioned lease; and
- iii. The applicant shall provide drafts of all necessary easements, including but not limited to:
 - a. Temporary construction easement from the City of Portland to Westerlea View Lofts;
 - b. License from the City of Portland to Westerlea View Lofts for building footings;
 - c. Easement(s) for the deck extensions above the existing parking garage structures (air rights); and
 - d. Access easement for sidewalks that are on the site property,

for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority, with evidence of executed easements to be submitted prior to the issuance of a building permit.

B. SITE PLAN

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in planning board report for the public hearing on April 17, 2018 for application 2018-046 (75 Chestnut Street) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing, the Planning Board finds that the amended plan **is / is not** in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That the project is subject to the submitted Transportation Demand Management Plan dated October 2016, to include annual monitoring studies that comply with the requirements set out in the comments of the Traffic Engineering reviewer Tom Errico dated 12.9.2016;
- ii. That the ROW plans along the Chestnut Street frontage be revised, for review and approval prior to the issuance of a building permit, to:
 - a. Provide a relatively straight 5 foot wide ADA clear sidewalk with no impediments (excepting tree grates in limited locations) within an overall width of a minimum of 8 feet sidewalk;
 - b. Provide at least 4 street trees in front of the building on Chestnut Street and 1 additional street tree nearby, taking into account the options suggested by the City Arborist dated 4.12.18;
 - c. Show the locations and revised specifications for the four new street lamps to be installed by the applicant, to be coordinated with the street tree spacing;
- iii. That the applicant submit a revised and more detailed plan for the amenity area between the building and Lancaster Street that demonstrates that the safety and security of the area meets CPTED standards eg re lighting, visual surveillance and similar issues including landscape features;
- iv. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan dated 9.30.2016 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works;
- v. That plans showing details for the areas listed below shall be submitted to the Planning Authority for review and approval prior to the issuance of a building permit:
 - a. Patio/entrances on Oxford Street
 - b. Doors for entrance to parking garage on Chestnut Street
 - c. Decks over parking lot
 - d. Live-work unit
 - e. Parking layout (dimensioned) for ADA spaces and demonstration that it meets applicable state and federal standards regarding ADA van parking;
- vi. That the applicant shall submit details of the location, design and screening of façade and rooftop external heating, ventilation and other mechanical equipment, and associated information to document the sound levels meet the City's Site Plan, Zoning and Technical Standards, for review and approval by the Planning Authority;
- vii. That the applicant address the Fire Department comments dated 9.7.2016; and

- viii. That the proposed building mounted wall sconces shall be installed so that the light is directed downward.

ATTACHMENTS

Attachments to the Report

1. Approval letter dated 12.16.2016 (except Design)
2. Approval letter 2.14.2017 (RE Cond 1 Design)
3. Design Review Workshop comments on Amendments
4. Final Design Review comments
5. Staff comments on draft Subdivision Plats
6. Final Traffic Engineering Review Comments
7. Final Transportation Program Manager comments
8. Legal comments regarding Reciprocal Agreement
9. Final City Arborist Comments

Public Comments (none received at the time report was prepared)

Applicants Amendment Submittal

- A. Amendment Applications
- B. Cover letter describing design amendments (Archetype)
- C. Cover letter describing Site Plan amendments (Walsh Engineering)
- D. Street Tree amendments
- E. Parking information (as for 2016)
- F. Signed Reciprocal Agreement

A. Plans/Renderings as approved 2016/2017

- P1. Approved 2017 Elevations
- P2. Approved 2017 Elevations Rendered
- P3. Approved 2017 Lancaster/Chestnut revised rendering
- P4. Approved 2017 Oxford /Chestnut revised rendering
- P5. Approved 2017 Upper Chestnut rendering
- P6. Approved 2017 Street View of Chestnut Street revised
- P7. Approved 2017 Massing
- P8. Approved subject to Conditions Draft Subdivision Plan
- P9. Approved subject to Conditions 2016 Site Plan
- P10. Approved subject to conditions 2016 Landscape Plan
- P11. Line Axon of approved - two views

B. Plans/Renderings as amended 2018

- P12. Amended Elevations
- P13. Amended Lancaster/Chestnut Rendering
- P14. Amended Upper Chestnut Rendering
- P15. Amended Floor Plans
- P16. Exterior Details
- P17. Existing Conds & Demolition
- P18. Amended Draft Subdivision Plan
- P19. Amended Site Plan
- P20. Amended Landscape Plan
- P21. Amended Grading and Utilities Plan
- P22. Amended Erosion Control Plan
- P23. Line Axon Upper Chestnut
- P24. Final Line Axon Lancaster
- P25. Rendering from Chestnut in context

October 9, 2020

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

**RE: 75 Chestnut Street, Daymark Portland, Maine
Summary of Amendments**

Dear James,

Thank you for your email of 9/24/2020 regarding the site plan amendment application for the Inclusionary Zoning change. Below is a summary of the proposed site plan amendment.

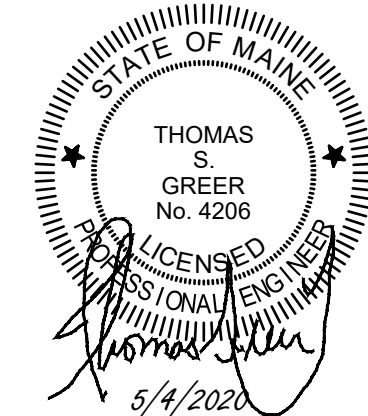
The Procopio Companies is proposing to pay a fee in lieu of workforce housing for the proposed apartments at 75 Chestnut Street as stated on the site plan approved in May 2020 (C1.1 General Note: 20).

We look forward to working with the Planning Board on this item.

Respectfully,



William R. Walsh, III, P.E.
Walsh Engineering Associates, Inc.



LEGEND

EXISTING

---	PROPERTY LINE
---	ABUTTERS PROPERTY
---	EDGE OF PAVEMENT
---	CONTOURS
---	BUILDING
---	EDGE OF GRAVEL
---	CURB
---	GAS LINE
---	SANITARY SEWER
---	STORMDRAIN
---	OVERHEAD UTILITY
---	WATER LINE
---	CATCH BASIN
---	COMBINED SYSTEM MANHOLE
---	SEWER MANHOLE
---	ELECTRIC MANHOLE
---	GAS METER
---	HYDRANT
---	WATER VALVE
---	GAS VALVE
---	POLE MOUNTED TRANSFORMER
---	UTILITY POLE W/ GUY WIRE
---	SIGN
---	TREE
---	IMPERVIOUS TO BE REMOVED
---	BENCHMARK

DEMOLITION NOTES

- ANY UNUSED SERVICE LINES ARE TO BE PROPERLY REMOVED TO THE MAIN. CAP EACH IN ACCORDANCE WITH THE APPROPRIATE UTILITY REQUIREMENTS.

DAYMARK

75 CHESTNUT STREET
PORTLAND, MAINE

PREPARED FOR:
75 CHESTNUT STREET OWNER, LLC

c/o THE PROCOPIO COMPANIES
220 BROADWAY, UNIT 302
LYNNFIELD, MASSACHUSETTS 01940

Rev.	Date	Description	Drawn	Check
5	4/1/2020	Rev'd Per Review Comments 4/1/1/1/18 & 4/20/19, Add COA	JDC	TSG
6	5/4/2020	Rev'd Per Final Civil Plan Set Review Comments	JDC	TSG

Sheet Title:

EXISTING CONDITIONS AND DEMOLITION PLAN

Job No.: 653 / 16142

Date: JULY 28, 2016

Scale: AS SHOWN

Drawn: JDC

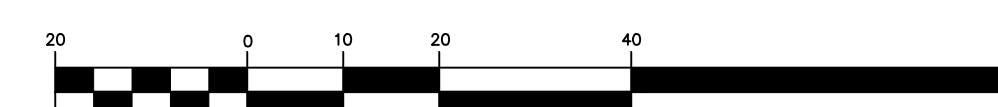
Checked: TSG

Sheet No.:

C1.3

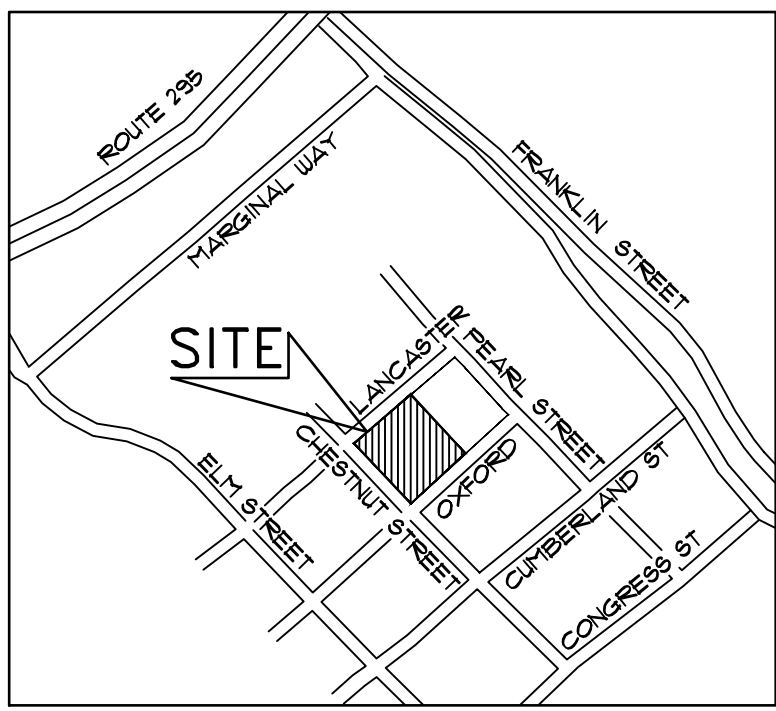
MAP / LOT: 26 / E / 10

GRAPHIC SCALE



(IN FEET)

1 inch = 20 ft.



LOCATION PLAN

SCALE: 1"=150'

EX. BRICK RAMP TO REMAIN

MATCH END OF EX. BRICK RAMP

EX. HYDRANT

MATCH EX. RAMP SHAPE AND GRADE

CONTINUE CONCRETE SIDEWALK ACROSS DRIVEWAY

EX. CONC. CURB AT DRIVEWAY, TYP.

EXIT ISLAND

ENTER

LANCASTER STREET

EX. HYDRANT

REUSE EX. RADIAL GRANITE TERMINAL CURBS TO CREATE ADA COMPLIANT CORNER RAMP

6-8 STREETLIGHTS, BAYSIDE DISTRICT MEDIUM SCALE RESIDENTIAL LIGHTS

SPACING SHOWN, SEE DETAIL 10 ON SHEET C2.4

REBUILD SIDEWALK W/ CONCRETE AND VERTICAL GRANITE CURB (AS REQ'D) PER CITY REQUIREMENTS, ALIGN REBUILD SIDEWALK W/ EX. CURB LINE, 812 L.F.±

TREEWELL W/ GRATE, SEE LANDSCAPE PLAN FOR ADD'L INFO, TYP. 4 PLCS

APPROX. OUTLINE OF FULL-DEPTH CONSTRUCTION FOR UTILITY TRENCHES

STREET LEVEL WALL SCIENCE, TYP.

SIGHT DISTANCE: TO THE INTERSECTIONS

SPEED LIMIT: 25 MPH

DRIVEWAY TRANSITION TO STREET IS TO USE "BUGS" PER DETAIL 6 ON SHEET C2.4. THE DRIVEWAY SHOULD BE CONSTRUCTED WITH GRADES ACCORDING TO THE DETAIL.

VERT. GRANITE CURB, MATCH SLOPE OF ROAD & HEIGHT OF EX. ADJACENT CURB, TYP. EACH SIDE OF DRIVEWAY

WALKING AREA THAT IS DIRECT, INTUITIVE, NON-MEANDERING WITH CLEAR WIDTH OF NO LESS THAN 5' WIDE

REUSE EX. RADIAL GRANITE TERMINAL CURBS TO CREATE ADA COMPLIANT CORNER RAMP

EX. PAINTED CROSSWALKS

POSTS FOR UPPER FLOOR

BIT. DRIVEWAY EDGE AND ROAD REPAIR

OVERHEAD GARAGE DOOR & GARAGE PEDESTRIAN EGRESS DOOR

FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

EX. PAINTED PARKING SPACES TO BE RECONFIGURED TO COMPLY WITH ADA REQUIREMENTS. EX. CONC. SLAB DOES NOT SLOPE MORE THAN 2% IN ANY DIRECTION INCLUDING TRAVEL PATH THAT SERVES THE ADA SPACES AND ACCESS AISLES.

EX. GARAGE FLOOR EL. 23.0

STEPS TO MECHANICAL ROOM, SEE ARCH. DUGS

CATCHBASIN, OVERFLOW FOR STORMWATER TREATMENT AREA

AREA FOR UNDERDRAINED SOIL FILTER, STORMWATER TREATMENT

5'x12' CONCRETE ENTRY PAD W/ INSULATION BELOW, TYP. AT 3-ENTRIES

3' WIDE CONCRETE PAVEMENT WALK

8'x12' CONCRETE PAVEMENT BIKE RACKS AREA

EX. HYDRANT

EX. STAIR TOWER

CENTER CONC. WALK ON EXISTING GARAGE STEPS TO UPPER LEVEL

2-BIKE RACKS IN CONCRETE PAVEMENT PAD, 45'x6'

MECHANICAL VENT FOR LOWER FLOOR, COORD. WITH MECH. & ARCH. PLANS

STEPS TO UNIT 202, SEE ARCH. DUGS

3' WIDE CONCRETE PAVEMENT WALK

INSTALL REUSED PARKING SIGNS ON NEW POSTS IN ACCORDANCE WITH CITY STANDARDS.

EX. HYDRANT

REUSE EX. RADIAL GRANITE TERMINAL CURBS TO CREATE ADA COMPLIANT CORNER RAMP

EX. PAINTED CROSSWALKS

POSTS FOR UPPER FLOOR

BIT. DRIVEWAY EDGE AND ROAD REPAIR

OVERHEAD GARAGE DOOR & GARAGE PEDESTRIAN EGRESS DOOR

FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

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FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

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FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

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STEPS TO UNIT 202, SEE ARCH. DUGS

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POSTS FOR UPPER FLOOR

BIT. DRIVEWAY EDGE AND ROAD REPAIR

OVERHEAD GARAGE DOOR & GARAGE PEDESTRIAN EGRESS DOOR

FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

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AREA FOR UNDERDRAINED SOIL FILTER, STORMWATER TREATMENT

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STEPS TO UNIT 202, SEE ARCH. DUGS

3' WIDE CONCRETE PAVEMENT WALK

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EX. PAINTED CROSSWALKS

POSTS FOR UPPER FLOOR

BIT. DRIVEWAY EDGE AND ROAD REPAIR

OVERHEAD GARAGE DOOR & GARAGE PEDESTRIAN EGRESS DOOR

FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

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EX. GARAGE FLOOR EL. 23.0

STEPS TO MECHANICAL ROOM, SEE ARCH. DUGS

CATCHBASIN, OVERFLOW FOR STORMWATER TREATMENT AREA

AREA FOR UNDERDRAINED SOIL FILTER, STORMWATER TREATMENT

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3' WIDE CONCRETE PAVEMENT WALK

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EX. STAIR TOWER

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STEPS TO UNIT 202, SEE ARCH. DUGS

3' WIDE CONCRETE PAVEMENT WALK

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EX. PAINTED CROSSWALKS

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BIT. DRIVEWAY EDGE AND ROAD REPAIR

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FIN. FLR. EL. 23.0

FIN. FLR. EL. 2125

FIN. FLR. EL. 33.0

DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"

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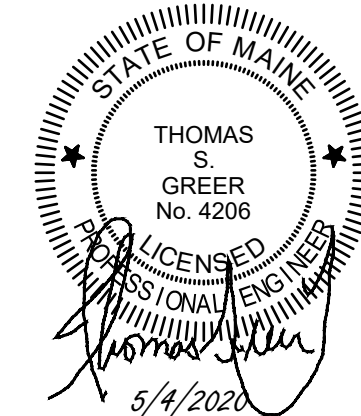
DETECTABLE WARNING PLATE

CONC. DRIVEWAY AFFRON, END AT OVERHEAD DOOR

4' WIDE STRIPED WALK

EXISTING PARKING LAYOUT TO REMAIN

EX. DOOR OPENING: 26'-0" x 10'-0" x 9'-0" x 10'-2" x 9'-0" x 9'-0" x 9'-0" x 10'-2" x 9'-0"



DAYMARK

75 CHESTNUT STREET
PORTLAND, MAINE

75 CHESTNUT STREET OWNER, LLC

PREPARED FOR:

c/o THE PROCOPIO COMPANIES

220 BROADWAY, UNIT 302
LYNNFIELD, MASSACHUSETTS 01940

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions
DATE OF APPROVAL: 4-17-2018 as amended to
most cmts 5.15.2020
PLANNER: Jean Fraser
PROJECT NO.: #2018-046

Rev.	Date	Description	Drawn	Check
8	4/1/2020	Rev'd Per Review Comments 4/1/17/18 & 4/20/18, Add COA	JDC	TSG
9	4/22/2020	Rev'd Per Review Comments 4/17/20	JDC	TSG
10	4/28/2020	Rev'd Per PWD Requirements	JDC	TSG
11	5/4/2020	Rev'd Per Final Civil Plan Set Review Comments	JDC	TSG

Sheet Title:

GRADING AND UTILITIES PLAN

Job No.: 653 / 16142

Date: JULY 28, 2016

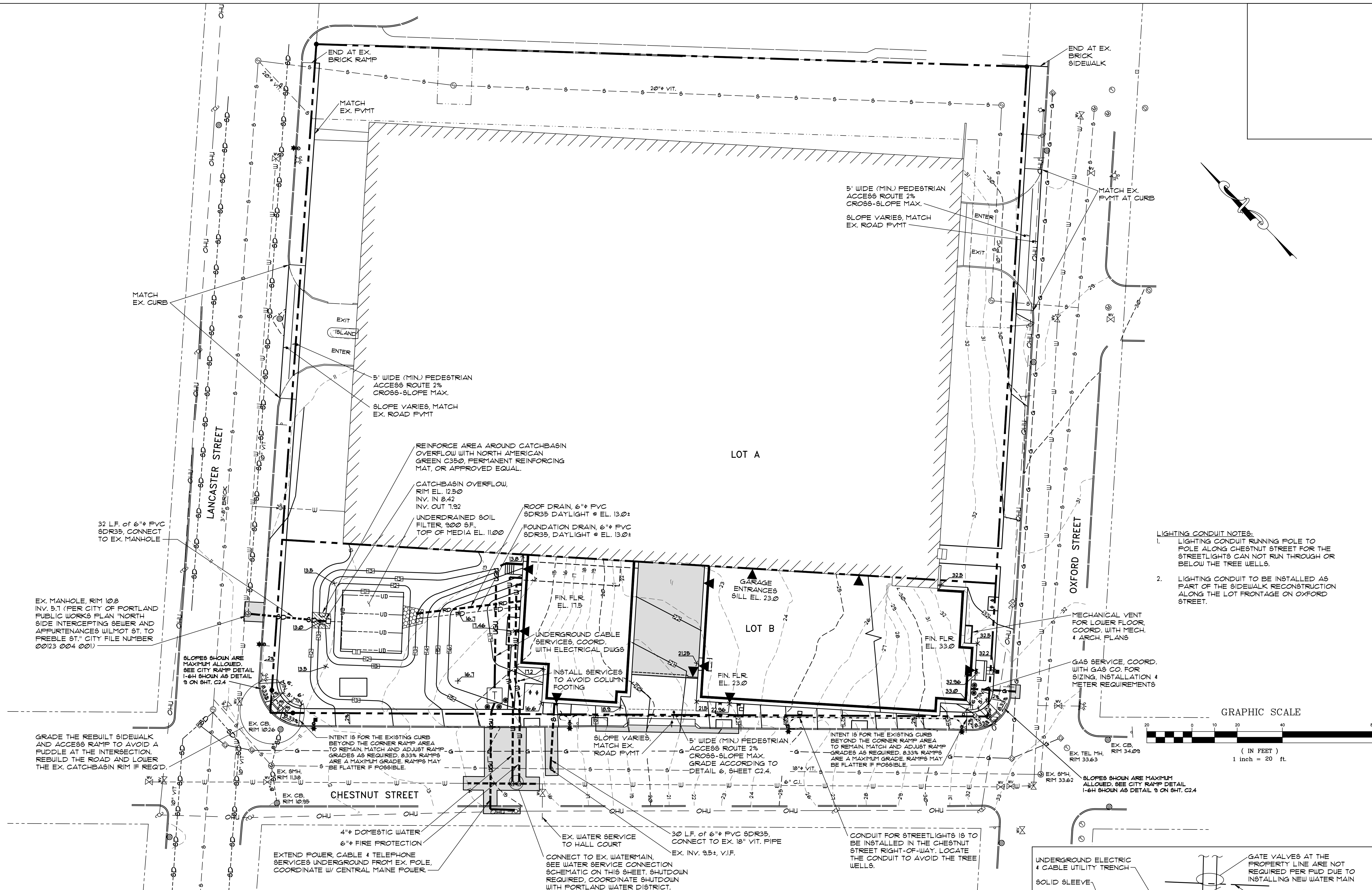
Scale: AS SHOWN

Drawn: JDC

Checked: TSG

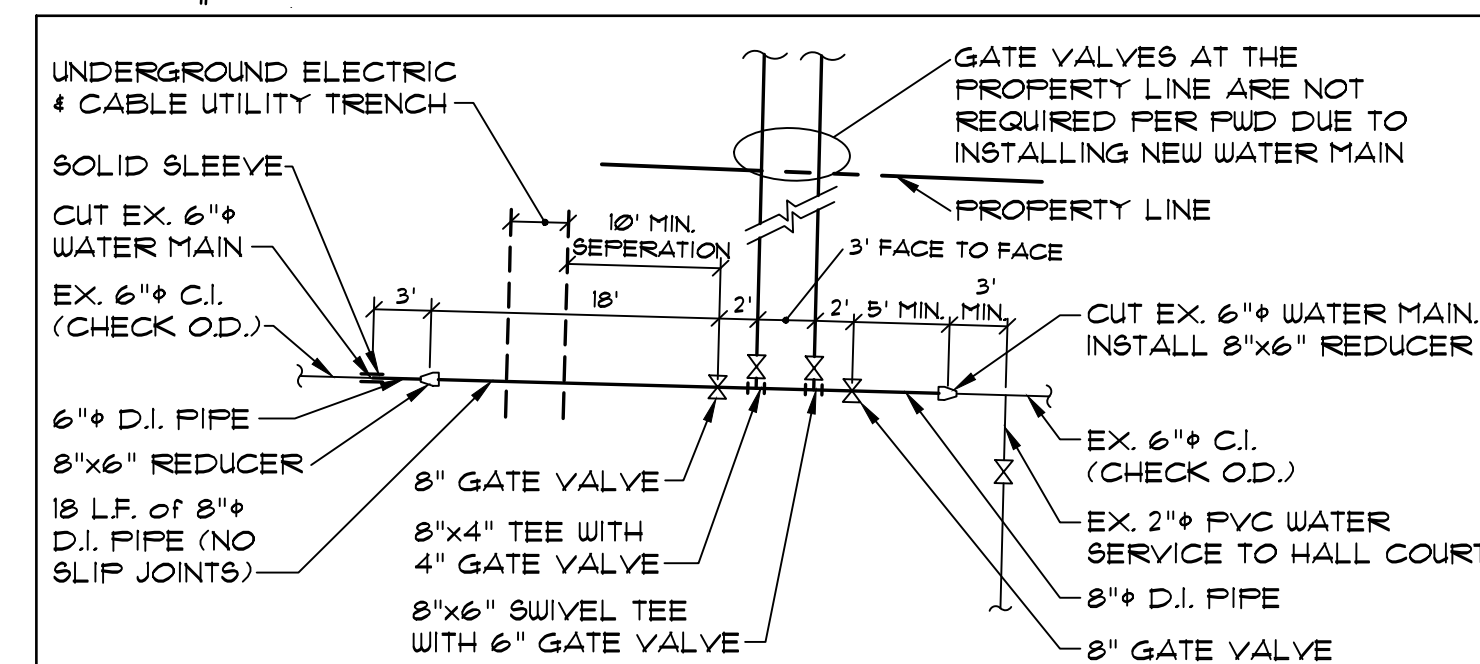
C1.4

MAP / LOT: 26 / E / 10



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.



WATER SERVICE CONNECTION SCHEMATIC

NOT TO SCALE

LEGEND

EXISTING

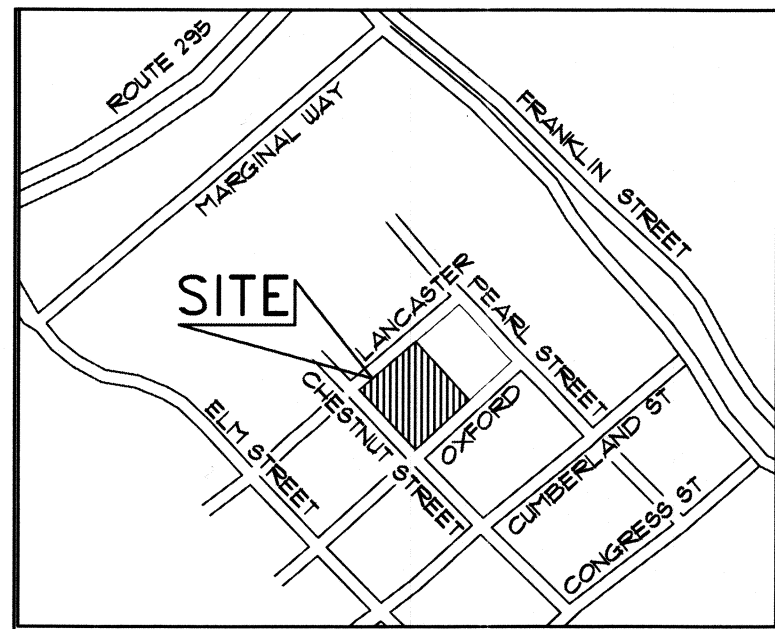
PROPERTY LINE
ABUTTER'S PROPERTY
EDGE OF PAVEMENT
CONTOURS
BUILDING
EDGE OF GRAVEL
CURB
GAS LINE
SANITARY SEWER
STORMDRAIN
OVERHEAD UTILITY
WATER LINE

CATCH BASIN
COMBINED MANHOLE
SEWER MANHOLE
ELECTRIC MANHOLE
GAS METER
HYDRANT
WATER VALVE
GAS VALVE
POLE MOUNTED TRANSFORMER
UTILITY POLE W/ GUY WIRE
SIGN
LIGHT POLE

PROPOSED

EDGE OF PAVEMENT
VERTICAL GRANITE CURB
BUILDING
BUILDING ENTRY/EGRESS
CONTOURS
GAS LINE
SANITARY SEWER
STORMDRAIN
ROOF DRAIN
FOUNDATION DRAIN
UNDERGROUND UTILITY
ELECTRIC CONDUIT
WATER LINE

SPOT GRADE
CATCH BASIN
CONTROL STRUCTURE
LIGHT POLE
WALL MOUNTED LIGHT
WATER SHUT OFF
TRANSFORMER
BOLLARD
BITUMINOUS PAVEMENT
CONCRETE PAVEMENT



LOCATION PLAN

SCALE: 1"=150'

LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- EDGE OF PAVEMENT
- BUILDING CURB
- CONTOURS
- ZONING DISTRICT
- IRON PIPE FOUND
- MONUMENT FOUND
- 5/8" IRON ROD
- W/CAP #111 SET

PROPOSED

- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- BUILDING ENTRY/EGRESS
- LIGHT POLE
- BOUND TO BE SET
- FOOTING LICENSE
- ACCESS EASEMENT
- AIR RIGHTS EASEMENT
- SNOW STORAGE AREA
- BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT

State of Maine, Cumberland ss.

Registry of Deeds

Received _____, 20____

at _____m., and recorded in

Plan Book _____, Page _____

Attest: _____

Register

GENERAL NOTES

- OWNER: 75 CHESTNUT STREET OWNER, LLC
c/o THE PROCOPIO COMPANIES
220 BROADWAY, UNIT 203, LYNNFIELD,
MASSACHUSETTS, 01940. DEEDS RECORDED
IN CUMBERLAND COUNTY REGISTRY OF
DEEDS BK. 36510, PG. 62, DATE 3/16/2020.
- ENGINEER: WALSH ENGINEERING ASSOCIATES,
INC., ONE KAREN DRIVE, SUITE 2A,
WESTBROOK, MAINE 04092.
- ARCHITECT: ARCHETYPE ARCHITECTS,
48 UNION WHARF, PORTLAND, MAINE 04101.
- TOPOGRAPHIC & BOUNDARY: MAINE SURVEY
CONSULTANTS, INC., PO BOX 485, HARRISON, MAINE, 04040.
- UNDERLYING SOILS MAPPING TAKEN FROM SOIL CONSERVATION
STUDY OF CUMBERLAND COUNTY. THE UPPER HALF OF THE SITE IS CLASSIFIED
HICKLEY (HIB). THE LOWER HALF IS CLASSIFIED AS AU GRES (Au). THE
SURFACE OF THE SITE IS CURRENT URBAN LAND.
- TAX MAP REFERENCE: MAP 26 / BLOCK E / LOT 10.
- ZONE: B-7, MIXED DEVELOPMENT, PROPOSED USE: RESIDENTIAL
- EXISTING PARCEL = 2.12 acres
- UNITS TO BE SERVICED BY PUBLIC WATER, SEWER, AND GAS FROM CHESTNUT
STREET. THESE SERVICES, INCLUDING HYDRANTS, ARE AS SHOWN ON SHEET C1.4,
GRADING AND UTILITIES PLAN.
- POWER, TELEPHONE AND CABLE SERVICES ARE TO BE UNDERGROUND FROM
AN EXISTING POLE. THESE SERVICES ARE SHOWN ON SHEET C1.4, GRADING AND
UTILITIES PLAN.
- CALL DIG-SAFE PRIOR TO COMMENCING WORK, 1-800-DIG-SAFE.
- ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL MEET CITY OF PORTLAND
TECHNICAL MANUAL STANDARDS COORDINATE WITH PLANNING DEPARTMENT
FOR MOST CURRENT VERSION OF ALL CITY DETAILS.
- PROPOSED PARKING SPACES: NO NEW SPACES, EXISTING PARKING IS PER AN
AGREEMENT WITH THE OWNERS OF LOT A. 1 PER UNIT PROVIDED IN THE EXISTING
GARAGE. SEE THE RECIPROCAL AGREEMENT AND PARKING LEASE RECORDED
IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK _____, PAGE _____,
DATED _____.
- THE SUBJECT PARCEL SHOWN AS DAYMARK IS SUBJECT TO A CITY OF
PORTLAND LEVEL III SITE PLAN AND SUBDIVISION PERMIT.
- DETAILS OF STREET TREES ARE INCLUDED ON THE LANDSCAPE
PLAN AS PART OF THE APPROVAL FOR DAYMARK SITE PLAN.
- FLOODPLAIN: THIS PROPERTY IS IN ZONE C OF THE FLOOD
INSURANCE RATE MAP, COMMUNITY PANEL 230251 0013 B, EFFECTIVE
DATE JULY 17, 1986. IT IS NOT IN A SPECIAL FLOOD HAZARD ZONE.
- PROPERTY PINS TO BE SET AT THE EXPENSE OF THE DEVELOPER AT
THE END OF CONSTRUCTION ON CORNERS NOT CURRENTLY MARKED.
- ALL CONSTRUCTION AND SITE ALTERATIONS SHALL BE DONE IN
ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL
BMPs" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY,
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST
EDITION, MARCH 2003.
- THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER
TREATMENT SYSTEM, TREAS REMOVAL AND GROUNDSKEEPING. THE
STORMWATER TREATMENT SYSTEM IS TO BE MAINTAINED IN ACCORDANCE WITH
THE STORMWATER MANAGEMENT REPORT, INCLUDING MAINTENANCE, DATED
9/30/2016 AND SUBJECT TO A STORMWATER MAINTENANCE AGREEMENT WITH THE
CITY OF PORTLAND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF
DEEDS BOOK _____, PAGE _____, DATED _____.
- THIS PROJECT WILL PAY A FEE IN LIEU OF WORKFORCE HOUSING, WHICH IS DUE
PRIOR TO AN ISSUANCE OF A CERTIFICATE OF OCCUPANCY, FOR INCLUSIONARY
ZONING IN COMPLIANCE WITH THE CITY'S ZONING ORDINANCE DIVISION 30,
SECTION 14-48T.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

SURVEYORS NOTES:

NOTES:

- THE PARCEL BOUNDARIES AS DEPICTED ON THIS MAP WERE
DERIVED FROM A THOROUGH REVIEW OF RECOVERED EXISTING
RECORD EVIDENCE AND ACTUAL FIELD SURVEY LOCATION OF
FOUND PHYSICAL EVIDENCE AND REPRESENT IN MY PROFESSIONAL
OPINION THE POSITION OF THE RECORD PARCEL BOUNDARIES.
- THIS SURVEY CONFORMS TO THE CURRENT STANDARDS ADOPTED
BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND
SURVEYORS. EXCEPTIONS AS NOTED ABOVE.
- NOT VALID OR TRUE COPY OF ORIGINAL UNLESS SIGNED AND
EMBOSSED BY SURVEYOR.
- NO DETAILED SURVEY REPORT.

SUBDIVISION PLAN
APPROVED BY THE CITY OF PORTLAND PLANNING BOARD

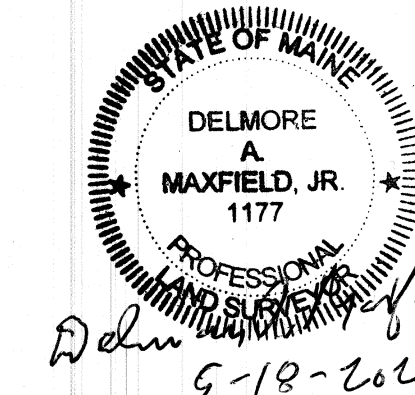
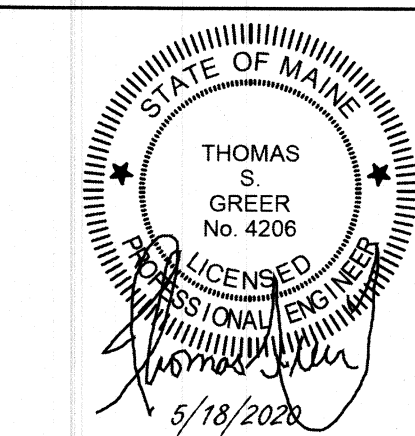
April 17, 2018

DATE

WALSH
ENGINEERING ASSOCIATES, INC.

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ph: 207.553.9898 | www.walsh-eng.com

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CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval
and Standard Conditions
4-17-2018 (finalized May,
2020)
PLANNER: Jean Fraser
PROJECT NO.: (U) #2018-046

DAYMARK
75 CHESTNUT STREET
PORTLAND, MAINE
PREPARED FOR:
75 CHESTNUT STREET OWNER, LLC
c/o THE PROCOPIO COMPANIES
220 BROADWAY, UNIT 302
LYNNFIELD, MASSACHUSETTS 01940

Rev.	Date	Description	Drawn	Check
8	4/18/20	Revised Plan Review Comments	JDC	TSG
9	4/20/20	Revised Plan Review Comments	JDC	TSG
10	4/20/20	Revised Plan Review Comments	JDC	TSG
11	4/20/20	Revised Plan Review Comments	JDC	TSG
12	4/20/20	Added Surveyors Stamp	JDC	TSG

Sheet Title:
SUBDIVISION PLAN
SHEET 1 of 3

Job No.: 653 / 16142 Sheet No.:
Date: JULY 28, 2016
Scale: AS SHOWN
Drawn: JDC
Checked: TSG
C1.1
MAP / LOT: 26 / E / 10

NOTE: SEE SUBDIVISION PLAN SHEET 3 of 3,
C1.6, FOR EASEMENTS & LICENSES LAYOUT.

SURVEY GENERAL NOTES
AND PLAN REFERENCES

GENERAL NOTES:

- 1) THE BENCHMARK ELEVATION WAS DERIVED FROM A STATIC GPS OBSERVATION ON SITE USING A JAVAD TRIUMPH-2 RECEIVER. DATA COLLECTION WAS FOR 25 HOURS WITH A RESULTANT RMS OF 0.003 METERS. THE POSITION WAS CONVERTED TO U.S. FEET MAINE WEST 1983 AND NGVD 29 USING CORPSCON 6.
- BENCHMARK: HYDRANT AT CORNER OF LANCASTER & CHESTNUT STREETS, TOP HYDRANT FLANGE BOLT OVER MAIN OUTLET. EL.=12.861.
- 2) HORIZONTAL DATUM REFERS TO MAINE COORDINATE SYSTEM 1983 MAINE WEST ZONE AS DERIVED FROM STATIC GPS OBSERVATIONS MADE ON SITE 01-12-2016.
- 3) UNDERGROUND UTILITIES SHOWN WERE DERIVED FROM FIELD OBSERVATIONS AND EXISTING PLAN PROVIDED BY PORTLAND PUBLIC WORKS DEPARTMENT.
- 4) DIGSAFE SHOULD BE CONTACTED FOR ACURATE UTILITY LOCATION BEFORE ANY SITE EXCAVATION WORK IS PERFORMED.

PLAN REFERENCES:

- 1) AS-BUILT SITE SURVEY FOR AVESTA PEARL STREET TWO LP DATED MARCH 01, 2013 PREPARED BY NORTHEAST CIVIL SOLUTIONS, RECORDED IN CCRD PB 211, PG 362.
- 2) ALTA /ACSM LAND TITLE SURVEY FOR OXFORD DEVELOPMENT ASSOCIATES DATED 06-28-88 PREPARED BY SMRT SURVEYING RECORDED IN CCRD PB 171, PG 68.
- 3) PORTLAND RENEWAL AUTHORITY NEIGHBORHOOD DEVELOPEMENT PROJECT ME A-2 DATED MAY 22, 1914 PREPARED BY E.C. JORDAN.
- 4) CITY PLAN OF LANCASTER STREET DATED 1925 VOL 1, PG 51 ON FILE AT CITY OF PORTLAND DEPT. OF PUBLIC WORKS OFFICE SEE ALSO CITY OF PORTLAND RECORDS 9-48 DATED 9/1/854.
- 5) CITY PLAN OF OXFORD STREET DATED 1925 VOL 1, PG 42 ON FILE AT CITY OF PORTLAND DEPT. OF PUBLIC WORKS OFFICE SEE ALSO CITY OF PORTLAND RECORDS 2-342 DATED 3-13-1824.
- 6) CITY PLAN OF CHESTNUT STREET DATED 1925 VOL 1, PG 44 ON FILE AT CITY OF PORTLAND DEPT. OF PUBLIC WORKS OFFICE SEE ALSO CITY OF PORTLAND RECORDS 1-398 DATED MAY 6, 1805.

SNOW CLEARANCE NOTES

1. SNOW MAY BE STORED WITHIN THE TEMPORARY SNOW STORAGE AREAS ONLY.
2. ANY SNOW THAT CAN NOT BE STORED ON SITE SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE WITHIN 24 TO 48 HOURS FOLLOWING A SNOW STORM.
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 513 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
5. THE CONDOMINIUM ASSOCIATION IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

ZONE INFORMATION

B-1 MIXED DEVELOPMENT DISTRICT ZONE

PERMITTED USE: RESIDENTIAL CONDOMINIUMS

PARKING INFORMATION

OFF STREET PARKING 1 SPACE PER UNIT
SEE DEED ATTACHMENTS
FOR PARKING AGREEMENTS

BIKE RACKS:
2 BICYCLE SPACES PER
EVERY 5 DWELLING UNITS: EXTERIOR: 8 BIKES
(52'5") x 2 = 21 SPACES INTERIOR: 13 BIKES

IMPERVIOUS INFORMATION

EXISTING IMPERVIOUS 53,826 SQ. FT.

PROPOSED IMPERVIOUS 64,844 SQ. FT.

NET IMPERVIOUS 41,018 SQ. FT.

State of Maine, Cumberland ss.

Registry of Deeds

Received _____, 20____

at ____h____m____M, and recorded in

Plan Book _____, Page _____

Attest: _____

Register

CITY OF PORTLAND PLANNING BOARD
CONDITIONS OF APPROVAL (4/17/18)

SUBDIVISION

THE PLANNING BOARD VOTED UNANIMOUSLY (6-0 SILK ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH THE SUBDIVISION STANDARDS OF THE LAND USE CODE, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL, WHICH MUST BE MET PRIOR TO THE SIGNING OF THE PLAT UNLESS OTHERWISE STATED:

- i. THE APPLICANT SHALL SUBMIT A FINAL SUBDIVISION PLAT FOR REVIEW AND APPROVAL BY CORPORATION COUNSEL, THE DEPARTMENT OF PUBLIC WORKS, AND THE PLANNING AUTHORITY, ADDRESSING THE STAFF COMMENTS AND REFLECTING THE SUBDIVISION AND SITE PLAN CONDITIONS OF APPROVAL.
- ii. THAT A LEASE AGREEMENT FOR THE REQUIRED PARKING, AS CONTEMPLATED BY THE SUBMITTED RECIPROCAL AGREEMENT, BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CORPORATION COUNSEL, THE DEPARTMENT OF PUBLIC WORKS, AND THE PLANNING AUTHORITY, AND EXECUTED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. SUCH LEASE TO INCLUDE THE TERM, NUMBER, LOCATION AND ACCESSIBILITY OF HANDICAPPED SPOTS AND OTHER DETAILS TO MEET THE CITY'S PARKING REQUIREMENTS. THE RULES AND REGULATIONS GOVERNING THE USE OF THE PARKING SPACES, AS REFERENCED IN ARTICLE 6 OF THE RECIPROCAL AGREEMENT, SHALL BE SUBMITTED PRIOR TO THE APPROVAL OF THE AFOREMENTIONED LEASE, AND
- iii. THE APPLICANT SHALL PROVIDE DRAFTS OF ALL NECESSARY EASEMENTS, INCLUDING BUT NOT LIMITED TO:
- a. TEMPORARY CONSTRUCTION EASEMENT FROM THE CITY OF PORTLAND TO WESTERLEA VIEW LOFTS,
- b. LICENSE FROM THE CITY OF PORTLAND TO WESTERLEA VIEW LOFTS FOR BUILDING FOOTINGS,
- c. EASEMENT(S) FOR THE DECK EXTENSIONS ABOVE THE EXISTING PARKING GARAGE STRUCTURES (AIR RIGHTS), AND
- d. ACCESS EASEMENT FOR SIDEWALKS THAT ARE ON THE SITE PROPERTY,

FOR REVIEW AND APPROVAL BY CORPORATION COUNSEL, THE DEPARTMENT OF PUBLIC WORKS, AND THE PLANNING AUTHORITY, WITH EVIDENCE OF EXECUTED EASEMENTS TO BE SUBMITTED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

DEVELOPMENT REVIEW

THE PLANNING BOARD VOTED UNANIMOUSLY (6-0 SILK ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH THE SITE PLAN STANDARDS OF THE LAND USE CODE, SUBJECT TO THE FOLLOWING CONDITIONS:

- i. THAT THE PROJECT IS SUBJECT TO THE SUBMITTED TRANSPORTATION DEMAND MANAGEMENT PLAN DATED OCTOBER 2016, TO INCLUDE ANNUAL MONITORING STUDIES THAT COMPLY WITH THE REQUIREMENTS SET OUT IN THE COMMENTS OF THE TRAFFIC ENGINEERING REVIEWER TOM ERRICO DATED 12.3.2016;
- ii. THAT THE ROW PLANS ALONG THE CHESTNUT STREET FRONTAGE BE REVISED, FOR REVIEW AND APPROVAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, TO:
- a. PROVIDE A RELATIVELY STRAIGHT 5 FOOT WIDE ADA CLEAR SIDEWALK WITH NO IMPEDIMENTS (EXCEPTING TREE GRATES LIMITED LOCATIONS) WITHIN AN OVERALL WIDTH OF A MINIMUM OF 8 FEET SIDEWALK,
- b. PROVIDE AT LEAST 4 STREET TREES IN FRONT OF THE BUILDING ON CHESTNUT STREET AND 1 ADDITIONAL STREET TREE NEARBY, TAKING INTO ACCOUNT THE OPTIONS SUGGESTED BY THE CITY ARBORIST DATED 4.12.18, AND
- c. SHOW THE LOCATIONS AND REVISED SPECIFICATIONS FOR THE FOUR NEW STREET LAMPS TO BE INSTALLED BY THE APPLICANT, TO BE COORDINATED WITH THE STREET TREE SPACING.
- iii. THAT THE APPLICANT SUBMIT A REVISED AND MORE DETAILED PLAN FOR THE AMENITY AREA BETWEEN THE BUILDING AND LANCASTER STREET THAT DEMONSTRATES THAT THE SAFETY AND SECURITY OF THE AREA MEETS CPTED STANDARDS EG RE LIGHTING, VISUAL SURVEILLANCE AND SIMILAR ISSUES INCLUDING LANDSCAPE FEATURES,
- iv. THAT THE APPLICANT AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORM WATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE SUBMITTED CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN DATED 9.30.2016 BASED ON CITY STANDARDS AND STATE GUIDELINES. A MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM SHALL BE APPROVED BY CORPORATION COUNSEL AND THE DEPARTMENT OF PUBLIC WORKS, AND SUBMITTED SIGNED AND RECORDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY WITH A COPY TO THE DEPARTMENT OF PUBLIC WORKS;
- v. THAT PLANS SHOWING DETAILS FOR THE AREAS LISTED BELOW SHALL BE SUBMITTED TO THE PLANNING AUTHORITY FOR REVIEW AND APPROVAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT:
- a. PATIO/ENTRANCES ON OXFORD STREET
- b. DOORS FOR ENTRANCE TO PARKING GARAGE ON CHESTNUT STREET
- c. DECKS OVER PARKING LOT
- d. LIVE-WORK UNIT
- e. PARKING LAYOUT (DIMENSIONED) FOR ADA SPACES AND DEMONSTRATION THAT IT MEETS APPLICABLE STATE AND FEDERAL STANDARDS REGARDING ADA VAN PARKING.

- vi. THAT THE APPLICANT SHALL SUBMIT DETAILS OF THE LOCATION, DESIGN AND SCREENING OF FAÇADE AND ROOFTOP EXTERNAL HEATING, VENTILATION AND OTHER MECHANICAL EQUIPMENT, AND ASSOCIATED INFORMATION TO DOCUMENT THE SOUND LEVELS MEET THE CITY'S SITE PLAN ZONING AND TECHNICAL STANDARDS, FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY;
- vii. THAT THE APPLICANT ADDRESS THE FIRE DEPARTMENT COMMENTS DATED 9.12.2016, AND
- viii. THAT THE PROPOSED BUILDING MOUNTED WALL SCONCES SHALL BE INSTALLED SO THAT THE LIGHT IS DIRECTED DOWNWARD.

WAIVERS: WAIVERS SUMMARIZED PER PLANNING BOARD DECISION 12/13/2016

- i. SITE CONSTRAINTS PREVENT THE PLANTING OF ALL REQUIRED STREET TREES IN THE RIGHT-OF-WAY. THE APPLICANT SHALL CONTRIBUTE 16,400 TO PORTLAND'S TREE FUND.

INCLUSIONARY ZONING CONDITIONAL USE: INCLUSIONARY ZONING CONDITIONAL USE CONDITIONS SUMMARIZED PER PLANNING BOARD DECISION 12/13/2016

- i. ENTER INTO AN AFFORDABLE HOUSING AGREEMENT
- ii. DETAILS OF THE RESTRICTIONS PLACED ON THE WORKFORCE UNITS

STANDARD CONDITIONS OF APPROVAL

APPLICANT IS TO COMPLYING WITH THE CITY OF PORTLAND STANDARD CONDITIONS OF APPROVAL AND REQUIREMENTS AS NOTED IN THE FINAL APPROVAL LETTER DATED APRIL 18, 2018 CONFIRMING PLANNING BOARD APPROVAL ON APRIL 17, 2018.

CITY OF PORTLAND SITE PLAN
AND SUBDIVISION NOTES

1. LANDSCAPING SHALL MEET THE "ARBOCULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
3. ALL POWERLINE UTILITIES SHALL BE UNDERGROUND.
4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERRECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
10. SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A M.R.S.A. SECTION 4401. THE TERM SUBDIVISION SHALL ALSO INCLUDE THE DIVISION OF A NEW STRUCTURE OR STRUCTURES ON A TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD AND THE DIVISION OF AN EXISTING STRUCTURE OR STRUCTURES PREVIOUSLY USED FOR COMMERCIAL OR INDUSTRIAL USE INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD. THE AREA INCLUDED IN THE EXPANSION OF AN EXISTING STRUCTURE IS DEEMED TO BE A NEW STRUCTURE FOR THE PURPOSE OF THIS PARAGRAPH. A DWELLING UNIT SHALL INCLUDE ANY PART OF A STRUCTURE WHICH, THROUGH SALE OR LEASE, IS INTENDED FOR HUMAN HABITATION, INCLUDING SINGLE-FAMILY AND MULTIFAMILY HOUSING CONDOMINIUMS, TIME-SHARE UNITS AND APARTMENTS."

RESIDENTIAL UNIT USES

UNIT TYPE	QUANTITY	TOTAL BEDS
1 BEDROOM	13	13
2 BEDROOM	39	78
TOTAL	52	91

ZONE INFORMATION

ZONE: B-1, MIXED DEVELOPMENT DISTRICT
PERMITTED USE: RESIDENTIAL

SPACE STANDARDS	REQUIRED	LOT B PROVIDED
MINIMUM LOT SIZE	NONE	21,451 SF.
MINIMUM STREET FRONTAGE	NONE	443 FEET
MINIMUM FRONT YARD SETBACK	NONE	0.8 FEET
MINIMUM REAR YARD SETBACK	NONE	NA
MINIMUM SIDE YARD SETBACK	NONE	NA
MAXIMUM STREET SETBACK	10 FEET OR	-
	75% OF BLDG WITHIN 10' OF IE - CHESTNUT	94%
	75% OF BLDG WITHIN 10' OF IE - OXFORD	62%
MINIMUM LENGTH OF BUILDING WALL	25% OF PERIM.	48%
MAXIMUM BUILDING LOT COVERAGE	100%	45%
MAXIMUM RESIDENTIAL DENSITY	NONE	54 UNITS
MAXIMUM BUILDING HEIGHT	75 FEET	74.2 FEET **
OFF STREET PARKING	1 PER UNIT	1 PER UNIT
BIKE RACKS	21	21

** SEE CODE SUMMARY SHEET AC001, TABLE 504.3 TABLE 504.4

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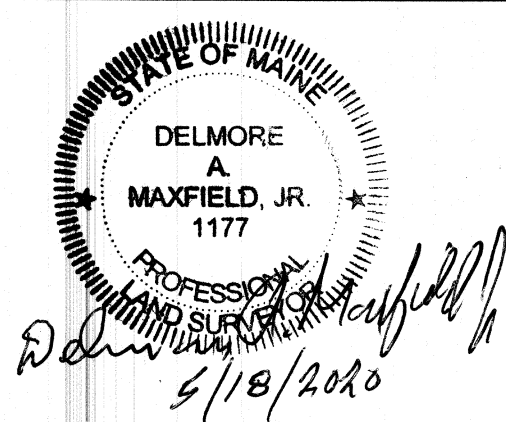
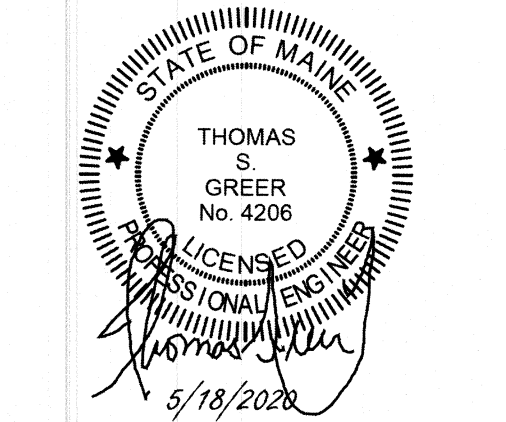
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APPROVED SITE PLAN
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4-17-2018 (finalized) May
DATE OF APPROVAL 2020
PLANNER Jean Frayer
PROJECT NO. (U1)#2018-046

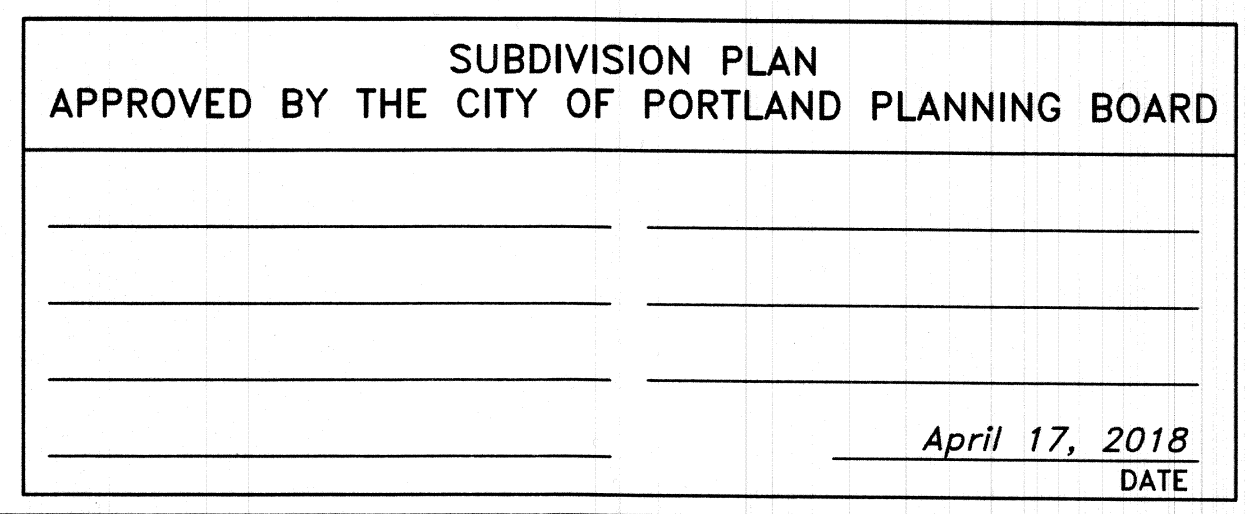
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LYNNFIELD, MASSACHUSETTS 01940

Rev.	Date	Description	Drawn	Check
For previous versions of the project see Westlerlea View Lofts by Pinkham & Greer Civil Engineers filed with the City of Portland				
4	4-11-2018	Rev'd Per Review Comments 4/11/18 & 4/26/18, Add COA	JDC	TSG
5	4-26-2018	Rev'd Per Review Comments 4/27/20 & Owner Review	JDC	TSG
6	5-9-2020	Rev'd Per Final Civil Plan Review Comments	JDC	TSG
7	5-18-2020	Added Surveyor's Stamp	JDC	TSG

Sheet Title:
SUBDIVISION PLAN
SHEET 2 of 3

Job No.: 653 / 16142 Sheet No.:
Date: JULY 28, 2016
Scale: AS SHOWN
Drawn: JDC
Checked: TSG
MAP / LOT: 28 / E / 10

C1.1a



Sheet Title:		SUBDIVISION PLAN SHEET 3 of 3	
Job No.: 653 / 16142		Sheet No.:	
Date: JULY 28, 2016		C1.1b	
Scale: AS SHOWN			
Drawn: JDC			
Checked: TSG			
		MAP / LOT: 26 / E 10	