1. Legal Ad

    Documents:

        PB LEGAL AD 5-9-17.PDF

2. Agenda

    Documents:

        PB AGENDA 5-9-17.PDF

3. 218 Washington Avenue

    3.I. Report And Report Attachments

        Documents:

            WASHINGTON AVE. - 218 (REPORT AND REPORT ATTACHMENTS).PDF

    3.II. Applicants Submittal

        Documents:

            WASHINGTON AVE. - 218 (APPLICANTS SUBMITTAL) 1 OF 3.PDF
            WASHINGTON AVE. - 218 (APPLICANTS SUBMITTAL) 2 OF 3.PDF
            WASHINGTON AVE. - 218 (APPLICANTS SUBMITTAL) 3 OF 3.PDF

    3.III. Plans

        Documents:

            WASHINGTON AVE. - 218 (PLANS) 1 OF 3.PDF
            WASHINGTON AVE. - 218 (PLANS) 2 OF 3.PDF
            WASHINGTON AVE. - 218 (PLANS) 3 OF 3.PDF

4. Chapter 30 - Affordable Housing

    4.I. Memo

        Documents:

            AFFORDABLE HOUSING MEMO.PDF

5. 197 Spring Street

    5.I. Report And Attachments

        Documents:

            SPRING ST. - 197 (REPORT AND ATTACHMENTS).PDF

    5.II. Applicants Submittal

        Documents:

            SPRING ST. - 197 (APPLICANTS SUBMITTAL).PDF

    5.III. Plans

        Documents:

            SPRING ST. - 197 (PLANS).PDF

6. 1700 Westbrook Street

    6.I. Report And Report Attachments

        Documents:

            WESTBROOK ST. - 1700 (REPORT AND ATTACHMENTS).PDF

    6.II. Applicants Submittal

        Documents:

WESTBROOK ST. - 1700 (APPLICANTS SUBMITTAL) 1 OF 4.PDF
WESTBROOK ST. - 1700 (APPLICANTS SUBMITTAL) 2 OF 4.PDF
WESTBROOK ST. - 1700 (APPLICANTS SUBMITTAL) 3 OF 4.PDF
WESTBROOK ST. - 1700 (APPLICANTS SUBMITTAL) 4 OF 4.PDF

6.III. Public Comments

Documents:

WESTBROOK ST. - 1700 (PUBLIC COMMENTS).PDF

6.IV. Plans

Documents:

WESTBROOK ST. - 1700 (PLANS).PDF

LEGAL ADVERTISEMENT
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will meet on **Tuesday, May 9, 2017**, Council Chambers, 2nd Floor, City Hall, 389 Congress Street.

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

Workshop: 4:30 p.m.

i. Level III Subdivision and Site Plan; 218 Washington Avenue; 218-220 Washington Ave., LLC., Applicant. (4:30 -5:30 estimated time) The Board will hold a workshop on a proposed 45 unit condominium project with 22 one-bedroom and 23 two-bedroom units. On-site parking will be provided for 45 vehicles under the building. The site is in the B-1b zone and will also be reviewed to meet the inclusionary zoning requirements of Ensure Workforce Housing.

ii. Proposed Amendments to Chapter 30, Affordable Housing; City of Portland, Applicant. (5:30- 6:30 p.m. estimated time) The Board will hold a workshop on proposed amendments to Chapter 30, Affordable Housing, which have been proposed by the Housing Committee. The potential amendments, include but are not limited to, allowing increased housing density and flexible dimensional standards for affordable housing projects in the B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-4, B-5, R-7 and RP zones, and in Planned Residential Unit Developments.

Dinner Break: 6:30

Public Hearing - 7:00 p.m.

i. Level III Site Plan; 197 Spring Street; Steve Morrison of WAIT, LLC., Applicant.
(7:00 -7:30 p.m. estimated time) The Board will hold a public hearing on a proposal to convert an existing lodging house into seven residential units which includes demolishing a portion of the building and replacing it with a new addition. A parking area for 5 vehicles is proposed on site. The property is within the R-6 zone and will be reviewed for compliance under the City's Subdivision and Site Plan Ordinance.

ii. Zoning Map Amendments for R-1 to R-3 and ROS and Removal of Flexible Housing Zone in the Vicinity of 1700 Westbrook Street; Camelot Holdings, LLC., Applicant. (7:30 p.m. estimated time) The Board will consider zoning map amendments from Residential R-1 to Residential R-3 and Recreation Open Space (ROS). The proposed changes extend along the southerly side of Westbrook Street to the Resource Protection Zone along the Stroudwater River and westerly to the Maine Turnpike. The proposal includes removing the Flexible Housing Zone from the northerly side of Westbrook Street.

ELIZABETH BOEPPLE, CHAIR - PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE
PLANNING BOARD

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

AGENDA
PORTLAND PLANNING BOARD MEETING

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Dinner Break 6:30 p.m.

PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM
2. COMMUNICATIONS AND REPORTS
3. REPORT OF ATTENDANCE AT THE MEETING HELD ON APRIL 25, 2017:

Workshop: Boepple, Dundon, Eaton, Mazer, Morrissette (arrived 5:45), Stanley, and Whited.
Public Hearing: All present. Whited recused for first item

4. REPORT OF DECISIONS AT THE MEETING HELD ON APRIL 25, 2017:

i. Traffic Movement Permit; 58 Fore Street; CPBS, LLC., Applicant. Dundon moved and Morrissette moved a motion to find that the Traffic Movement application for 58 Fore Street is in conformance with 23 MRSA 704-A and Chapter 305 and approved the Traffic Movement permit with one condition of approval. Vote: 6-0, Whited recused.

ii. Zoning Text Amendments for Emergency Shelters in B-3, B-4, B5, Il, Ilb, IM and IH zones, City of Portland, Applicant Dundon moved and Morrissette seconded a motion to find the proposed text amendments in conformance with the Comprehensive Plan and recommends adoption of the amendments, as amended. Vote: 6-1, Morrissette opposed.

5. NEW BUSINESS

i. Level III Site Plan; 197 Spring Street; Steve Morrison of WAIT, LLC., Applicant. (7:00 -7:30 p.m. estimated time) The Board will hold a public hearing on a proposal to convert an existing lodging house into seven residential units which includes demolishing a portion of the building and replacing it with a new addition. A parking area for 5 vehicles is proposed on site. The property is within the R-6 zone and will be reviewed for compliance under the City's Subdivision and Site Plan Ordinance.

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Memorandum
Planning and Urban Development Department
Planning Division

To: Chair Boepple and Members of the Portland Planning Board

From: Jean Fraser, Planner

Date: May 4th 2017

Re: **May 9th 2017 Planning Board Workshop**
Level III Site Plan and Subdivision:
45 unit residential development, 218 Washington Avenue (#2016-280)
218-220 Washington Avenue LLC, Applicant

I. INTRODUCTION

Sebago Technics, on behlaf of 218-220 Washington Avenue LLC, has submitted a Level III Site Plan and Subdivision application for a project on the west side of Washington Avenue just south of the slip connection with I295 and below the East End School. The proposal is for a single building of 45 dwelling units, comprising 4 stories over a partially sunken parking level. The project is located on a steeply sloping site that overlooks Back Cove; and is located in the B1b zone and within 100 feet of the Eastern Promenade Historic District.

The 45 dwellings are proposed as condo units, of which 22 are one-bedroom and 23 are two-bedroom units. The proposal is also subject to the Inclusionary Zoning (IZ) ordinance and a separate conditional use application confirming the number and location of workforce housing units to be provided is included at Attachment W. The application confirms that a total of 5 workforce units will be provided: three 1-bed units and two 2-bed units located on the lower three floors.

The Board should be aware of the fact that when the applications were submitted there were questions regarding the Right, Title and Interest for this project. The review of the Right, Title and Interest delayed the commencement of the site plan and subdivision review by staff. One of the legal agreements has implications for the development of the site, and this is discussed under the section on Right, Title and Interest.

This Workshop was noticed to 94 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on May 1st and 2nd, 2017. The applicant held a Neighborhood Meeting on January 4th, 2017 and the notes are included in Attachment U. The Planning Division has received one letter from the attorney acting for the abutter at 202 Washington (PC 1); it questioned whether the applicant could undertake the proposed project without violating the existing legal agreements (discussed under the section on Right, Title and Interest below).

Applicant: 218-220 Washington Avenue LLC (represented by Maietta)
Agent and Engineer: Sebago Technics (Will Conway)
Architect:, Archetype (Bill Hopkins)

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New structure of 45 dwelling units	Subdivision Review
Multifamily building of 81,200 sq ft	Level III Site Plan Review and B-1b Design Review
New structure of 45 dwelling units	Inclusionary Zoning Section 14-484

II. PROJECT DATA

SUBJECT	*DATA*
Total area of the site	28,382 sq ft
Total Disturbed Area	22,532 sq ft
Existing Zoning	B1b
Existing Use	Small residential building and otherwise vacant
Proposed Use	Residential; 45 condo units
Impervious Surface Area	
--Existing	2,375 sq ft
--Proposed	22,532 sq ft
--Net Change	20,157 sq ft
Building Footprint	
--Existing	1,100 sq ft
--Proposed	13,751 sq ft
--Net Change	12,651 sq ft
Building Floor Area	
--Existing	2,200 sq ft
--Proposed	69,459 sq ft
-Net Change	67,259 sq ft
Proposed Bedroom Mix	
-Efficiency Units	0
One-Bedroom Units	22
Two-Bedroom Units	23
Three-Bedroom Units	0
Parking Spaces	45 under building (3 existing)
Bicycle parking Spaces	18 (none existing)
Estimated Cost of the project:	$5,850,000

III. EXISTING CONDITIONS

The development site is made up of three parcels previously in different ownerships, including one parcel that contains a single family home that will be demolished as part of the project [see right].

This section of Washington Avenue abuts the IL-b zone that runs along Anderson Street, to the west and below the site. To the north is land owned by the MDOT as part of the I295 buffer; at this location the buffer is wide so that the land may not be permanently needed for I295 purposes.

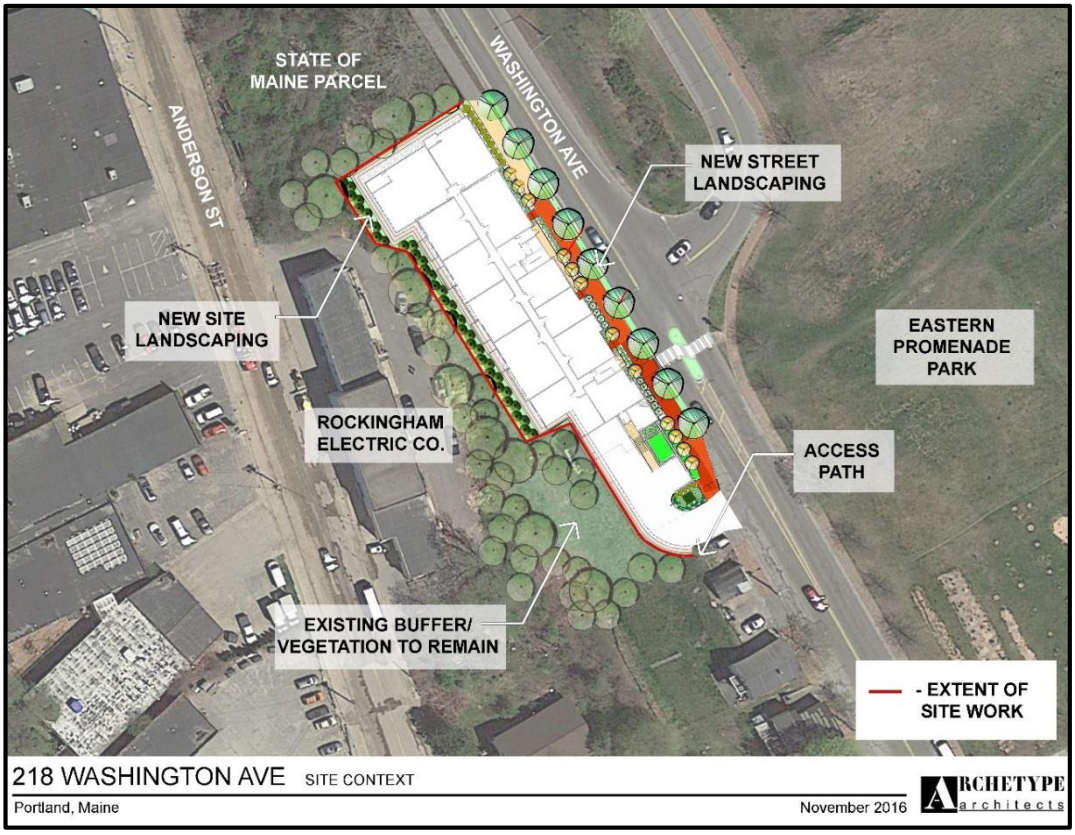
To the east is the intersection of the Washington Avenue slip road connecting to I295, and the Eastern Prom which winds down from the east End School and Back Cove overlook. Only a small part of the open area to the east is part of the historic landscape and the rest is parkland. To the south is a single family residential property.

The site contains some mature vegetation on the northern half, but from the house (to be demolished) to the rear and south is mainly scrub and invasive species.

Building to be demolished is at right of this photo

The site includes a 20 foot wide section of relatively flat area nearest to Washington Avenue and then drops steeply by about 25 feet to the rear property line (see the Boundary Survey in Plan 2). This presents constraints on the development and construction techniques, which are discussed in greater detail as part of the review.

The site, along with other properties along Washington Avenue, benefits from long views over Back Cove. The applicants have submitted the following Context Plan (Plan P11):



IV. PROPOSED DEVELOPMENT

The proposals, including elevations and perspectives, are shown in the Plan set and described in the applicant's submittal. This extract (Plan P6) shows the access and parking garage level.

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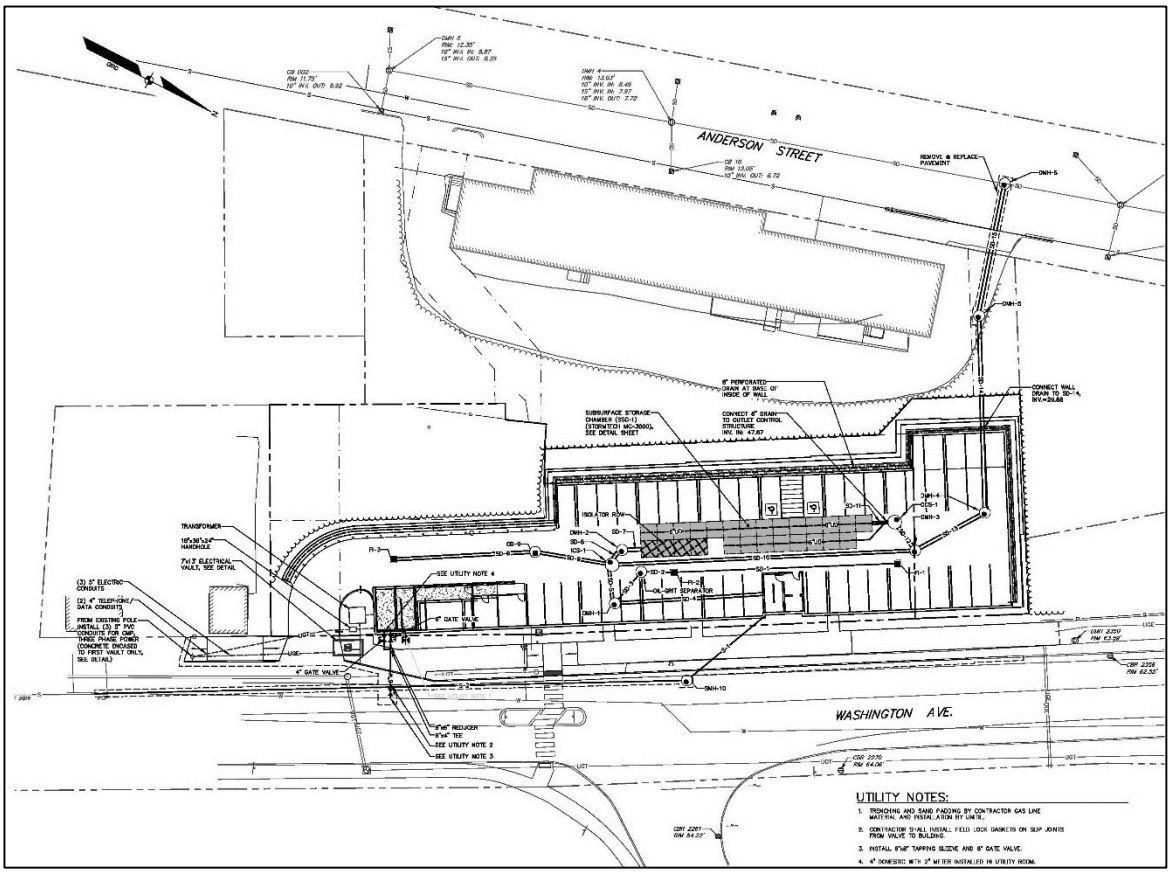


The proposals include:

- 45 condo units (one and two bedroom);
- Lower level parking for 45 vehicles;
- High retaining wall ranging from about 8 to 23 feet in height;
- Planting along the Washington Avenue frontage along with street trees;
- Planting buffers for the part of the wall to the north, with an unimproved ("preserved") area of grass, scrub and mainly invasive plants to the retaining wall to the south.

The elevation below (Plan P15) faces Anderson Street and would be the building as viewed from Back Cove and I295. Some of the units have balconies. Floor plans have not been submitted and it is not clear what is on the roof of the building.

218 WASHINGTON AVE SITE CONTEXT ELEVATION
Portland, Maine
November 2016 ARCHETYPE architects

V. STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

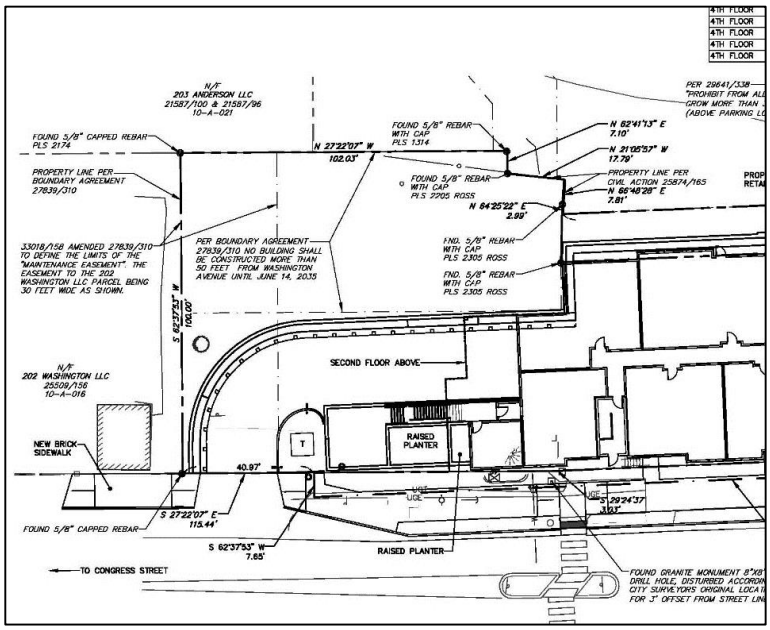
The applicant has submitted the deeds in respect of to the northern part of the site, and provided a Purchase and Sale Agreement for the parcel that makes up the southern part of the site (Attachment B). In addition, this property benefits from easements or land transfers with adjoining property owners along Anderson Street (referred to in Attachment E and included in Attachment B).

The southern parcel is of most concern as it includes a residential building that will be demolished to allow for the construction of a retaining wall (up to about 15 feet high in places) that supports the access drive into the garage under the condos. The remainder of the parcel, as currently proposed, includes no development nor any other improvements as it is constrained by a "Boundary Agreement" with an "Amendment to Boundary Agreement" (see applicant's submittal Attachment B, last two documents). This agreement stems from the fact that this area has been the subject of several development concepts in the past, and it became apparent during those earlier reviews that the boundary surveys for the two adjoining properties (202 Washington and 218 Washington) overlapped. Prior to proceeding with any development reviews of the former plans, the city requested that clear right title and interest be presented. The current Boundary Agreement (with Amendment) is the result of private negotiations.

The submitted right, title and interest was reviewed by the Associate Corporation Counsel and determined to meet the site plan requirement for evidence of "Right, Title and Interest".

However, the Boundary Agreement (with Amendment) appears to have implications for the nature and extent of site plan improvements that may be carried out. The attorney for the owner of 202 Washington has set out an interpretation of the Boundary Agreement (see PC1) and suggested that the project is not in compliance, but the applicant's attorney considers that they are in compliance (based on the current proposals).

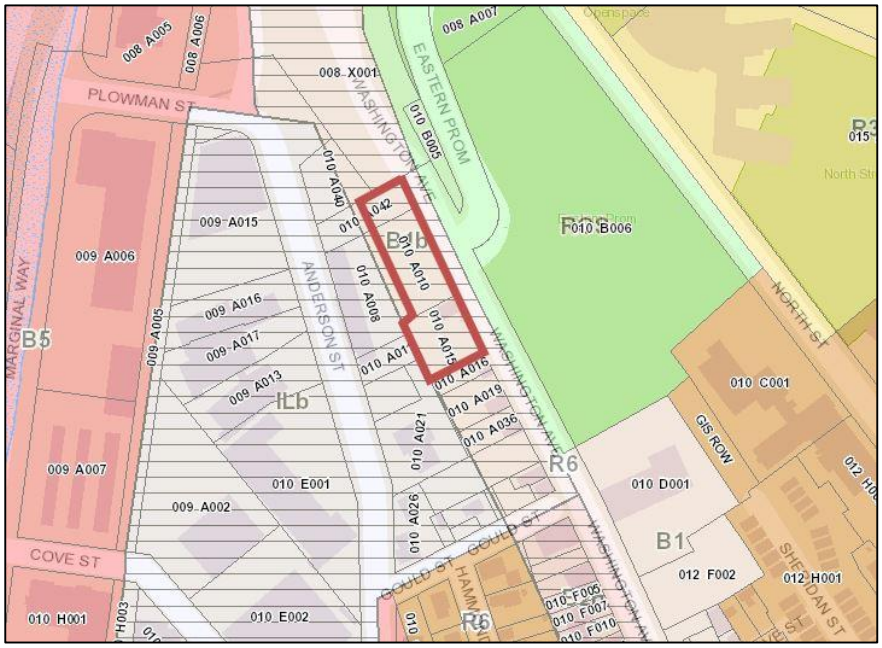
Below is a summary of the boundary agreement limitations: (see detail in the proposed plat below, and see Plan P3 and Attachment B):



- Perpetual maintenance easement 30 feet in width along the common boundary, which allows for an access drive to be constructed (not a building) and requires a maintenance access along the boundary. The proposed drive access is at grade near Washington Avenue;
- "Negative Easement" that prohibits buildings or improvements within 50 feet of the NE boundary with Washington Avenue. The current proposals show "Existing vegetation to remain" (Plan 9).

B. ZONING ASSESSMENT

The proposed building is located in the B1b zone which allows for a building height of 45 feet and the proposed building is 45 feet as from the average grade. The proposal meets all of the other dimensional requirements of the B1b zone.



C. SUBDIVISION STANDARDS

14-496. Subdivision Plat Requirements: The applicant has submitted a draft plat (Plan P3) which has not been reviewed in detail.

14-497. General Requirements (a) Review Criteria

Water, Air Pollution and Soil Erosion
The applicant has submitted the capacity letter from the Portland Water District (Attachment N.). The proposals include a deep stormdrain system (down to 45 fet in depth) and high retaining walls (up to 23 feet in height) and the Peer Engineering Reviewer is concerned about constructability including erosion control (Attachment 4). The applicant will need to provide further information as part of the submittals for the final review.

Traffic
The applicant has submitted a Traffic Study that provides a trip generation estimate that shows a Traffic Movement Permit is not required (Attachment J). The Traffic Engineering reviewer concurs with this assessment but is concerned that traffic queuing takes place near the site and a revised lane layout (for a left turn lane) is requested. (Attachment 3).

Parking
The applicant has incorporated a parking level underneath the residential units to meet the zoning requirement of one space per unit (45 spaces). The Site Plans (Plan P5) show a total of 47 parking spaces, including one compact space and 4 tandem spaces. The Traffic Engineering reviewer has requested further information including how the tandem spaces would be managed and how all of the internal vehicle movements can occur within the garage thus ensuring that there would be no need to back out of the site (Attachment 3).

Sanitary Sewer/Soils
The application has been reviewed by the Peer Engineering Reviewer (Attachment 4) and is generally acceptable subject to confirmation of wastewater capacity.

Storm water
The applicant has submitted a Stormwater and Erosion Control Plan (Attachment L) that proposes to manage stormwater impacts by utilizing a StormTech chamber system with an underdrained subsurface sand filter to control peak runoff and provide treatment. The Peer Engineering Reviewer broadly agrees with the stormwater management approach but has raised concerns regarding the scale of disturbance associated with the very deep placement of structures and pipes, and the feasibility of future maintenance (Attachment 4). The applicant should address these questions in their final submissions.

Scenic Beauty
The proposal does not result in the loss of any significant vegetation, but the landscape and buffering proposals are focused on the Washington Avenue frontage. The western elevation and retaining wall are likely to be more austere than as depicted in the submitted renderings (Plans P15 and P16) based on the type and extent of the existing and proposed planting.

Staff recommend additional planting at the south end of the site to address this standard (see discussion under Section VD Site Plan Standards).

Comprehensive Plan
The project is consistent with the Housing Goals and Policies of the Comprehensive Plan.

D. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing
The proposals retain an existing curbcut (currently used for parking of several vehicles) to provide the access drive to the 45+ space parking level. The Traffic Engineering Reviewer has noted that the access does not meet the City's Technical Standards regarding driveway separation and corner clearance and that further documentation in support of a waiver request should be submitted for further review (Attachment 3).

The Traffic Engineering Reviewer has also noted the following:

> *During peak time periods, inbound Washington Avenue at the Eastern Promenade intersection can experience traffic queuing. The City is interested in the development of a short narrow left-turn lane (opposite the median refuge island). It is requested that the applicant develop a layout plan for consideration.* (Attachment 3)

Sidewalks
The applicant has proposed brick sidewalks in compliance with the City's Sidewalk Materials Policy, although the apron would need to be revised to be brick in order to fully comply with the recent policy. The improvements are generally welcomed but the detailed design will need to be revised to modify the apron re ADA pedestrian use and to maintain and integrate the existing bikeway/pathway along this frontage. Draft review comments are included in Attachment 5 re this and the restriping mentioned above, and further clarification re details will be provided by staff.

Construction Management Plan
A Construction Management Plan was submitted (Attachment I), and the Traffic Engineering reviewer has requested it be revised to preserve pedestrian and bicycle movements to/from the Back Cove shared path, and to address the management of construction and associated vehicles to minimize impacts on Washington Avenue traffic (Attachment 3).

Public Transit Access
The project would need to address the ordinance requirements as part of the final submissions, which may require provision of a bus transit shelter.

Parking: The proposed parking provision is discussed under Section V. C *Subdivision Standards*.

Snow Storage
This may apply to the garage access drive and should be addressed at the final submission stage.

Transportation Demand Management: The project is not subject to these ordinance provisions.

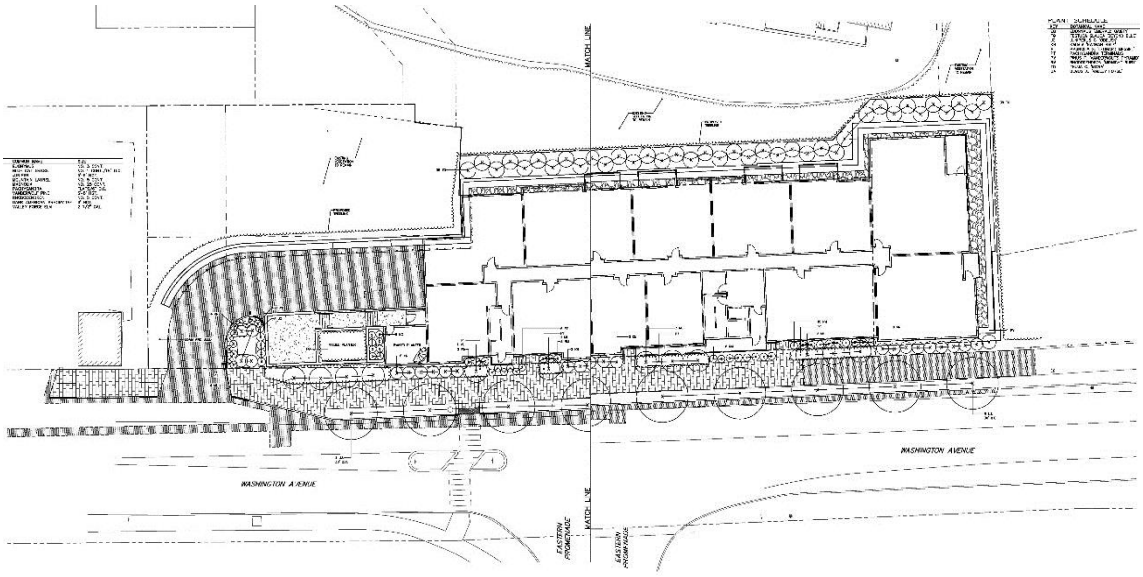
Landscape Preservation / Site Landscaping and Screening
The proposals include landscape treatment along the entire frontage and part of the rear retaining wall. No improvements are proposed for the back south corner (approximately 5000 sq ft) where the plans show a "proposed tree line" along the retaining wall and a note that states "existing vegetation to remain" (Landscape Plan as below and Plan P9).

Staff are aware that this area is covered by both of the limitations outlined in the Boundary Agreement with the neighbor (summarized above under V A *Right, Title and Interest)* but these prior legal agreements are not a consideration from the Subdivision and Site Plan ordinance perspective. There are two issues where the Board is requested to provide direction:

- Whether any buffering of the high retaining wall at the south end is required? It could be argued that it faces an industrial zone, but it is likely to be visible from Anderson Street and from distant viewpoints. (see rendering above under "Scenic Beauty" and in Plans P15 and P16);

- Whether the area between the wall and the back property line (about 50 feet) should be improved as part of the site plan to provide visual amenity or open space accessible to residents (see discussion under *Design Review* below). The City Arborist notes that "*The existing vegetation is mostly invasive plants that do not offer much in the way of useful green space from a functional open or landscape buffer"*; the area is not wooded as implied by the note on the Landscape Plan.

Landscape Plan (Plan P9):



Street Trees
The applicant has proposed 9 street trees (based on the Landscape Plan in Plan P9) and submitted a waiver request that refers to the provision of 22 street trees out of the requirement of 45 street trees. The City Arborist was unable to attend a meeting arranged with the applicant to explore this issue in the context of the additional options now available for planting street trees off site (per amended Technical Standards). This questions requires further discussion.

Water quality, Stormwater Management and Erosion Control - see above under VC *Subdivision Standards.*

Public Safety
The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The proposals indicate a garage door at the entrance to the garage and do not appear to repesent any particular concern. The final submissions should include a lighting plan that would help address this requirement.

Fire Prevention and Public Utilities: There are no concerns at this time.

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review.

Historic Resources: Although technically within 100 feet of the Historic Landscape of the Eastern Promenade, the Historic Preservation Program Manager has indicated that there is no direct impact and therefore no need for any further review.

Exterior Lighting incl Street Lighting
The applicant has submitted the specifications for the site lighting and the final submission will need to include the photometric plans to confirm how the project would address the Technical Standards and CPTED objectives.

Street Lights: Reviewers have noted that the project will need to install new street lights along the frontage in the ROW (at the applicant's cost). The lights would need to meet the Technical Standards for street lighting and match the lights installed elsewhere along Washington Avenue (Bayside medium). Staff will work with the applicant to develop the street light plan.

Noise and Vibration
The applicant has confirmed that the exact HVAC equipment has not been chosen at this time and requests that is information be provided prior to the issuance of a full building permit. The site plan ordinance requires:

> (i) All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall comply with the following:
>
> (a) Be located to the interior of the site, away from abutting residential properties;
>
> (b) Be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

The elevations (Plan P14) suggest that some HVAC will be on the roof and the final submissions should clarify where the HVAC will be located and how it will be screened even if the exact specifications are submitted later.

E. DESIGN STANDARDS

Zoning: The site is located within the B1b Zone and the City's Urban Designer has concluded that the project is generally in compliance with the somewhat limited design standards that apply in this zone (see Att. 2).

The local context is B1b and ILb zones with open space and historic landscape on the other side of Washington Avenue. There may be longer distance views of the building from across Back Cove but there are no design standards that particularly apply to this issue (though the *Subdivision Standards* re Scenic Beauty do apply - see VC above).

Multi-family and Other Housing Types Design Standard - This design standard also applies to the proposal, is outlined below with associated staff review comments:

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

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

a. Proposed structures and related site improvements shall meet the following standards:

1. The exterior design of the proposed structures, including architectural style, facade materials, roof pitch, building form and height, window pattern and spacing, porches and entryways, cornerboard and trim details, and facade variation in projecting or recessed building elements, shall be designed to complement and enhance the nearest residential neighborhood. The design of exterior facades shall provide positive visual interest by incorporating appropriate architectural elements;

a. The proposed development shall respect the existing relationship of buildings to public streets. New development shall be integrated with the existing city fabric and streetscape including building placement, landscaping, lawn areas, porch and entrance areas, fencing, and other streetscape elements;

Staff comment: as noted in the Urban Design Review comments (Attachment 2), there is little surrounding built context; the neighborhood is largely composed of industrial, business and open space uses.

3. Open space on the site for all two-family, special needs independent living unit, bed and breakfast and multiple-family development shall be integrated into the development site. Such open space in a special needs independent living unit or a multiple-family development shall be designed to complement and enhance the building form and development proposed on the site. Open space functions may include but are not limited to buffers and screening from streets and neighboring properties, yard space for residents, play areas, and planting strips along the perimeter of proposed buildings;

Staff comment: As proposed the project does not include open space as described in this provision, and staff requested the applicant to clarify how the project meets this standard. This was submitted and is included at Attachment V.

The area below the retaining wall at the south end appears to be accessible (as the wall reaches grade near Washington Avenue) but the existing vegetation is not considered by the City Arborist to be screening nor open space (Attachment 6). As outlined in Section VD *Site Plan – Landscape* the absence of any improvements to this area is a staff concern, partly because it does not appear to address this standard within the site. This is perhaps balanced by the fact that the Eastern Promenade is immediately across the street from the site and that some of the units have outside decks.

4. The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principal living areas and shall also provide sufficient storage areas;

Staff comment: This standard appears to be met.

5. The scale and surface area of parking, driveways and paved areas are arranged and landscaped to properly screen vehicles from adjacent properties and streets;

Staff comment: The parking is located underneath the units.

F. WORKFORCE HOUSING CONDITIONAL USE (INCLUSIONARY ZONING)

This project is subject to the Inclusionary Zoning ordinance that ensures the provision of workforce housing. A development of ten or more units of housing in the City is required to provide on-site workforce housing units or make an in-lieu payment to the City's Housing Trust.

As applied to this project the applicant could provide 4 deed-restricted units on site, 4 deed-restricted units off site, or $450,000 fee-in-lieu to the Housing Trust. If the provision of on-site units is chosen, the number of bedrooms also must be at least 10% of the total number of bedrooms included in the project.

The applicant has just confirmed the way they propose to address this requirement in a completed Inclusionary Zoning application (Attachment W). The application confirms that a total of 5 workforce units will be provided: three 1-bed units and two 2-bed units located on the lower three floors. This appears to meet the ordinance requirement, subject to further review of the deed restrictions and other details.

VI NEXT STEPS

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

- Revisions to site landscaping and screening proposals
- Information to address the Peer Engineering review comments regarding constructability (geotechnical information, erosion control) and stormwater system construction and maintenance
- Information to address the Traffic Engineer review questions regarding the parking layout and driveway and corner separation
- Revision of the Construction Management Plan to address comments
- Work with staff to clarify ways to meet requirements for a transit facility, sidewalks/ROW design and materials, street lights and street trees
- Submission of lighting plan, street lighting plan, road striping plan for left turn, and floor plans
- Locations and screening details for HVAC
- Submit capacity letter for Wastewater
- Provide additional Workforce Housing information (eg deed restrictions) to the Housing & Community Development Division and finalize details
- Other issues raised by the Planning Board

ATTACHMENTS:

Attachments to Memorandum

1. Staff e-mail prelim review comments
2. Design Review - Preliminary comments
3. Traffic Engineering Preliminary Review comments
4. Engineering Preliminary Review comments
5. ROW draft comments
6. City Arborist preliminary comments

Public Comments

PC1 Attorney Schofield on behalf 202 Washington 1.19.17

Applicant's Submittal

A. Application
B. Right, title and Interest
C. State & Federal Approvals
D. Zoning analysis
E. Easements
F. Waivers
G. Financial and Technical Capacity
H. Boundary survey
I. Construction management Plan
J. Traffic Study
K. Natural Features
L. Stormwater Management Plan
M. City Master plans
N. Utilities
O. Solid Waste
P. Fire
Q. Design Review
R. HVAC
S. Lighting Specs
T. Retaining Wall Specs
U. Neighborhood Meeting
V. Narrative re Multi-Family Design Standards
W. Workforce Housing application and plans

Plans

P1 Cover sheet
P2 Boundary Survey & Existing Conditions
P3 Draft Plat
P4 Demolition Plans (2 sheets)
P5 Site Plans (4 sheets)
P6 Utility Plan
P7 Grading Plans (4 sheets)
P8 Details (5 sheets)
P9 Landscape Plans (2 sheets)
P10 Watershed Plans (2 sheets)
P11 Site Context
P12 Site Section
P13 Retaining Wall
P14 Elevations (2 sheets)
P15 Site Context Elevations (3 sheets)
P16 Perspectives (4 views)

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Fwd: 218 Washington Avenue - Trees along Frontage.

1 message

Jean Fraser <jf@portlandmaine.gov> Fri, Apr 21, 2017 at 4:31 PM
To: Shawn Frank <sfrank@sebagotechnics.com>
Cc: Will Conway <wconway@sebagotechnics.com>, Michael Coyne <coyne@archetypepa.com>

Hello Shawn

Despite the subject heading this covers traffic, stormwater, design and city arborist comments. (Fire Department do not have comments)

I undertook to get comments to you by today in order to give you time to revise the plans for presentation to the Planning Board.

I attach the Preliminary Comments from the Traffic and Peer Engineering Reviewers. Tom Errico refers to previous comments but those have not been sent as they are in draft form- they are quite detailed but I will get you those on Monday.

Please note that streetlights will need to provided by the applicant along the frontage in compliance with the City's Technical Standards. I think it will need to be 2 or 3- I am getting confirmation on the number and type (probably Bayside medium) and will send asap.

I also attach the Design Review comments that we will include in the memo to the Planning Board; this does not raise any key issues.

Below are the City Arborist prelim comments as the plans show this area as having the vegetation "preserved" (the rendering shows it as partly lawn) but in any case it needs a landscape plan showing new planting treatment. The City Arborist will have further comments on the street trees and proposed planting elsewhere (hopefully Monday).

While writing, I would appreciate it if you could please use one plan per subject (like the Utility Plan)- it is very difficult to understand and review to have part of the subject plan on each of two sheets.

Please contact me if any questions. We would need any revised plans that you want to have reviewed and presented to the Planning Board by the end of next week.

thank you
Jean

---------- Forwarded message ----------
From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Thu, Apr 20, 2017 at 4:27 PM
Subject: Re: 218 Washington Avenue - Trees along Frontage.
To: Bruce Hyman <bhyman@portlandmaine.gov>
Cc: Jean Fraser <jf@portlandmaine.gov>

Jean -

The project at 218 Washington Avenue proposes to use a portion of the slope area, see photo below. The existing vegetation is mostly invasive plants that do not offer much in the way of useful green space from a functional open or landscape buffer. If the project is using this space for that purpose, an improvement plan is needed, the space has potential to meet the landscape goals for a project of this scale if they can improve.

A more detail review to follow.

Thanks

Jeff

Planning and Urban Development Department
Planning Division

Subject: B-1b Design Review – 218 Washington Avenue

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, April 19 2017

The residential project at 218 Washington Avenue was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer against *the B-1b Commercial Business Zones Standards* (Section (d) of the Design Manual).

(d) B-1b Neighborhood Business Zones

Standard (1) a. Urban Street Wall – Building is located to create an urban street wall. There is little to no existing street wall in this context. The aspiration for Washington Avenue is to become built up with a more urban street wall, mixed uses, and density. This project could be considered to be establishing a scale and street wall pattern for this end of the street.

Standard (1) b. Mixed Uses – Project is multi-storied but not mixed-use.

Standard (1) c. Building Entrances – Primary building entrance faces Washington Avenue and is emphasized with stoop, canopy, material differentiation.

Standard (1) d. Windows – Windows are present along the street frontage though slightly elevated because first floor is residential. Windows shall be transparent.

Standard (1) e. Façade Character – No active or public portions of the building. Main residential entry faces Washington Avenue. Additional visual amenity provided by landscaping, changes in façade plane, fenestration.

Standard (1) f. Building Design –Washington Ave includes one and two-story commercial and residential buildings of varying styles, forms, and roof lines. A flat roof for a multi-family building is appropriate. The building is significantly larger in scale (height and length on the street) than most of the existing Washington Ave context, however, there is little built context immediately adjacent to the site.

Standard (1) g. Building Materials – Residential buildings on Washington Ave are predominantly clapboard. Project proposed clapboard as the primary material with the additional use of metal, fiber cement panel and boards. Again, there is little surrounding context, but the use of clapboard is preferred as the predominant material to be consistent with the overall Washington Avenue residential streetscape.

Standard (1) h. Building Scale – Building is two stories taller than predominant residential context on Washington Ave. However, the site is at the end of Washington Ave with little surrounding built context.

Standard (1) i. Landscaping and Buffers – Parking areas are screened from street with wall and landscaping.

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

218 Washington Street - Preliminary Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com> Fri, Apr 21, 2017 at 3:29 PM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Jeff Tarling <jst@portlandmaine.gov>

Hi Jean – I have reviewed the application materials and offer the following preliminary traffic comments.

- The applicant has conducted a trip generation estimate for the project and less than 20 peak hour trips will be generated by the project. Accordingly, a Traffic Movement Permit or a formal Traffic Impact Study are not required.

- The City standard for driveway separation on a roadway such as Washington Avenue is 100 feet. The applicant shall provide documentation in support of a waiver for driveway separation. In general, I'm concerned about future development on the abutting property and how best to manage access.

- The City standard for corner clearance or distance to a nearby intersection is 150 feet for an arterial street like Washington Avenue. The applicant shall provide documentation in support of a waiver for corner clearance.

- The construction management plan shall be revised to preserve pedestrian and bicycle movements from the Back Cove shared use path. The applicant should note if impacts to Washington Avenue vehicle traffic is expected and if so how it will be managed.

- The plans note that two parking spaces will be provided at the driveway entrance (after the curve). The applicant should note the use of these spaces.

- The applicant should provide information on how the tandem parking spaces will be managed.

- The applicant shall confirm that all internal vehicle movements can occur without having to back out of the site.

- During peak time periods, inbound Washington Avenue at the Eastern Promenade intersection can experience traffic queuing. The City is interested in the development of a short narrow left-turn lane (opposite the median refuge island). It is requested that the applicant develop a layout plan for consideration.

- The driveway apron shall be constructed such that a 5-foot wide area with maximum 2% cross-slope is provided. I believe Bruce Hyman has provided comments on this as well as driveway apron material and other frontage comments.

If you have any questions, please contact me.

Best regards,

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

"One Vision, One Company"

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Jean Fraser, Planner
FROM: Lauren Swett, PE
DATE: April 21, 2017
RE: 218 Washington Avenue, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application and attachments for the proposed development located at 218 Washington Avenue in Portland, Maine. The project involves the construction of a 45 – unit condominium building.

Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated December 12, 2016, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.
- Engineering Plans, Sheets 1 – 23, dated December 15, 2016, along with updates dated April 11, 2017, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.

Comments

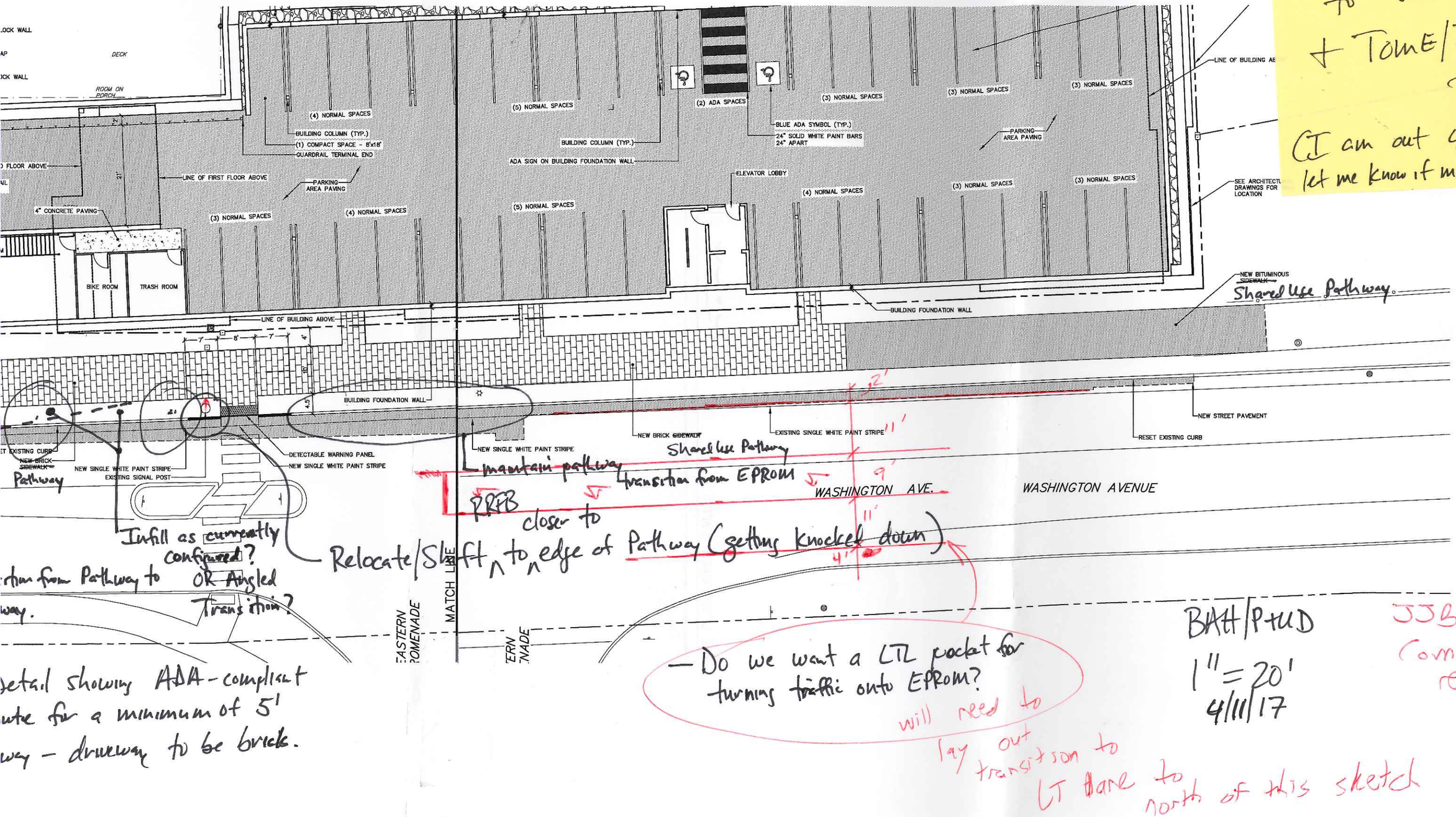
1) In general, we have constructability concerns with this project. There are varying steep slopes on the site, and significant features proposed for construction, including a tall retaining wall and deep stormdrain features. These features may be constructable, but larger impact areas and limits of work may be required than what is currently shown on the plans. We understand that maintenance of existing vegetation is proposed, so it will be important to ensure that these areas can be maintained.
2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
   a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. No erosion control has been specified associated with the proposed stormdrain installation, and additional clarification will be required in this area.
   b) General Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to include stormwater management features for stormwater quality control. The Applicant has proposed an Underdrained Subsurface Sand Filter. The stormwater system is required to comply with the requirements of Chapter 7.3 of Volume III of the MaineDEP Stormwater BMP Manual. In general, we are in agreement with the stormwater management approach. We recommend that the applicant review the project layout with the Stormtech manufacturer to ensure that the design is in conformance with the manufacturer's standards. The Applicant should confirm that adequate access for maintenance will be provided. We are completing further review of the stormwater model, and will provide additional comments following the workshop.
   c) Flooding Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to control the rate or quantity of stormwater runoff from the site. Stormwater flow will increase during the 2-year storm event. We agree that the impact will be minimal, but we do recommend that the Applicant review their stormwater system for potential changes.
3) The Applicant is proposing to connect their stormdrain system to the City's infrastructure in Anderson Street. The City has been completing a project on Anderson Street, and the street will be under a moratorium.

4) The Applicant should review their stormdrain design relative the depth of structures and pipes. DMH 4 is proposed with nearly 45' in depth, and DMH 5 is proposed with nearly a 28' depth. These are unreasonable for construction. Other structures are not as deep, but still deep enough to require a fairly significant trench width. The Applicant should review all structure depths and provide a realistic impact width to manage construction of stormwater systems at these depths.
5) Relative to the depths discussed above, pipes will also be installed with steep slopes. The Applicant should address concerns associated with steep slopes (internal pipe scour, trench backfill erosion, etc.).
6) A stormwater inspection and maintenance plan is required in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances. A plan has been provided, but it should be updated to reflect the current proposed stormwater treatment systems.
7) Per the City of Portland's recently adopted modifications to the sidewalk standards, the driveway apron must match the sidewalk material.
8) All work within the City of Portland right-of-way must meet the City of Portland Technical standards. The Applicant should review this standards relative to pipe installation and pavement. Specifically note, that 9.5 mm HMA is not the City's standard for surface pavement.
9) Additional geotechnical information will be required for the retaining wall design.

Att. 5

218 WASHINGTON AVE
SHEETS 5A/5B

My comments to Jeff T + Tom E/Jeremiah. Bruce
(I am out 4/12-4/14 - let me know if more needed.) BB



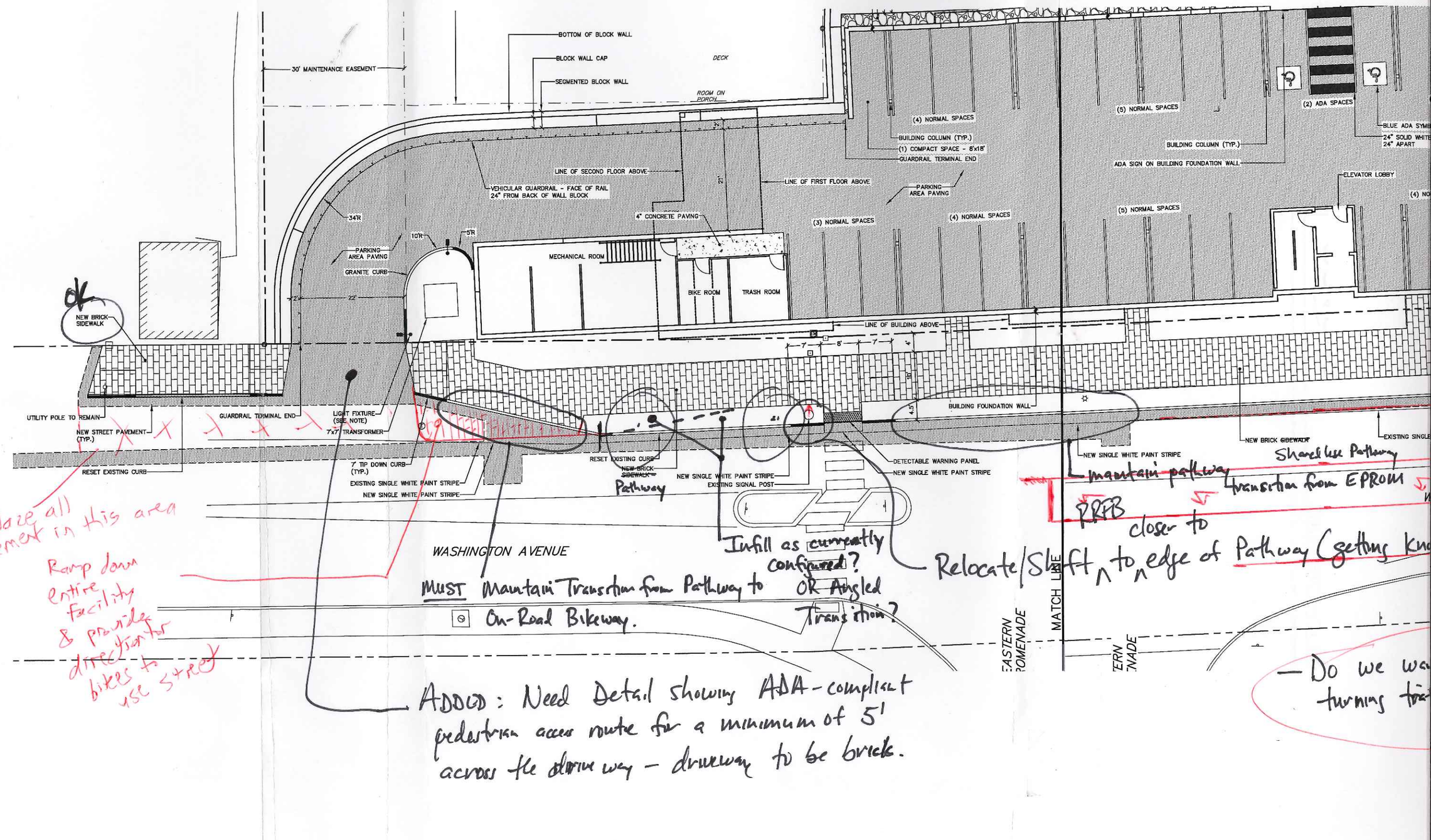
detail showing ADA-compliant
ute for a minimum of 5'
way - driveway to be brick.

— Do we want a LTL pocket for turning traffic onto EPROM?
will need to lay out transition to LT lane to north of this sketch

BATH/PHED
1" = 20'
4/11/17

JSB/DPW comments in red.

218 WASHINGTON AV
SHEETS 5A/5B



OK

replace all pavement in this area

Ramp down entire facility & provide directional for bikes to use street

Infill as currently configured?

Relocate/Shift to edge of Pathway (getting kno

MUST Maintain Transition from Pathway to On-Road Bikeway.

OR Angled Transition?

Shared Use Pathway

maintain pathway

transition from EPROM

RRFB

closer to

ADDED: Need Detail showing ADA-compliant pedestrian access route for a minimum of 5' across the driveway - driveway to be brick.

— Do we wa
turning tra

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

Re: 218 Washington Avenue - Trees along Frontage.

1 message

Jeff Tarling <jst@portlandmaine.gov> Thu, Apr 20, 2017 at 4:27 PM
To: Bruce Hyman <bhyman@portlandmaine.gov>
Cc: Jean Fraser <jf@portlandmaine.gov>

Jean -

The project at 218 Washington Avenue proposes to use a portion of the slope area, see photo below. The existing vegetation is mostly invasive plants that do not offer much in the way of useful green space from a functional open or landscape buffer. If the project is using this space for that purpose, an improvement plan is needed, the space has potential to meet the landscape goals for a project of this scale if they can improve.

A more detail review to follow.

Thanks

Jeff

PC1

H&A HOPKINSON & ABBONDANZA
ATTORNEYS

Please respond to our Portland office

- James A. Hopkinson
- Richard J. Abbondanza
- Gerald B. Schofield, Jr.
- Mark A. Woronoff
- Jeffrey S. LaCourse

January 19, 2017

City of Portland
Planning and Urban Development
Attn: Tuck O'Brien, City Planning Director
389 Congress Street
Portland, Maine 04101

VIA MAIL AND EMAIL
sgo@portlandmaine.gov

City of Portland
Office of Corporation Counsel
Attn: Danielle West-Chuhta, Corp. Counsel
389 Congress Street, Room 211
Portland, Maine 04101

Re: December 15, 2016 Site Plan of 218-220 Washington Avenue for 218-220 (Tax Maps 10-A-15 and 10-A-10) Washington Avenue, LLC ("Site Plan")

Dear Director O'Brien and Attorney West-Chuhta:

This letter follows and confirms a telephone conversation I had with Tuck O'Brien on January 10, 2017.

Our office represents 202 Washington Avenue, LLC ("202"), the owner of real property located at 202 Washington Avenue, Portland, Maine (Tax Map 10-A-16-19) ("202 Washington Property") by virtue of a deed dated September 28, 2007 and recorded in the Cumberland County Registry of Deeds ("CCRD") in Book 25509, Page 156. The 202 Washington Property directly abuts the parcel known as 218-220 Washington Avenue, Portland, Maine ("218-220 Washington Property"). I have reviewed a copy of the above-referenced Site Plan prepared by Sebago Technics dated December 15, 2016 for the project at the 218-220 Washington Property, proposed by 218-220 Washington Avenue, LLC ("218-220").

The purpose of this letter is to advise you that the Site Plan prepared by Sebago Technics and submitted to the City appears to clearly violate the terms of a Boundary Agreement dated May 25, 2010 and recorded in the CCRD in Book 27839, Page 310, as amended by an Amendment to Boundary Agreement dated March 29, 2016 and recorded in the CCRD in Book 33018, Page 158. The Site Plan clearly references both a 30 foot maintenance easement ("Maintenance Easement"), as well as an area of building restriction for the land existing greater than 50 feet

from Washington Avenue on the 218-220 Washington Property ("Negative Easement"). Both of the aforementioned easements are clearly denoted and specified in the recorded Boundary Agreement and Amendment to Boundary Agreement. Both the current owners of the properties and the applicant were involved in the creation of the final version of the Boundary Agreement and amendment thereto, so I was surprised to see that the Site Plan submitted to the City by the applicant violates the terms of both agreements and both Easements. The agreements were on record prior to the preparation of the Site Plan.

The proposed Site Plan violated the Maintenance Easement, inter alia, by rendering access and use impassable due to the proposed retaining wall. The proposed Site Plan violates the Negative Easement, inter alia, by permitting uses and improvements in the Negative Easement contrary to the stated purposes of the Easement. The Negative Easement states that "[n]o buildings or improvements of any kind shall be constructed, located or maintained in any area of the Morse Parcel that is more than [50 feet] from the Morse Parcel's northeasterly boundary abutting Washington Avenue." Such language would, and does, clearly prohibit the installation, implementation, or other work related to any storm management, erosion control, landscaping, staging, equipment, or other measures on this area of the 218-220 Washington Property. Simply stated, the Negative Easement area must remain status quo.

Under the agreement entered into by and between 202, 218-220 and/or Morse, 202 is permitted to object to any project proposed that may violate the terms of the Boundary Agreement and/or Amendment to Boundary Agreement. This letter shall constitute formal notice to the City of Portland that the project and permitting proposed for the 218-220 Washington Property is directly opposed by 202 as an immediate abutter to the project, and as an owner of real property rights that will be directly impacted by the granting of any said permit. It is my understanding that the City of Portland traditionally does not approve projects and Site Plans that in any manner violate easements, such as the Maintenance Easement or the Negative Easement in this instance. Should the project move forward as proposed, my client will be exercising its rights under the Boundary Agreement and Amendment to Boundary Agreement, as well as exercising its rights to demand arbitration with 218-220 and Mr. Morse as it is entitled.

In my conversation with Tuck on January 10, 2017, Tuck advised that a completeness check had yet to be completed, and that the same would not occur until late March, 2017. Additionally, he confirmed that the applicant, 218-220, would have to show 'right, title and interest' before its project would be approved. Certainly any such display of proof of the same by 218-220 will involve the resolution of issues with 202 related to the Easements and the Agreements of record.

By virtue of this letter, and on behalf of 202, it is respectfully requested that the City of Portland decline to approve or move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse.

Thank you very much for your kind attention.

Sincerely,

Gerald B. Schofield

GBS/
Email: gschofield@hablaw.com

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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

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

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
p.m. (207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30

PROJECT NAME:

218 – 220 Washington Avenue

PROPOSED DEVELOPMENT ADDRESS:

218 – 220 Washington Avenue

PROJECT DESCRIPTION:

45 Residential Condominiums in one building with parking under the building

CHART/BLOCK/LOT: MAP 10/BLOCK A/LOT 10 AND 15

PRELIMINARY PLAN _____(date)

FINAL PLAN _____(date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: 218 – 220 Washington Avenue LLC Business Name, if applicable: Address: 199 Elderberry Road City/State: So. Portland ME Zip Code: 04106	**Applicant Contact Information** Work #: — Home #: — Cell #: 207.749.0000 Fax#: — e-mail: maletta@aol.com
Owner – (if different from Applicant) Name: — Address: City/State: Zip Code:	**Owner Contact Information** Work #: — Home #: Cell #: Fax#: e-mail:
Agent/ Representative Name: Sebago Technics Inc./Will Conway Address: 75 John Roberts Road City/State: So. Portland ME Zip Code: 04106	**Agent/Representative Contact information** Work #: 207. 200. 2055 Home #: — Cell #: — Fax#: 207.856.2206 e-mail: wconway@sebagotechnics.com
Billing Information Name: Sebago Technics Address: City/State: Zip Code:	**Billing Contact Information** Work #: Will Conway Home #: 207.200.2055 Cell #: — Fax#: e-mail:

Engineer Name: Sebago Technics Address: City/State : Zip Code:	**Engineer Contact Information** Work #: Will Conway Home #: Cell #: Fax#: e-mail:
Surveyor Name: Sebago Technics Address: City/State : Zip Code:	**Surveyor Contact Information** Home #: Will Conway Work #: Cell #: Fax#: e-mail:
Architect Name: Archetype / Bill Hopkins Address: 48 Union Wharf City/State: Portland ME Zip Code: 04101	**Architect Contact Information** Work #: 207.772.6022 Home #: — Cell #: — Fax#: — e-mail: hopkins@archetypepa.com
Attorney Name: — Address: City/State : Zip Code:	**Attorney Contact Information** Work #: — Home #: Cell #: Fax#: e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: Will Conway
e-mail: Wconway@sebagotechnics.com

Name:
e-mail:

Name:
e-mail:

APPLICATION FEES:

Level III Development (check applicable reviews)	**Other Reviews (check applicable reviews)**
✓ Less than 50,000 sq. ft. ($750.00) ✓ 50,000 - 100,000 sq. ft. ($1,000) ___100,000 – 200,000 sq. ft. ($2,000) ___200,000 – 300,000 sq. ft. ($3,000) ___over 300,00 sq. ft. ($5,000) ___Parking lots over 11 spaces ($1,000) ___After-the-fact Review ($1,000.00 plus applicable application fee) **Plan Amendments (check applicable reviews)** ___Planning Staff Review ($250) ___Planning Board Review ($500) _____ The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.	✓ Traffic Movement ($1,500) ✓ Stormwater Quality ($250) ___Subdivisions ($500 + $25/lot) # of Lots 45 x $25/lot = $ 1625 (units) ___Site Location ($3,500, except for residential projects which shall be $200/lot) # of Lots___x $200/lot = _____ ___Other _____ ___Change of Use ___Flood Plain ___Shoreland ___Design Review ___Housing Replacement ___Historic Preservation

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

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

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

   Applying Online Instructions

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

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

APPLICANT SIGNATURE:

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

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

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

Signature of Applicant:	**Date:**
Vincent A Martin	12/12/16

PROJECT DATA

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

Total Area of Site	28,382	sq. ft.
Proposed Total Disturbed Area of the Site	22,532	sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.		
Impervious Surface Area		
Impervious Area (Total Existing)	2375	sq. ft.
Impervious Area (Total Proposed)	22,532	sq. ft.
Building Ground Floor Area and Total Floor Area		
Building Footprint (Total Existing)	1100	sq. ft.
Building Footprint (Total Proposed)	13,751	sq. ft.
Building Floor Area (Total Existing)	2200	sq. ft.
Building Floor Area (Total Proposed)	69,459	sq. ft.
Zoning		
Existing	B1h	
Proposed, if applicable	B1h	
Land Use		
Existing	RESIDENTIAL / UNDEVELOPED	
Proposed	RESIDENTIAL	
Residential, If applicable		
# of Residential Units (Total Existing)	1	
# of Residential Units (Total Proposed)	45	
# of Lots (Total Proposed)	1 (CONDO)	
# of Affordable Housing Units (Total Proposed)	0	
Proposed Bedroom Mix		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	22	
# of Two-Bedroom Units (Total Proposed)	23	
# of Three-Bedroom Units (Total Proposed)	0	
Parking Spaces		
# of Parking Spaces (Total Existing)	3	
# of Parking Spaces (Total Proposed)	45	
# of Handicapped Spaces (Total Proposed)	2	
Bicycle Parking Spaces		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	18	
Estimated Cost of Project	$ 13.0 M	

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

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

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

- Continued on next page -

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

Conditional Use for Ensuring Workforce Housing
Inclusionary Zoning
Planning Board Review
Application
Portland, Maine

Planning and Urban Development Department
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

A. Ensuring Workforce Housing: Standards -Section 14-484

(d) Workforce Housing Minimum At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

(e) Standards

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.

3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.

4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.

6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability for Required Workforce Units
10%	Longest term permitted under federal, state and local laws and ordinances
25%	30 years
50%	20 years
100%	10 years

(f) Implementing Regulations. Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be "in the same neighborhood".

B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.

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

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division	**Housing and Community Development**	**Office Hours**
Fourth Floor, City Hall	Room 313, Third Floor, City Hall	Monday thru Friday
389 Congress Street	389 Congress Street	8:00 a.m. – 4:30 p.m.
(207)874-8719	(207)482-5028	

PROJECT NAME:
218 - 220 Washington Avenue

PROPOSED DEVELOPMENT ADDRESS:
218 - 220 Washington Avenue

CHART/BLOCK/LOT (s): MAP 10 / BLOCK A / LOT 10 AND 15 **Applicable Zone:** B1b

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: 218 - 220 Washington Avenue LLC Business Name, if applicable: Address: 199 Elderberry Road City/State: So. Portland, ME Zip Code: 04106	**Applicant Contact Information** Work # — Home# — Cell # 207.749.0000 Fax# e-mail: Maietta@aol.com
Owner – (if different from Applicant) Name: — Address: City/State : Zip Code:	**Owner Contact Information** Work # — Home# Cell # Fax# e-mail:
Billing Information Name: Sebago Technics Address: 75 John Roberts Road City/State So. Portland, ME Zip Code: 04106	**Billing Information** Work # Will Conway Cell # Fax# 207.200.2055 e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: WILL CONWAY
e-mail: wconway@sebagotechnics.com

Name:
e-mail:

Name:
e-mail:

RIGHT, TITLE OR INTEREST:

SEE SITE PLAN APPLICATION

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

EXISTING USE: Describe the existing use of the subject property.

1 SINGLE FAMILY HOME

PROJECT DESCRIPTION:

45 RESIDENTIAL CONDOMINIUM UNITS

INCLUSIONARY ZONING:	
# IZ Units	
On-Site IZ Units	
Off-Site IZ Units	
# IZ Homeownership Units	
# IZ Rental Units	
# IZ Efficiencies	
# IZ 1-Beds	
# IZ 2-Beds	
# IZ 3-Beds	
IZ Fee In-Lieu	

APPLICATION FEES:

___ Conditional Use Review to Ensure Workforce Housing ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

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

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

   Applying Online Instructions

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

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

Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
✓		1	Completed Application Form
		1	Cover letter stating the nature of the project.
✓		1	Evidence of right, title and interest.
		1	Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count
		1	Draft Workforce Housing Agreement
		1	Proposed Marketing Strategy
		1	Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.
		1	If the project is to be phased, provide written description of project phasing and accommodation of workforce units.
			Plans and Construction Details Submission Checklist
✓		1	An accompanying site plan application, as applicable.
		1	Floor Plans of all units and identifying proposed designated workforce housing units
		1	Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities
		1	If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project.

APPLICANT SIGNATURE:

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

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

Signature of Applicant:	**Date:**
Vincent A Maas	12/12/16

Individual Member
Individual Membership

Specialist, Industrial and Office Real Estate

One Canal Plaza, Portland, ME 04101 * 207.772.1333

CONTRACT
FOR THE SALE OF REAL ESTATE

Contract Date: October 19, 2016

RECEIVED OF: **218-220 Washington Avenue LLC and/or assigns** whose mailing address is **199 Elderberry Rd, South Portland, ME 04106** hereinafter called the Buyer, the sum of [redacted] as earnest money deposit and in part payment of the purchase price of the following described real estate, situated in the municipality of **Portland**, County of **Cumberland**, State of Maine and located at **230-234 Washington Ave** being **a portion of** the property owned by the **Rockingham LLC**, herein Seller, and part of the land described at said County's Registry of Deeds Book **27757**, Page **278** and further described as: **(a) a 15' x 160' strip of land along the common boundary of Buyer and Seller (a portion of parcel 10); a 50' x 95' lot of land, being a portion of Lot 42, with a 50' of frontage on Washington Avenue; and a 20' wide underground sewer easement along the northerly boundary of Lot 42 from the parcel to be conveyed to Anderson Street. Also to be conveyed a triangle piece of land measuring 15' x 15' x 21'(113 square feet) as referenced in Sebego Tech.'s drawings Existing Conditions Plan.** upon the terms and conditions indicated below:

1. PURCHASE PRICE: The TOTAL purchase price being [redacted]

2. EARNEST MONEY/ACCEPTANCE: **Rockingham, LLC** shall hold all earnest money in a non-interest bearing account and act as Escrow Agent until closing. The first deposit of [redacted] shall be non refundable.

3. TITLE: That a deed, conveying good and merchantable title in accordance with standards adopted by the Maine Bar Association shall be delivered to the Purchaser(s) and this transaction shall be closed and the Purchaser(s) shall pay the balance due and execute all necessary papers on or before, **April 19th, 2017**. If Seller(s) is unable to convey in accordance with the provisions of this paragraph, then the Seller(s) shall have a reasonable time period, not to exceed thirty (30) days, from the time the Seller(s) receives written notice of the defect, unless otherwise agreed to by both parties, to remedy the title, after which time, if such defect is not corrected so that there is merchantable title, the Purchaser(s) may, within fifteen (15) days thereafter, at Purchaser's option, declare the contract null and void and any earnest money shall be returned to the Purchaser(s) and neither party shall have any further obligation hereunder. If the Purchaser(s) does not declare the contract void within the period set forth above, the Purchaser(s) shall have waived the right to object to title. The Seller(s) hereby agrees to make a good-faith effort to cure any title defect during such period.

4. DEED: That the property shall be conveyed by a **Quit Claim with Covenat**, and shall be free and clear of all encumbrances except building and zoning restrictions of record, restrictive covenants and conditions of record and usual public utilities servicing the property and shall be subject to applicable land use and building laws and regulations.

5. POSSESSION /OCCUPANCY: Possession/occupancy of premises shall be given to Purchaser(s) immediately at closing, subject to any leases, unless otherwise agreed by both parties in writing.

6. RISK OF LOSS: Until the transfer of title, the risk of loss or damage to said premises by fire or otherwise, is assumed by the Seller(s) unless otherwise agreed in writing. Said premises shall then be in substantially the same condition as at present, excepting reasonable use and wear.

7. PRORATIONS: The following items shall be prorated as of the date of closing:

Seller AS Purchaser VHM

a. Real Estate Taxes based on the municipality's tax year. Seller is responsible for any unpaid taxes for prior year

b. Purchaser(s) and Seller(s) shall each pay its transfer tax as required by the State of Maine.

8. INSPECTIONS: The Purchaser(s) is encouraged to seek information from professionals regarding any specific issue of concern. Purchaser(s) acknowledges receipt of disclosure form attached hereto. The Agent makes no warranties regarding the condition, permitted use or value of the Seller's real or personal property. This Contract is subject to the following inspections, with the results being satisfactory to the Purchaser(s):

TYPE OF INSPECTION	YES	NO	RESULTS REPORTED	TYPE OF INSPECTION	YES	NO	RESULTS REPORTED
a. General Building	☐	☒	Within # days	g. Lead Paint	☐	☒	Within # days
b. Sewage Disposal	☐	☒	Within # days	h. Pests	☐	☒	Within # days
c. Water Quality	☐	☒	Within # days	i. ADA	☐	☒	Within # days
d. Radon Air Quality	☐	☒	Within # days	j. Wetlands	☐	☒	Within # days
e. Radon Water Quality	☐	☒	Within # days	k. Environmental Scan	☐	☒	Within # days
f. Asbestos Air Quality	☐	☒	Within # days	l. General Due Diligence	☒	☐	Within **60** days

The use of days is intended to mean from the effective date of this Contract. All inspections will be done by inspectors chosen and paid for by the Purchaser(s). If the result of any inspection or other condition specified herein is unsatisfactory to the Purchaser(s), in Purchaser(s) sole discretion, Purchaser(s) may declare the Contract null and void by notifying Seller(s) in writing within the specified number of days, and any earnest money shall be returned to the Purchaser(s). If the Purchaser(s) does not notify the Seller(s) that an inspection is unsatisfactory within the time period set forth above, this contingency is waived by the Purchaser(s). In the absence of inspection(s) mentioned above, the Purchaser(s) is relying completely upon Purchaser's own opinion as to the condition of the property.

11. FINANCING: **Intentionally Deleted**
12. AGENCY DISCLOSURE: **Intentionally Deleted**

13. .DEFAULT: If Purchaser(s) fails to perform any of the terms of this Contract or is otherwise in default of any of its obligations, Seller shall have the option of either retaining the earnest money as full and complete liquidated damages or employing all available legal and equitable remedies. Notwithstanding any other provision of this agreement, Escrow Agent shall have the right to require written releases from both parties prior to releasing the earnest money to either party. If a dispute arises between Purchaser(s) and Seller as to the existence of a default hereunder and/or the release of the earnest money and said dispute is not resolved by the parties within (30) days, Escrow Agent may elect to file an action in interpleader and deposit the earnest money in the court to resolve said dispute, or otherwise disburse the earnest money pursuant to Maine Real Estate Commission regulations. Purchaser(s) and Seller, jointly and severally, shall indemnify Escrow Agent for all costs, losses, expenses, and damages, including reasonable attorneys' fees, incurred by Escrow Agent in connection with said action and/or in connection with any dispute relating to this Contract and/or the Deposit.

14. MEDIATION: Any dispute or claim arising out of or relating to this Contract or the premises addressed in this Contract shall be submitted to mediation in accordance with the Maine Residential Real Estate Mediation Rules of the American Arbitration Association. This clause shall survive the closing of this transaction.

15. PRIOR STATEMENTS: Any verbal representations, statements and agreements are not valid unless contained herein. This Contract completely expresses the obligations of the parties. This is a Maine contract and shall be construed according to the laws of Maine.

16. HEIRS/ASSIGNS: This Contract is assignable YES ☒ NO ☐. This Contract shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns (if assignment is allowed by the terms of this Contract), of the respective parties.

17. COUNTERPARTS: This Contract may be signed on any number of identical counterparts, including telefacsimilie copies, with the same binding effect as if the signatures were on one instrument. Original or telefacsimilied signatures are binding.

Seller AJ Purchaser

18. BINDING CONTRACT: This Contract is a binding contract when signed by both Seller(s) and Purchaser(s) and when that fact has been communicated to all parties or to their agents. The Effective Date of the Contract is noted below. Time is of the essence of this Contract.

19. Seller(s) and Purchaser(s) acknowledge receipt of the Maine Real Estate Commission Disclosure of Agency Relationship Form (Form #2), *if the property is, or has a component of, one to four residential dwelling units.*

20. ADDENDA: This Contract has addenda containing additional terms and conditions YES ☐ NO ☒x

21. The existing sewer easement as set forth in Book 29539, Page 10 shall be released.

22. The deadline for the Buyer to close shall be April 19th, 2017. The Buyer may extend this deadline for six (6) months by making a further [redacted] earnest money deposit by deadline. Buyer may further extend the deadline to close for another six (6) months, by making another [redacted] earnest deposit, however, these further deposits shall be credited towards the purchase price.

23. The Seller's obligation shall be subject to the Seller obtaining within ninety (90) days of the date of this Contract a consent from its Lender that it will release the Premise.

24. The Buyer shall have ninety (90) days from the date of this contract to make any objections to title then existing, but not arising thereafter.

25. In the event that the Seller cannot deliver good and insurable title, or obtain the approval set forth in paragraph 23, the deposit shall be returned to the Buyer.

Seller(s) acknowledges that the laws of the State of Maine provide that every buyer of real property located in Maine must withhold a withholding tax equal to 2 % of the consideration unless the Seller(s) furnishes to the Buyer(s) a certificate by the Seller(s) stating, under penalty of perjury, that Seller(s) is/are a resident of Maine or the transfer is otherwise exempt from withholding.

Vincent A Mentto Member — 10-19-16

Purchaser — *Date*

Name/Title **281-220 Washington Avenue LLC** — *Soc. Sec # or Tax I.D.*

Purchaser — *Date*

Name/Title — *Soc. Sec # or Tax I.D.*

The Seller(s) accepts the offer and agrees to deliver the above-mentioned property at the price and upon the terms and conditions set forth above.

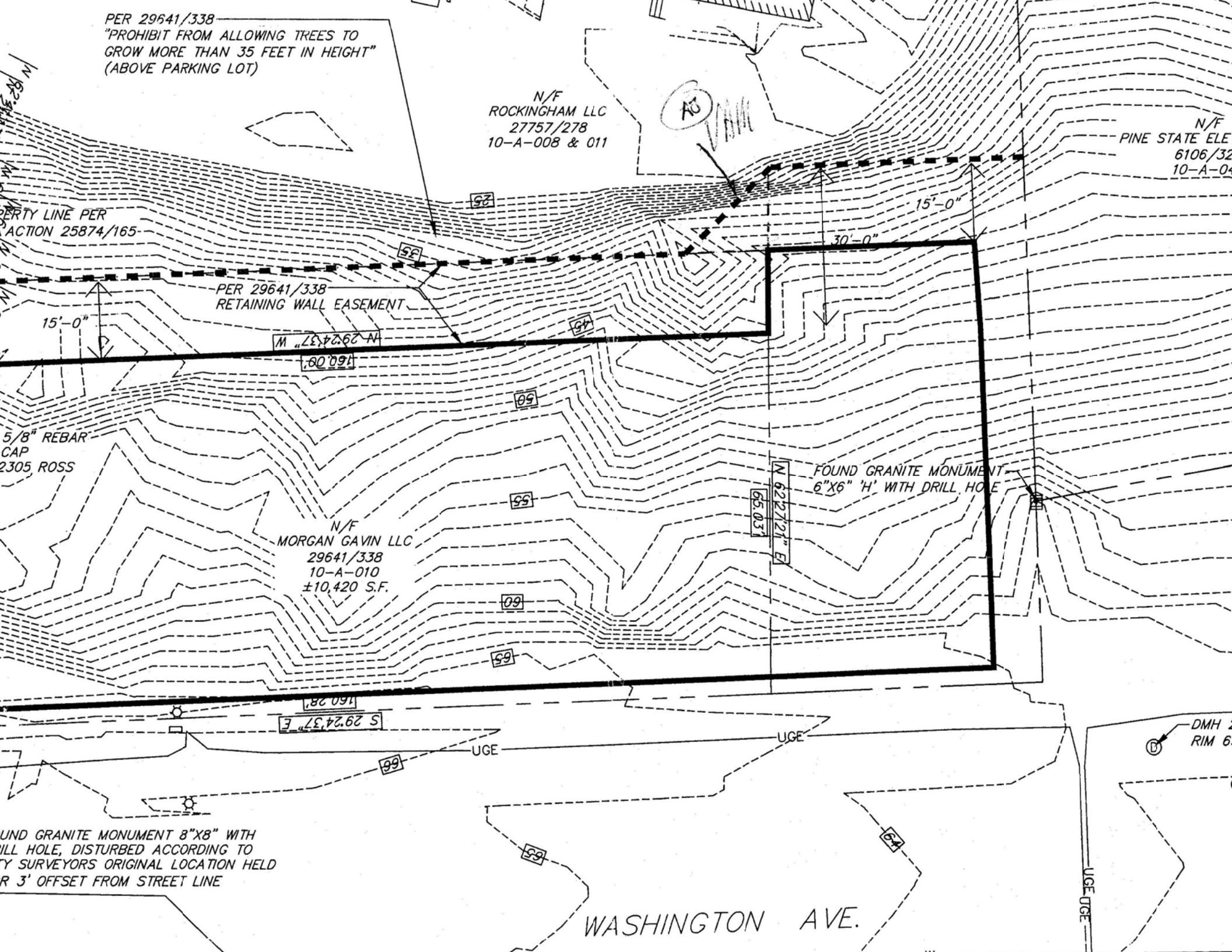
Signed this: 19th day of October, 2016. Effective date of Contract: 19th, day of Oct. 2016

Seller AS Purchaser VAM

	10/19/16
Seller Allan Jaggers	*Date*
Name/Title **Rockingham LLC**	*Soc. Sec # or Tax I.D.*
Seller	*Date*
Name/Title	*Soc. Sec # or Tax I.D.*

Offer reviewed and refused on _____, _____. _____, Seller

Seller AJ Purchaser


PER 29641/338
"PROHIBIT FROM ALLOWING TREES TO GROW MORE THAN 35 FEET IN HEIGHT"
(ABOVE PARKING LOT)
N/F
ROCKINGHAM LLC
27757/278
10-A-008 & 011
N/F
PINE STATE ELE
6106/32
10-A-0
PERTY LINE PER
ACTION 25874/165
PER 29641/338
RETAINING WALL EASEMENT
15'-0"
30'-0"
15'-0"
N 29°24'37" W
160.09'
5/8" REBAR
CAP
2305 ROSS
N 62°12'21" E
65.03'
FOUND GRANITE MONUMENT
6"X6" 'H' WITH DRILL HOLE
N/F
MORGAN GAVIN LLC
29641/338
10-A-010
±10,420 S.F.
S 29°24'37" E
160.28'
UGE
UGE
DMH
RIM 6
UND GRANITE MONUMENT 8"X8" WITH
ILL HOLE, DISTURBED ACCORDING TO
Y SURVEYORS ORIGINAL LOCATION HELD
R 3' OFFSET FROM STREET LINE
WASHINGTON AVE.
UGE
UGE
25
35
45
50
55
60
65
66
64
65

SHORT FORM WARRANTY DEED

Chadballs Holding, LLC, a Maine limited liability company with a place of business at Freeport, Maine ("Grantor"), FOR CONSIDERATION PAID, grants to **Rockingham, LLC**, a Maine limited liability company with a mailing address of 40 O'Brion Street, Portland, ME 04101 ("Grantee"), with WARRANTY COVENANTS, certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to the Grantor by deed from the City of Portland dated May 10, 2007 and recorded in the Cumberland County Registry of Deeds in Book 25095, Page 316; and deed from James E. Pender, Sr., Trustee of the Herbert B. Clifford, Sr. Revocable Trust dated May 10, 2007 and recorded in said Registry of Deeds in Book 25095, Page 320.

IN WITNESS WHEREOF, Chadballs Holding, LLC has caused this instrument to be executed by William P. Simpson, its Manager thereunto duly authorized, this 7th day of May, 2010.

WITNESS:

Name: Thomas Jewell

CHADBALLS HOLDING, LLC

By: William P. Simpson
Its Manager

State of Maine
County of Cumberland, ss.

May 7, 2010

PERSONALLY APPEARED the above-named William P. Simpson, Manager of Chadballs Holding, LLC as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

Name: Thomas Jewell
~~Notary Public~~ / Attorney at Law

EXHIBIT A

TRACT I

A certain lot or parcel of land situated in said Portland, on the Easterly side of Anderson Street, bounded and described as follows, viz:

Beginning at a point on the said Easterly side line of said Anderson Street where a line projected from the fence on the Southerly side of said lot would intersect; thence Northwardly along the said Easterly side line of said Anderson Street one hundred eighty (180) feet, more or less, to a point beyond the cement building, thence turning to the right and running Eastwardly until it meets the Westerly corner of the land sold by The Cash Fuel Company to one Charles C. Achorn, by deed recorded in Cumberland County Registry of Deeds, Book 944, Page 141, which is eighty (80) feet distant from Washington Avenue and about ninety (90) feet, more or less, from said Anderson Street; thence turning to the right and following the line of said Achorn land to the said fence on said Southerly side of said lot a distance of one hundred sixty (160) feet, more or less; thence turning to the right and following the line of said fence, ninety (90) feet, more or less to said Anderson Street and the point of beginning. Being the Westerly portion of the lot of land conveyed to The Cash Fuel Company by Edwin H. Hall and Frederick W. Hall by deed recorded in said Registry, Book 844, Page 384, and the same lot on which the Cash Fuel Company built its brick stable and its cement house. The lot hereby conveyed is subject to the right of a sewer from the lot above being built and maintained through the Southerly side of the sewer on Anderson Street. Said lot is also subject to the right-of-way over the stairs on the Southerly side of said lot and the maintenance of said stairs as stated in the deed from The Cash Fuel Company to Achorn.

Also a certain other lot of land in said Portland, situated near Nos. 214 and 218 W. side of Washington Avenue. Being the same premises conveyed to the Pinkham Associates, Inc. by deed of Samuel J. Knowles dated November 18, 1922 and recorded in the Cumberland County Registry of Deeds in Book 1112, Page 335.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

Reference is made to a Deed of Distribution by Personal Representative from Alma M. Clifford, Personal Representative of the Estate of Herbert B. Clifford, Sr. to Amoskeag Bank & Trust Company, Trustee of the Herbert B. Clifford Trust dated May 10, 1985 and recorded in said Registry of Deeds in Book 6764, Page 65.

TRACT II

ALSO conveying the premises at 207-209 Anderson Street, Assessor's Plan 10-A-13 as described in a deed of the City of Portland to Herbert B. Clifford, Sr. dated December 18, 1973 and recorded in the Cumberland County Registry of Deeds in Book 3498, Page 144.

TRACT III

ALSO another lot or parcel of land situated on the westerly side of Washington Avenue in said Portland bounded and described as follows:

Beginning at the intersection of the fence along the southerly side line of the said Cash Fuel Company's property with said Washington Avenue; thence northerly along the westerly side line of said Washington Avenue to the corner of the fence on the northerly side line of the said Cash Fuel Company's property, one hundred sixty (160) feet, more or less; thence westerly along said fence to its intersection with a line parallel to the said westerly side line of said Washington Avenue, and eighty (80) feet distant from said Avenue; thence southerly along said parallel line, eighty (80) feet distant from said Washington Avenue to its intersection with the fence first mentioned on the southerly side line of the said Cash Fuel Company's property; thence easterly by said fence to Washington Avenue at the point of beginning. Being a portion of the premises conveyed to Herbert B. Clifford by Ideal Cleaners and Launderers, Inc. by deed dated September 29, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3311, Page 6.

The above parcel was inadvertently omitted from the Deed of Distribution recorded in Book 6764, Page 65 as more fully set forth in an Affidavit of James E. Pender dated February 13, 2007 and recorded in said Registry of Deeds in Book 25095, Page 318.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

TRACT IV

A certain lot or parcel of land located in the City of Portland, Cumberland County, Maine known as Tax Map and Lot 10-A-42 on the maps of the Tax Assessor for the City of Portland for the fiscal year 2007 on file in the Office of the Tax Assessor for the City of Portland. Being the premises obtained by the City of Portland by tax foreclosure in 1954. The premises was previously referred to as Tax Map and Lot 10-A-6 by a Tax Deed recorded in the Cumberland County Registry of Deeds in book 2280, Page 300.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

All of the property described herein is conveyed subject to real estate taxes assessed as of April, 2010 not yet due, that Grantee upon acceptance of this deed, assumes and agrees to pay.

Received
Recorded Register of Deeds
May 07,2010 02:49:19P
Cumberland County
Pamela E. Lovley

QUITCLAIM DEED

(Release Deed)
Maine Statutory Short Form

KNOW ALL MEN BY THESE PRESENTS

THAT **MORGAN GAVIN, LLC, a Maine Limited Liability Company**, of Scarborough, Cumberland County, State of Maine, for consideration paid, releases to **GLENN A. MORSE**, whose mailing address is P.O. Box 1466, Scarborough, Maine 04070, a certain lot or parcel of land, with any buildings thereon, located in Portland, Cumberland County, State of Maine, bounded and described as follows:

SEE EXHIBIT "A" ATTACHED HERETO
MADE A PART HEREOF AND INCORPORATED BY REFERENCE HEREIN

Being the same premises conveyed in a deed from Glenn A. Morse to Morgan Gavin, LLC, a Maine Limited Liability Company, dated June 12, 2006 and recorded in the Cumberland County Registry of Deeds in Book 24078, Page 203. Reference is also made in a deed conveyed to Glenn A. Morse by Nancy A. Kelly, Personal Representative of the Estate of Philip Maloney dated July 14, 2005 and recorded in the Cumberland County Registry of Deeds in Book 22895, Page 28.

IN WITNESS WHEREOF, Glenn A. Morse, Manager of Morgan Gavin, LLC, caused this instrument to be executed on this 6th day of Dec., 2006.

SIGNED, SEALED AND DELIVERED in presence of

Witness

MORGAN GAVIN, LLC

By: *
Glenn A. Morse
Its: Manager

STATE OF MAINE
Cumberland, ss.

December 6, 2006.

Then personally appeared the above-named Glenn A. Morse, Manager of said Grantor Limited Liability Company as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said Limited Liability Company.

Before me,

Notary Public/Attorney at Law
Printed Name:
COMMISSION EXPIRES:

k:realswr/firstfinancial/morsereleasedeed

Doc#: 80743 Bk:24651 Ps: 158

EXHIBIT A

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

Beginning at a point on the southwesterly side of Washington Avenue, which point marks the most northerly corner of land conveyed by John Coughlin to Hattie E. Junco by deed dated November 1897 and recorded in the Cumberland County Registry of Deeds in Book 656, Page 339; thence northwesterly along said southwesterly sideline of Washington Avenue, One Hundred Fifty-Two and One-Half (152-1/2') feet to a point; thence at right angles to said Washington Avenue, One Hundred (100') feet to a point; thence at right angles in a southeasterly direction, One Hundred Fifty-Two and One-Half (152-1/2') feet to a point; thence at right angles in a southeasterly (incorrectly identified as northeasterly in deed 3828-70) direction, One Hundred (100') feet to the point of beginning.

Excepting a parcel of land conveyed by Philip E. Maloney to Nancy A. Kelly dated July 23, 1997 and recorded in the Cumberland County Registry of Deeds in Book 13210, Page 278.

Received
Recorded Register of Deeds
Dec 12,2006 11:59:40A
Cumberland County
John B OBrien

EASEMENT

We, Glenn Morse (hereinafter "Morse") of Scarborough, Maine and Rockingham, LLC (hereinafter"Rockingham") a Maine Limited Liability Company hereby agree as follows:

WHEREAS Morse owns real estate in the City of Portland, Maine located at 218 Washington Ave. and more particularly described in a deed recorded in the Cumberland County at Book 22895, Page 28;

WHEREAS Rockingham owns real estate in the City of Portland, Maine located at 219 Anderson St. and more particularly described in a deed recorded in the Cumberland County at Book 27757, Page 278;

WHEREAS the parties want to delineate and define an easement for an existing sewer line and provide for the future maintenance and repair of said sewer line serving the Morse premises and located on the above mentioned real estate owned by Rockingham;

WHEREAS Rockingham wants to grant an easement to Morse subject to the terms and conditions below;

NOW THEREFORE in consideration of One Dollar ($1.00) and other good and valuable consideration, the parties agree as follows:

1. There is currently an existing sewer line located on Rockingham's property which serves the building on Morse's adjacent property. The approximate location of the sewer line is depicted on the attached Exhibit A. Rockingham hereby grants an underground Easement to Morse to maintain, improve and repair this sewer line where it is actually located, together with an area ten feet (10') to either side of the line for construction access purposes, except to the extent there are existing buildings within such corridor.

2. In the event that the sewer line should fail or need to be repaired or improved , then Morse shall do all necessary work and shall restore the surface of the Easement to its condition prior to the repair. Morse shall inform Rockingham in advance of any repair work and shall conduct all work so that it will minimally interfere with use of the Rockingham premises.

3. Morse shall keep the Rockingham premises free of any mechanic liens. If Morse fails to comply with this provision, Rockingham shall be entitled to pay the lien, and Morse will reimburse Rockingham for all expenses incurred in this regard, including any legal fees, plus interest at 18% for any advances and payments made by Rockingham.

4. The terms of this Easement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto and shall be a covenant running with the land on the parcel owned by Rockingham. Time is of the essence in the performance of this Agreement.

5. This Easement shall be governed by and construed in accordance with, Maine law. This constitutes the entire agreement among the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties, and any other claim of easement by Morse over land of Rockingham, in connection therewith which conflict with the express terms of this Agreement.

6. If any provision of this Easement is determined to be invalid or unenforceable, it shall not affect the validity or enforceability of the remaining provisions hereof.

Dated at Portland, Maine this 27Th day of April, 2012.

Witness

Glenn Morse

ROCKINGHAM, LLC

Witness

By Allan Jagger, its duly authorized Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

April 27, 2012

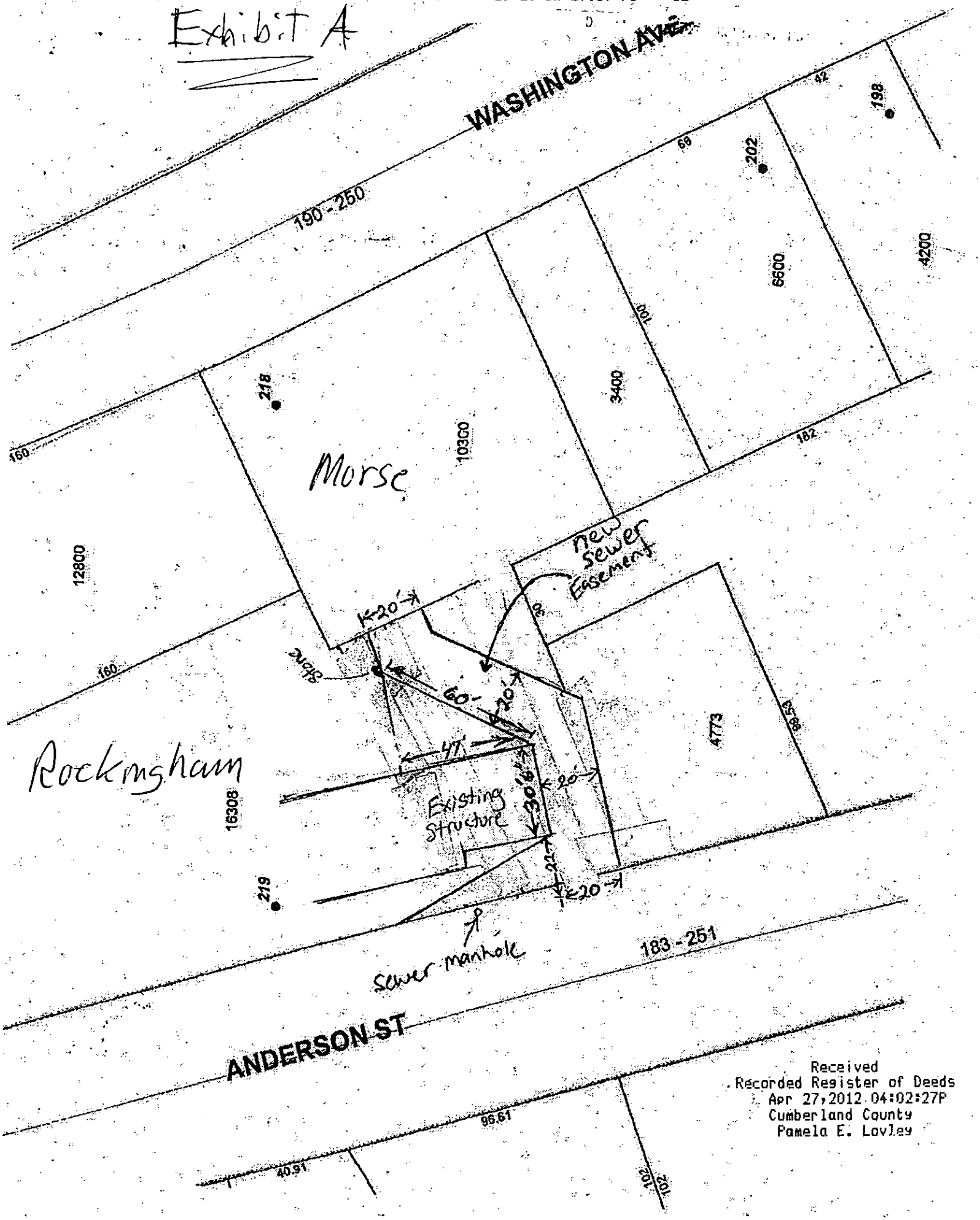
Then personally appeared Allan Jagger, Manager of Rockingham, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

~~Notary Public~~/Attorney at Law

Thomas Jewell

Exhibit A



Received
Recorded Register of Deeds
Apr 27,2012 04:02:27P
Cumberland County
Pamela E. Lovley

QUITCLAIM DEED WITH COVENANT
KNOW ALL MEN BY THESE PRESENTS

THAT, ROCKINGHAM, LLC, a Maine limited liability company, in consideration of one dollar and other valuable consideration paid, grants to MORGAN GAVIN, LLC, a Maine limited liability company, with a mailing address at P.O. Box 1466, Scarborough, Maine 04070, with quitclaim covenant, the land in the City of Portland, County of Cumberland, and State of Maine and more specifically described in Exhibit A attached hereton and incorporated by reference.

To have and to hold the same, together with all the privileges and appurtenances thereunto belonging, to the said Morgan Gavin, LLC, its successors and assigns forever.

Dated at Portland, Maine this 30 day of May, 2012.

ROCKINGHAM, LLC

Witness

By Allan D. Jagger, its duly authorized Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

May 30, 2012

Then personally appeared Allan D. Jagger, Manager of Rockingham, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

Attorney at Law
Thomas Jewell

MAINE REAL ESTATE TAX PAID

LEGAL DESCRIPTION FOR 220 WASHINGTON AVENUE

A certain lot or parcel of land situated on the westerly side of Washington Avenue in said Portland bounded and described as follows:

Beginning at the intersection of the fence along the southerly side line of the said Cash Fuel Company's property with said Washington Avenue; thence northerly along the westerly side line of said Washington Avenue to the corner of the fence on the northerly side line of the said Cash Fuel Company's property, one hundred sixty (160) feet, more or less; thence westerly along said fence to its intersection with a line parallel to the said westerly side line of said Washington Avenue, and eighty (80) feet distant from said Avenue; thence southerly along said parallel line, eighty (80) feet distant from said Washington Avenue to its intersection with the fence first mentioned on the southerly side line of the said Cash Fuel Company's property; thence easterly by said fence to Washington Avenue at the point of beginning. Being a portion of the premises conveyed to Herbert B. Clifford by Ideal Cleaners and Launderers, Inc. by deed dated September 29, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3311, Page 6.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

Excepting a 15 foot by 160 foot strip of land along the western side of the premises conveyed, which is the area of the common boundary between the above property being sold and the adjoining land of the Grantor.

Together with an easement over said fifteen strip described in the preceding paragraph, within which area the Grantee shall have the right to build and maintain a retaining wall.

The following interest is conveyed with no title covenants: Together with an easement over a portion of the remaining land of Grantor, which portion of land is described as Assessor Lot 10-A-8, within which area the Grantor is prohibit from allowing trees to grow more than 35 feet in height, with the base line being the high point of the existing paved parking lot at the rear of the building located on this parcel. This easement does not apply to structures. Grantee is responsible for maintaining the tree height and shall have reasonable access over Lot 10-A-8 in order to perform periodic tree trimming activities consistent with this view easement.

Being a portion of the premises (Tract III) conveyed to the Grantor by Chadballs Holding, LLC by deed dated May 7, 2010 and recorded in said Registry of Deeds in Book 27757, Page 278.

Received
Recorded Register of Deeds
Jun 05,2012 12:38:55P
Cumberland County
Pamela E. Lovley

BOUNDARY AGREEMENT

This Boundary Agreement ("Agreement") is made and entered into this 25th day of MAY, 2010, by and between Glenn A. Morse an individual residing in Scarborough, Maine (hereinafter referred to as "Morse") and 202 Washington, LLC, a Maine limited liability company with a principal place of business located in Portland, Maine (hereinafter referred to as "202 Washington").

WHEREAS, Morse currently holds title to a certain parcel of land and other improvements thereon in Portland, Cumberland County, State of Maine, said parcel being described in a deed from Morgan Gavin, LLC, dated December 6, 2006, and recorded in the Cumberland County Registry of Deeds in Book 24651, Page 157 (hereinafter referred to as the "Morse Parcel" and said deed referred to as the "Morse Deed");

WHEREAS, 202 Washington currently holds title to a certain parcel of land and other improvements thereon in Portland, Cumberland County, State of Maine, said parcel being described in a deed from Kevin D. Kelly and Nancy A. Kelly to Plaintiff, dated September 28, 2007, and recorded in the Cumberland County Registry of Deeds in Book 25509, Page 156 (herein referred to as "202 Washington Parcel" and said deed referred to as the "202 Washington Deed");

WHEREAS, Morse and 202 Washington desire to establish and/or confirm their common boundary in accordance with the "Line of Agreement" as shown on a certain sketch plan attached hereto as **Exhibit A** (hereinafter referred to as the "Plan"), and as more particularly described herein;

WHEREAS, Morse desires to grant certain easements and establish certain negative easements, as more particularly set forth herein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

A. Establishment of Common Boundary:

1. Morse hereby quitclaims and releases to 202 Washington, any and all right, title and interest he may have, by virtue of the Morse Deed, in land lying southeasterly of the following described boundary line (hereinafter referred to as the "Line of Agreement"):

> Beginning on the southwesterly side of Washington Avenue at a ½ inch iron rod to be set with plastic cap marked "Austin 2174" being NORTH 35° WEST as measured along the southwesterly side of Washington Avenue a distance of ONE HUNDRED FEET (100.00) from the southeasterly side of a concrete retaining wall at the division line between 202 Washington, LLC and land now or formerly of Anthony and Mary Pereira, said point of beginning being further described as being SOUTH 33°30'41" EAST a distance of

115.44 FEET from a brass rod found in a street right of way offset granite monument found by the northerly corner of the building located at 218 Washington Avenue;

THENCE, SOUTH 55°00'00" WEST on a bearing 90 degrees from the street line of Washington Avenue a distance of ONE HUNDRED FEET (100.00) to land now or formerly of Faber Anderson Street Co. and a ½ inch iron rod to be set with plastic cap marked "AUSTIN 2174."

2. 202 Washington hereby quitclaims and releases to Morse, any and all right, title and interest it may have, by virtue of the 202 Washington Deed, in land lying northwesterly of the Line of Agreement.

3. The parties desire to, and do hereby, establish and confirm by virtue of this Agreement and the conveyance made herein, that the common boundary line between the Morse Parcel and the 202 Washington Parcel is the Line of Agreement as shown on the Plan and described herein.

4. It is the specific intent of the parties hereto that this document shall have all the force and effect of an exchange of quitclaim release deeds between the parties.

B. Maintenance Easement:

1. Morse hereby grants to 202 Washington, and its successors in title, the following easement:

An appurtenant easement to enter the Morse Parcel with any necessary equipment, and at any reasonable time, as may be necessary for the purpose of construction, examination, maintenance, repair or replacement of a retaining wall to be located on the 202 Washington Parcel.

2. This Maintenance Easement burdens the Morse Parcel and benefits the 202 Washington Parcel. These easement covenants shall run with the land.

3. 202 Washington, and its successors in title, shall restore and/or repair as necessary the surface of the easement parcel described herein to its former condition after exercising the within granted rights.

C. Negative Easement:

1. Morse hereby grants to 202 Washington and its successors in title, and hereby subjects the Morse Parcel, to the following easement:

No buildings or improvements shall be constructed, located or maintained in any area of the Morse Parcel that is more than fifty (50) feet from the Morse Parcel's northeasterly boundary abutting Washington Avenue.

2. This Negative Easement burdens the Morse Parcel and benefits the 202 Washington Parcel. These easement covenants shall run with the land, provided, however, that this Negative Easement as set forth in this paragraph C of this Agreement shall immediately expire twenty-five (25) years from the recording of this Agreement.

D. This Agreement may be signed on any number of identical counterparts with the same binding effect as if the signatures were on one instrument.

Witness our hands and seals on this Boundary Agreement this 25th day of May, 2010.

Witness

202 Washington, LLC:

By: _____
Ronald L. Gan
Its Manager

STATE OF MAINE
Cumberland, ss. 5/28, 2010

Then personally appeared before me the above-named, Ronald L. Gan, ~~Sole Member~~ Manager of 202 Washington, LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the company.

~~Notary~~ Public/Attorney at Law

Witness

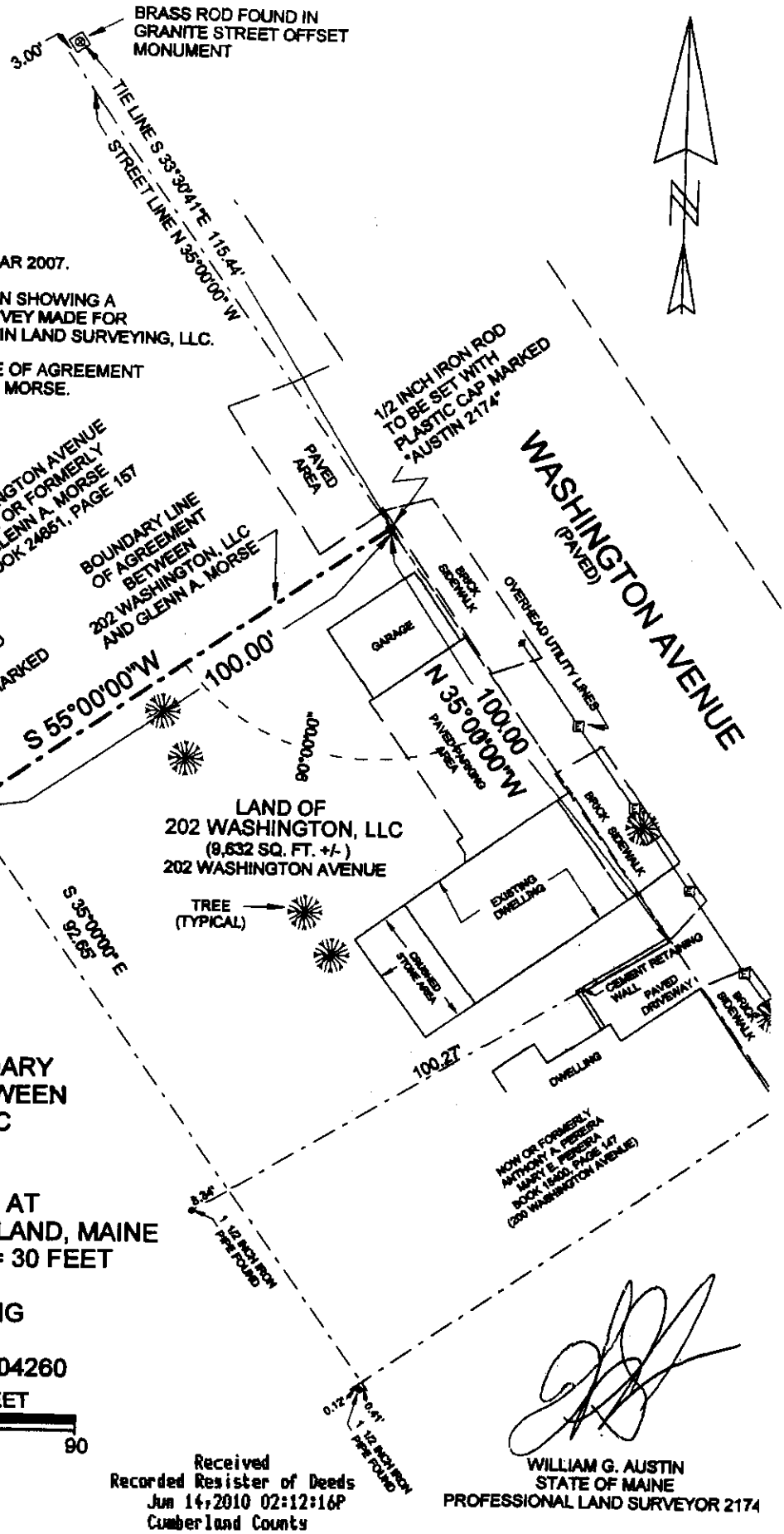
~~Glenn~~ A. Morse

STATE OF MAINE
York, ss. May 25, 2010

Then personally appeared before me the above-named Glenn A. Morse and acknowledged the foregoing instrument to be their free act and deed.

Notary Public/Attorney at Law #2230
NEAL L. WEINSTEIN

EXHIBIT A
To Boundary Agreement
202 Washington, LLC
& Glenn A. Morse



NOTES:

1.) BEARINGS REFER TO MAGNETIC FOR THE YEAR 2007.

2.) THIS PLAN IS BASED ON PLAN ENTITLED "PLAN SHOWING A STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY MADE FOR RONALD GANN", DATED OCTOBER 2007 BY AUSTIN LAND SURVEYING, LLC.

3.) THIS PLAN WAS CREATED TO SHOW THE LINE OF AGREEMENT BETWEEN 202 WASHINGTON, LLC AND GLENN A. MORSE.

PLAN SHOWING A BOUNDARY LINE OF AGREEMENT BETWEEN 202 WASHINGTON , LLC AND GLENN A. MORSE OF PROPERTY LOCATED AT 202 WASHINGTON AVENUE, PORTLAND, MAINE
APRIL 15, 2010 SCALE: 1 INCH = 30 FEET
SURVEYED BY:
AUSTIN LAND SURVEYING
82 ELDERBERRY LANE
NEW GLOUCESTER, MAINE 04260

GRAPHIC SCALE: 1 INCH = 30 FEET

0 30 60 90

Received
Recorded Register of Deeds
Jun 14,2010 02:12:16P
Cumberland County
Pamela E. Lovley

WILLIAM G. AUSTIN
STATE OF MAINE
PROFESSIONAL LAND SURVEYOR 2174

AMENDMENT TO BOUNDARY AGREEMENT

This Amendment to Boundary Agreement is made and entered into on March 29, 2016, by and between **Glenn A. Morse**, an individual residing in Scarborough, Maine (hereinafter referred to as "Morse"), and **202 Washington, LLC**, a Maine limited liability company with a principal place of business located in Portland, Maine (hereinafter referred to as "202 Washington");

WHEREAS, Morse currently holds title to certain real estate located on Washington Avenue in Portland, Maine, said parcel being described in a deed dated December 6, 2006, and recorded in the Cumberland County Registry of Deeds in Book 24651, Page 157 (hereinafter referred to as the "Morse Parcel");

WHEREAS, 202 Washington currently holds title to certain abutting real estate located on Washington Avenue as described in a deed dated September 28, 2007, and recorded in said Registry of Deeds in Book 25509, Page 156 (herein referred to as "202 Washington Parcel");

WHEREAS, Morse and 202 Washington entered into a Boundary Agreement with respect to said abutting parcels of real estate dated May 25, 2010 and recorded in said Registry of Deeds in Book 27839 Page 310 (the "Agreement");

WHEREAS, the parties desire to amend and restate the "Maintenance Easement" portion of the Agreement in accordance with the terms set forth below;

WHEREAS, the Negative Easement contained in the Agreement is reaffirmed and restated -- no building, structure, or improvement of any kind shall be constructed in the area described in Paragraph C(1) of the Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. The "Maintenance Easement" set forth in Paragraph B of the Agreement is hereby amended and restated as follows:

> Morse hereby grants to 202 Washington, and its successors and assigns, a perpetual easement in common with Morse for ingress and egress on foot and with equipment and motor vehicles over a thirty foot (30') wide strip of land running along the southeasterly sideline of the Morse Parcel abutting the 202 Washington Parcel extending from Washington Avenue to the southwesterly or rear line of the Morse Parcel (the "easement area") at reasonable times, as may be necessary for the purpose of constructing, maintaining, examining, repairing, or replacing any retaining wall or building or other structure on the 202 Washington

Parcel. The parties further agree that: (i) no building may be constructed within the easement area; (ii) an access drive may be constructed within the easement area to provide access by foot and vehicle for the benefit of the Morse Parcel and the parcel located at 220 Washington Avenue, and said access drive, or any other building, structure, or improvement, shall not enter the Negative Easement area; and (iii) 202 Washington's use of the easement area shall be carried on so as not to interfere with access over the access drive and so as to reasonably minimize any disturbance to the use and enjoyment of the Morse Parcel.

This easement burdens the Morse Parcel and benefits the 202 Washington Parcel and shall run with the land.

202 Washington, and its successors and assigns, shall restore and/or repair as necessary the easement area described herein to its former condition after exercising the within granted rights.

2. 202 Washington Avenue hereby releases the former Maintenance Easement originally established under the Agreement.

3. Except as set forth above, the Agreement shall remain in full force and effect, and no further revisions of the Agreement, as amended herein, shall be made except with the informed written consent of all parties hereto. Absent such informed written consent, the Agreement shall not be further revised or changed. Morse shall be responsible for recording this Amendment in the Cumberland County Registry of Deeds.

[This space intentionally blank]

IN WITNESS WHEREOF the parties have set their respective hands and seals on March 29, 2016.

Witness

GLENN A. MORSE

STATE OF MAINE
COUNTY OF CUMBERLAND March 29, 2016

Then personally appeared the above named Glenn A. Morse and acknowledged the foregoing instrument to be his free act and deed.

- ME BAR NO. 7541

~~Notary Public~~/Maine Attorney at Law
Name: _____
My commission expires

202 Washington, LLC

Witness

By: _____
Ronald L. Gan, its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND March 29, 2016

Then personally appeared the above named Ronald L. Gan in his said capacity and acknowledged the foregoing instrument to be his free act and deed, and the free act and deed of said limited liability company.

_____ ME BAR NO. 7541
~~Notary Public~~/Maine Attorney at Law
Name: _____
My commission expires

Received
Recorded Register of Deeds
Apr 04,2016 01:51:49P
Cumberland County
Nancy A. Lane

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION C – STATE/FEDERAL APPROVALS

THERE ARE NO STATE OR FEDERAL APPROVALS REQUIRED FOR THIS PROJECT.

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION D – ZONING ASSESSMENT

A ZONING ASSESSMENT IS INCLUDED ON THE PLAT DRAWING, IN THE NOTES.

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION E – EASEMENTS

THERE ARE FOUR EASEMENT AREAS RELATING TO THIS PROJECT –

- A 30 FOOT MAINTENANCE EASEMENT TO 202 WASHINGTON LLC AT THE SOUTH END OF THE SUBJECT PROPERTY.
- A 20 FOOT SEWER LINE EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC TO ANDERSON STREET.
- A PROPOSED 25 FOOT UTLITY EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC.
- A PROPOSED WALL EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC.

ALL OF THESE EASEMENTS ARE SHOWN ON THE PLAT DRAWING.

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION F - WAIVERS

1 . A WAIVER IS REQUESTED ON THE SITE PLAN STANDARD SECTION 14-526(b)2.B(III) AND TECHNICAL MANUAL SECTION 4.6.1 ON STREET TREES. THERE ARE 45 STREET TREES REQUIRED BY THESE STANDARDS – 22 STREET TREES ARE PROPOSED. TO COMPENSATE FOR THE DIFFERENCE, THE APPLICANT SHALL CONTRIBUTE TO THE CITY TREE FUND, AS DETERMINED BY THE PLANNING AUTHORITY.

SACO & BIDDEFORD SAVINGS INSTITUTION

MAILING ADDRESS • 50 Industrial Park Rd, Saco, ME 04072 • 1-877-SACO-BID

December 7, 2016

Mrs. Barbara Barhydt
Portland Planning Staff
Portland City Hall
389 Congress Street
Portland, ME 04101

Dear Mrs. Barhydt:

Saco & Biddeford Savings Institution (SBSI) has provided financing to Mr. Vincent Maietta on various real estate development projects over the last several years. Mr. Maietta is held in high regard by SBSI and is considered a customer in good standing.

I understand that he is working on the possible development of a +/- 45 unit condominium development at 218-220 Washington Avenue. Based on our experience with Mr. Maietta, his experience as a successful developer, and his financial strength, SBSI would be pleased to consider a loan application to participate in the financing of this project.

SBSI reserves the right to perform its due diligence with further assessment of a loan application, budgets, plans, specifications, market analysis, etc. This letter is not intended to be a commitment to lend.

Should you have any questions, please contact me at (207) 602-7652.

Best Regards,

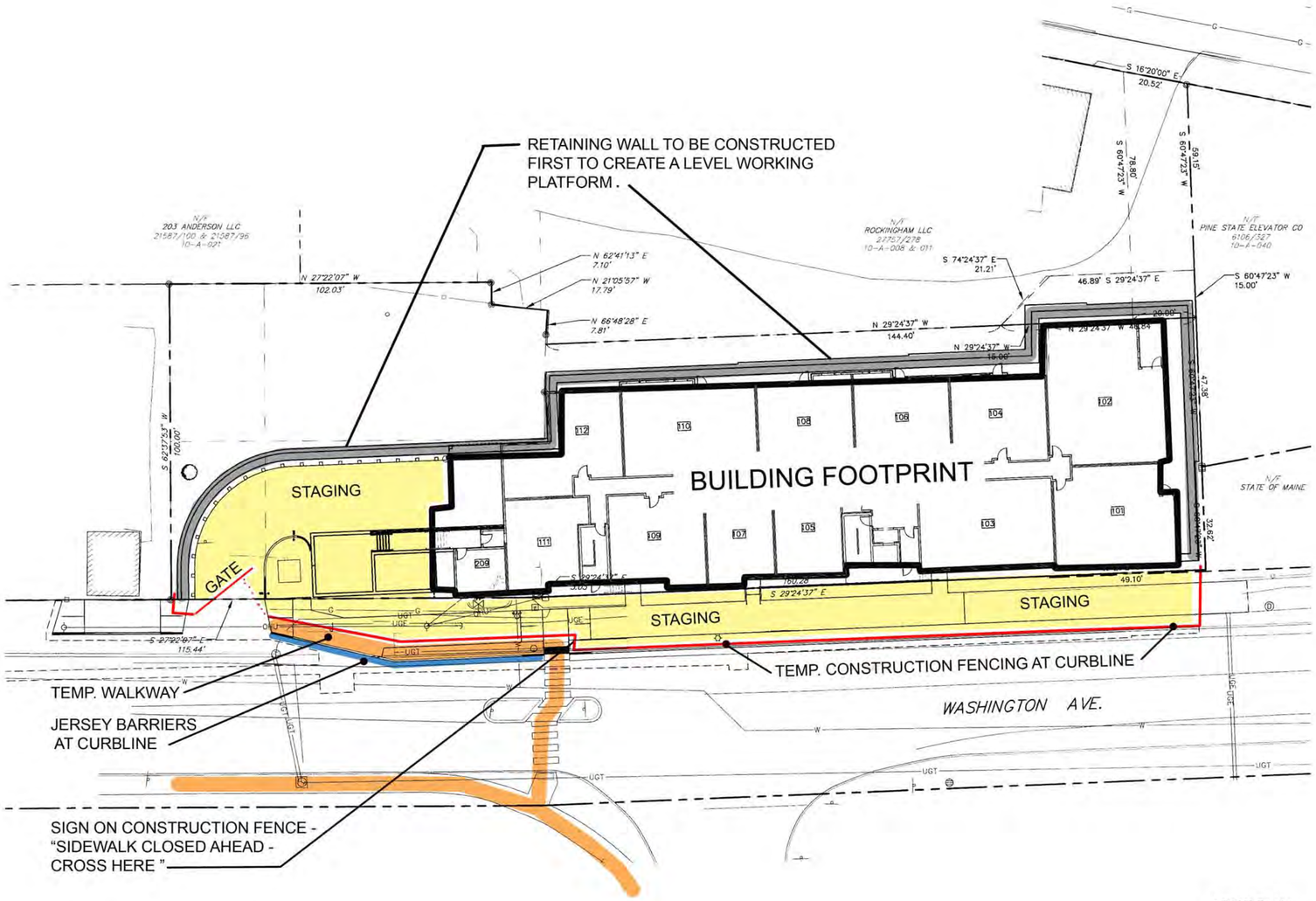
James M. Whelan, Vice President
Commercial Loan Officer
Saco & Biddeford Savings Institution

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION H- BOUNDARY SURVEY

THE BOUNDARY SURVEY HAS BEEN COMPLETED AND IS SUBMITTED AS PLAN SUBMISSION – PLAN 2.

CONDITIONS OF APPROVAL

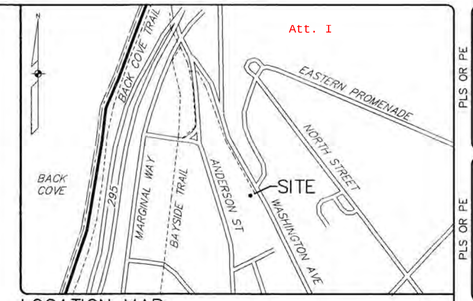
WAIVERS GRANTED



LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- EASEMENT
- MONUMENT
- IRON PIPE/ROD
- C1/L1 CURVE/LINE NO.
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- 120 118 CONTOURS
- G CHAIN LINK FENCE
- STOCKADE FENCE
- RETAINING WALL
- DECIDUOUS TREE
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- W WATER
- WATER SHUT OFF
- S SANITARY SEWER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- SD STORM DRAIN
- DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- TRANSFORMER PAD
- TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE



LOCATION MAP N.T.S.

GENERAL NOTES:

1. THE RECORD OWNERS OF THE PARCELS ARE AS FOLLOWS:
   TAX MAP 10 BLOCK A LOT 15: GLENN MORSE PER DEED BOOK 24651 PAGE 157 WITH REVISIONS IN DEED BOOK 25874 PAGE 165 AND 27839 PAGE 310.
   TAX MAP 10 BLOCK A LOT 10: MORGAN GAVIN LLC PER DEED BOOK 29641 PAGE 338.
   • ALL DEEDS REFERENCED ARE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD)
2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHNICS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
3. PLAN REFERENCES:
   A. STANDARD BOUNDARY SURVEY, AS-BUILT TOPOGRAPHY AND DEED ANALYSIS LOT AT 218 WASHINGTON AVENUE, PORTLAND FOR GLENN MORSE, BY ROSS BOUNDARY SURVEYS, (JOB NO. 20604P), LAST DATED JULY 2013.
   B. WASHINGTON AVENUE SIDE PATH EXISTING SITE CONDITIONS BETWEEN #198 AND INTERSTATE 295 OFF RAMP, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 881/35, LAST DATED OCTOBER 28, 2010.
   C. STREET LINE RETRACEMENT AND EXISTING MONUMENTATION PLAN, ANDERSON STREET, FOX STREET, GOULD STREET & PLOWMAN STREET, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 101'/29, LAST DATED FEBRUARY 27, 2005.
   D. SITE PLAN OF TAX MAP 10 BLOCK A LOT 10, WASHINGTON AVE, PORTLAND MAINE FOR GLENN MORSE, BY STEPHEN SELLECK, JOB NUMBER 2013, LAST DATED FEBRUARY 17, 2013.
   E. BOUNDARY SURVEY AT 207 ANDERSON STREET, FOR ROCKINGHAM LLC, BY OWEN HASKELL, INC. LAST DATED MARCH 25, 2013, AND RECORDED IN CCRD PLAN BOOK 215 PAGE 98.
5. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS AND CHECKED WITH CITY CONTROL POINTS. ELEVATIONS DEPICTED HEREON ARE ON THE CITY OF PORTLAND DATUM BASED UPON 2 BENCHMARKS PROVIDED BY THE CITY. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
6. TOTAL AREA OF SITE IS 28,382 SQUARE FEET.
7. SITE IS LOCATED IN THE B1b ZONE.
8. B1b DIMENSIONAL REQUIREMENTS :

(REQUIRED)	(PROPOSED)
MIN. LOT SIZE - NONE	28,382 SF
MIN LOT AREA PER DU - 435 SF	630 SF
MIN. STREET FRONTAGE - 20 FT	327.85 FT
MIN. LOT WIDTH - NONE	327.85 FT
MAX. FRONT YARD - 10 FT	3 FT
MIN. REAR YARD - NONE	7.5 FT
MIN. SIDE YARD - NONE	7.5 FT
STRUCTURE SETBACKS - N / A	N / A
MAX. STRUCTURE HEIGHT - 45 FT	45 FT
MAX FLOOR AREA - N / A	N / A
MAX. IMPERVIOUS AREA - 90 %	79 %

9. OFF STREET PARKING REQUIRED - 1 SPACE PER UNIT 45 SPACES REQUIRED
   45 SPACES PROPOSED.
10. BICYCLE SPACES REQUIRED - 18 SPACES / 18 SPACES PROPOSED.
11. PLAN DEPICTS A LICENSE AREA TO ALLOW BUILDING FOUNDATIONS WITHIN THE STREET RIGHT OF WAY.

APPROVAL-
CITY OF PORTLAND
PLANNING BOARD

_____ DATE

_____ CHAIRPERSON

STATE OF MAINE
CUMBERLAND COUNTY SS REGISTRY OF DEEDS
RECEIVED _____, 20____
AT ____h _____m _____M. AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST _____ REGISTRAR

PLS OR PE

PROGRESS PRINT

PLS OR PE

NOT FOR CONSTRUCTION

DESIGNED	CHECKED
WTC	WTC

REV	BY	DATE	STATUS
REV:	BY:	DATE:	STATUS:

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

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. Suite 4A South Portland, ME 04106 Tel. 207-200-2100
250 Goddard Rd. Suite 3 Lewiston, ME 04240 Tel. 207-783-5656

CONSTRUCTION MANAGEMENT PLAN
OF:
218 WASHINGTON AVENUE
218 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 EDLERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

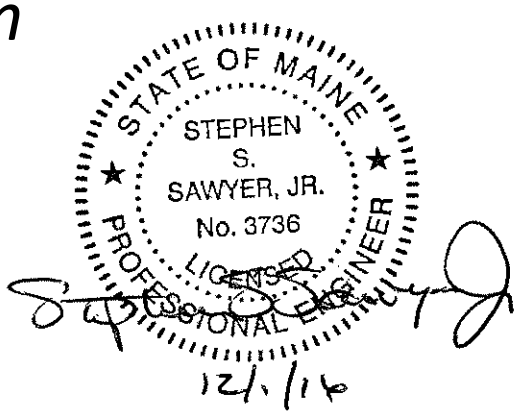
SHEET 1 OF 1

06172SB.dwg, TAB:S3

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Memorandum



06172

To: **Will Conway**

From: **Steve Sawyer**

Date: **December 1st, 2016**

Subject: **Trip Generation for 218 Washington Avenue**
45 Condominiums, Portland

Per your request, we have completed Trip Generation calculations for the proposed condominium project located in Portland at 218 Washington Avenue. To our understanding the proposed building includes parking under the building and forty five condominium residential units located on the upper four floors.

Trip Generation

Using the 9th Edition of ITE's Trip Generation Manual we have estimated the following trip generation for the proposed building and the results are included within Table 1 below. The condominiums are classified as Land Use Code 232 – High-Rise Residential Condominium/Townhouse.

Table 1– Trip Generation
Land Use 232 – High-Rise Residential Condominium/Townhouse
(45 Units)

Time Period	*Trip Generation Rate (trips/ 1 unit)*	*Total Trips*	*Entering*	*Exiting*
AM Peak Hour of Generator	0.34/Unit	15	12	3
PM Peak Hour of Generator	0.38/Unit	17	11	6
Saturday Peak Hour of Generator	0.35/Unit	16	6	10
Sunday Peak Hour of Generator	0.30/Unit	14	7	7

Conclusions

The estimated peak hour trip generation does not trigger the threshold for a MaineDOT Traffic Movement Permit of 100 trips nor meets the 25 trip requirement for a City of Portland Traffic Impact Study. Based upon the capacity of existing streets in the project location, we do not anticipate any adverse traffic impacts. Let me know if you need anything else in this regard.

75 John Roberts Road – Suite 1A, South Portland, ME 04106-6963 • 207.200.2100 • Fax: 207.856.2206

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION K – NATURAL FEATURES

THERE ARE NO SIGNIFICANT NATURAL FEATURES ON THIS SITE .

Att. L

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

STORMWATER MANAGEMENT PLAN

To:

City of Portland

Proposed Condominium Development

218 Washington Avenue
Portland, Maine

Prepared for:
218-220 Washington Avenue, LLC
199 Elderberry Road
South Portland, Maine 04106

Prepared by:
Sebago Technics, Inc.
75 John Roberts Road, Suite 1A
South Portland, Maine 04106

December 2016

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- C. Pre-Development
- D. Post-Development
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Attachments

Attachment A: Basic Standards – Inspection, Maintenance, and Housekeeping Plan
Attachment B: General Standards - Stormwater Quality Calculations
Attachment C: Flooding Standards - HydroCAD Output-Pre-Development & Post Development
Attachment D: Soils Report

06172

STORMWATER & EROSION CONTROL PLAN

218-220 WASHINGTON AVE. CONDOMINIUMS
218 WASHINGTON AVENUE
PORTLAND, MAINE

Executive Summary

On behalf of 218-220 Washington Avenue, LLC, we are pleased to submit this Stormwater Management Plan for the proposed 45-unit residential condominiums at 218 Washington Ave. The applicant intends to remove the existing home and develop the property into a 13,982 s.f. building with associated parking located at the basement level.

The project is subject to the City's Site/Stormwater Standards and is required to provide treatment for both stormwater quantity and quality. The chambers combined with the underdrained subsurface sand filter have been designed to have a treatment volume equal to one inch of runoff times the tributary impervious area and 0.4 inches of runoff times the tributary landscaped area. Additional storage provided above the treatment volume will be utilized for controlling the peak runoff from the site to meet the peak discharge requirement under the City of Portland's Site Plan review.

The project has been designed to provide treatment for 97% of the impervious area and 88% of the developed area. Treatment is achieved utilizing a wetpond located on the southerly side of the site to treat and detain the developed area. Best Management Practices (BMPs) have been designed and sized in accordance with criteria published in Chapter 500 BMP's Technical Design Manual.

06172

STORMWATER & EROSION CONTROL PLAN

218-220 WASHINGTON AVE. CONDOMINIUMS
218 WASHINGTON AVENUE
PORTLAND, MAINE

I. Introduction

This Stormwater Management Plan has been prepared to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan have been designed to best suit the proposed development and to comply with applicable regulatory requirements.

II. Existing Conditions

The property is identified as Lot 10 and 15 on the City of South Portland Tax Map 10 and is located in the Residential District. The proposed 13,982 s.f. building is to be constructed across the street from the intersection of Washington Avenue and Eastern Promenade. The existing single family structure located at 218 Washington Avenue would be demolished to clear the way for the proposed condominiums.

Land Cover: The site is currently developed with an existing 1,844 s.f. building, shed and deck. The vegetation of the property consists of minimal lawn areas and landscaping associated with the house with the majority of the site consisting mostly of mixed vegetated and wooded open space on a steep embankment.

Site Topography: The site significantly decreases in elevation from Washington Avenue down to Anderson Street. The elevation at Washington Ave is around 65 and the elevation at the back (western) property boundary is about 45 averaging a 30% slope across the property.

Surface Water Features: The project site contains multiple subareas where the majority of stormwater runoff from the site flows towards Anderson Street and is directed to existing catch basins and municipal infrastructure. The municipal infrastructure in Washington Ave discharges to Casco Bay. There are no existing wetlands delineated onsite. No other special natural features are known to exist within 500 feet of the project site.

Soils: Soil characteristics were obtained from the Soil Conservation Service (SCS) Medium Intensity Soil Survey of Cumberland County. Soils identified on the site (or within close proximity) are identified below in Table 1. These soil boundaries are identified on the attached watershed maps.

Table 1 – Proximity Soil Types and Characteristics			
Soil Type	Symbol	HSG	K Factor
Hinckley loamy sand (8% to 15% slopes)	HIC	A	0.28
Hinckley loamy sand (15% to 25% slopes)	HID	A	0.28

The K factor is an erodibility index that relates each soil family based on a slight erosion potential of 0.10 to a high erosion potential of 0.64. An index number, greater than 0.32, indicates that a high level of erosion control measures must be taken in order to control erosion of this soil. The Hydrologic Soil Group (HSG) designation is based on a rating of the relative permeability of a soil, with Group "A" being extremely permeable such as coarse sand, to Group "D" having low permeability such as clay.

III. Proposed Development

The proposed 13,982 s.f. building is situated over undeveloped woods and the existing single family home to be demolished. Access to the site is proposed to be located at the existing curb cut off from Washington Avenue where vehicles will proceed down a ramp to the parking deck located at the basement level of the building.

The majority of the stormwater runoff from the proposed development will be collected within the roof drainage leaders connected to catch basins and routed to underground storage chambers for treatment and detention prior to connecting into the City's storm infrastructure in Anderson Street. The development proposes to meet the Maine DEP Chapter 500 General Standards for treatment requirements by collecting stormwater runoff and routing it to a proposed underdrained chamber system which will provide both treatment and detention.

Alterations to Land Cover: Completion of the proposed project will result in required treatment of 17,460 square feet of impervious area. The total impervious area for pre-development conditions is 41.31% of the total area and post-development is increased to 67.37% of the total area.

IV. Downstream Ponds and Waterbodies

The site is tributary to Casco Bay.

V. Regulatory Requirements

A. City of Portland, Maine

The proposed development will require Site & Subdivision Plan approval from the City of Portland and must comply with the performance standards specified in the City's Site Plan Review Ordinance.

B. Maine Department of Environmental Protection (Maine DEP)

The City of Portland has delegated stormwater capacity over MDEP. Based on the amount of newly created non-vegetated area and the watershed which the project is located in, the proposed development shall comply with the Basic Standards and the General Standards as described below. The City also requires Flooding Standards to be met.

Basic Standards: These standards include various erosion and sedimentation controls, inspection and maintenance procedures, and general housekeeping requirements. These performance standards are addressed in the Erosion and Sedimentation Control Plan within the enclosed plan set and in the Inspection, Maintenance, and Housekeeping Plan attached. Please refer to these documents for more detailed information.

General Standards: These standards require that a minimum of 95% of all new non-vegetated areas and at least 80% of all new developed areas are designed to be treated by stormwater Best Management Practices (BMPs). The site is also listed as an impaired stream and is required to meet those standards.

General Standard BMPs have been defined by the MDEP and are described thoroughly in their publication "Stormwater Management for Maine: Best Management Practices Manual". Volume III of this manual contains additional information and sizing requirements for the treatment measures proposed for the proposed development.

Flooding Standards: These standards require detention of stormwater to meet pre-development conditions peak flow analysis.

VI. Stormwater Management BMPs

In order to meet the applicable regulations, the project will utilize a StormTech chamber system with an underdrain to treat and detain runoff from the majority of the developed area.

A. StormTech Chamber System & Underdrained Subsurface Sand Filter

The chambers combined with the underdrained subsurface sand filter have been designed to have a treatment volume equal to one inch of runoff times the tributary impervious area and 0.4 inches of runoff times the tributary landscaped area. Additional storage provided above the treatment volume will be utilized for controlling the peak runoff from the site to meet the peak discharge requirement under the City of Portland's Site Plan review.

The areas treated by this BMP are summarized in the stormwater treatment calculations attached in Attachment 1: *Stormwater Quality Calculations* and are shown on the Watershed/Treatment Plan attached to this application.

VII. Peak Flow Analysis

This section has been prepared to discuss the proposed modifications to peak flow rates as a result of the development.

A. Modeling Technique

In order to evaluate drainage characteristics in pre and post-development conditions, a quantitative analysis was performed to determine peak rates of runoff for the 2, 10, and 25-year storm events. Runoff calculations were performed following the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds, Technical Release #55" and HydroCAD Stormwater Modeling System Software. A 24-hour, SCS Type III storm distribution for the 2, 10, and 25-year storm frequencies were used for analysis.

The current 24-hour rainfall values utilized in the hydrologic model for Cumberland County are as follows.

Table 2 - Storm Frequency Precipitation (in./24 hr)	
2-year	3.10
10-year	4.60
25-year	5.80

B. Drainage Characteristics (Pre and Post-Development Watershed Delineation)

One watershed point of analysis (POA1) was established to evaluate the pre-development and post-development peak runoff conditions for compliance with the City Stormwater Compliance.

Point of analysis one (POA1) is located at the southern corner of the property where stormwater runoff collects and enters into an existing catch basin connected to the City's stormdrain infrastructure.

C. Pre-Development

Pre-development is defined by three (3) subareas (1S, 2S & 3S). Subarea 1S includes undeveloped wooded area; Subarea 2S includes the existing residence, driveway, outbuilding and wooded and lawn areas; Subarea 3S includes the offsite developed adjacent to Anderson Street.

D. Post-Development

Post-development is defined by eight (8) subareas (1S through 8S). Subarea 1S, 2S & 3S includes undeveloped wooded area and the offsite developed adjacent to Anderson Street as it did in pre-development but with reduced areas. Subareas 4S, 5S, 6S & 7S contain the impervious areas created from the development. Subarea 8S contains the landscape area between Washington Avenue and the proposed building.

E. Comparison

The watershed areas and times of concentration of the post-development watersheds vary from the existing conditions based on the proposed site development and grading. Table 3 summarizes the results of the hydrologic analysis of the project under pre-development and post-development conditions.

Table 3 – Stormwater Runoff Summary Table
Pre-Development vs. Post-Development

Study Point	Total Watershed Area (Ac)		Percent Impervious		Peak Rates of Runoff (cfs)					
					2-year		10-year		25-year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
POA1	1.59	1.59	41.31%	67.37%	1.88	1.99	3.37	3.23	4.74	4.31

As depicted in the above table, post-development peak runoff rates at the study point will be at or below pre-development levels for the 10-year and 25-year storm events with the exception of the 2-year event where the 5% increase is due to the subsurface underdrained sand filter which cannot be eliminated.

To achieve the required water quality treatment, an underdrained subsurface sand filter is proposed to treat a vast majority of the development. The proposed filter has been designed and sized in accordance with the current Maine DEP Stormwater Best Management Practices handbook.

The provided treatment percentages are indicated in the below table:

Table 4 – General Standards Treatment Level

Developed				Non-Vegetated			
Created Developed (ac)	Treated Developed (ac)	Required % Treated	Provided % Treatment	Created Impervious (ac)	Treated Impervious (ac)	Required % Treated	Provided % Treatment
0.457	0.401	80%	88%	0.457	0.441	95%	97%

From the table above, the proposed project has been designed to exceed the required treatment levels with the applied credit for existing impervious area. Water Quality Volumes and BMP sizing volume calculations are attached to this report.

IX. Conclusions

The proposed development has been designed to meet the requirements of the City of Portland's Site Plan Ordinance. The stormwater management system will treat 97% of the created impervious surface and 88% of the total developed area. Almost all the peak flow rates have been controlled to below or equal to the pre-development rates. Additionally, erosion and sedimentation controls have been outlined to prevent unreasonable impacts on the site and to the surrounding environment.

Prepared by,

SEBAGO TECHNICS, INC.

Keith D. Gray, P.E.
Project Engineer

KDG/WTC:

Attachment A

Inspection, Maintenance, and Housekeeping

Exhibit 1

06172

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

Proposed Development at 218 Washington Ave.
Portland, ME

Introduction

Upon completion of the proposed development, the owner, 218-220 Washington Avenue, LLC will be the responsible party for maintaining the stormwater management system. The owner shall be responsible for maintaining the stormwater management system. The responsible party shall schedule maintenance of all stormwater management structures, the establishment of any contract services required to implement the program, and the keeping of records and maintenance logbook.

Records of all inspections and maintenance work accomplished must be kept on file and retained for a minimum 5-year time span. The maintenance logbook will be made available to the Maine Department of Environmental Protection (MDEP) and the City of Portland upon request. At a minimum, the appropriate and relevant activities for each of the stormwater management systems will be performed on the prescribed schedule.

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in the Inspection, Maintenance, and Housekeeping Plan is provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional details on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the MDEP.

During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control,

including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven (7) calendar days and prior to any storm event (rainfall).

3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

   The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three (3) years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

   A. <u>Sediment Barriers:</u>

   - Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
   - If the fabric on silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
   - Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
   - Filter berms shall be reshaped as needed.
   - Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

   B. <u>Riprap Materials:</u>

   - Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. Temporary Storm Drain Inlet Protection:

- The inlet protection structure shall be inspected before each rain event and repaired as necessary.
- Sediment shall be removed and the storm drain sediment barrier restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap.
- Structures shall be removed upon permanent stabilization of the tributary area.
- Upon removal of the structure, all accumulated sediments downstream of the structure shall be cleaned from the storm drain system.

E. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

F. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

G. Stabilized Drainage Swales:

- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

A. Spill Prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

B. Groundwater Protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

C. Fugitive Sediment and Dust: Actions must be taken to insure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

D. Debris and Other Materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

E. Trench or Foundation Dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

After Construction

1. **Inspection:** After construction, the owner or operator shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.

2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective actions to the Department of Public Services (DPS). The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.

   A. Vegetated Areas:
      - Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.
      - Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

   B. Ditches, Swales and Other Open Channels:
      - Inspect ditches, swales, and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to the flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow and repair any erosion of the ditch lining.
      - Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
      - Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
      - Replace riprap in areas where any underlying filter fabric or underlying gravel is showing through the stone or where stones have dislodged.

   C. Winter Sanding:
      - Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
      - Accumulations on pavement may be removed by pavement sweeping.
      - Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

D. Bioretention Cell:
   - Inspect the site monthly for the first few months after construction. Then inspections can occur on an Semi-annual basis, preferably after rain events when clogging will be obvious.
   - Make any repairs necessary to ensure the measure is operating properly.
   - Regular maintenance is necessary to remove surface sediment, trash, debris, and leaf litter.
   - Outlets and chambers need to be cleaned/repaired when drawdown times in the filter exceed 36 hours.
   - In certain cases, layers of sand may need to be replaced every 3 to 5 years.
   - The soil filter should be inspected after every major storm in the first year to be sure it is functioning properly and that the plants are established. Thereafter, the filter 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.

E. Stormtech Chambers/Isolator Row:
   - Stormtech Chambers shall be inspected and maintained according to manufacturer's recommendations.
   - Recommended maintenance includes, but not limited to, visual inspection of accumulated sediment within isolator row and jet-vac flushing when required.

F. Catch Basins:
   - Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
   - Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

G. Culverts:
   - Inspect culverts in the spring, in the late fall, and after heavy rains to remove any obstructions to flow.
   - Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit.
   - Inspect and repair any erosion damage at the culvert's inlet and outlet.
   - Inspect embankment for erosion, settling, and structural failure.

3. **Annual Report:** The owner or operator or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification that the person has inspected the BMPs and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective actions taken. Annual reporting shall be submitted to the City of South Portland Director of Water Resource Protection.

4. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

Attachments

Attachment 1 – Sample Stormwater Inspection and Maintenance Form

Sample Stormwater Inspection and Maintenance Form

Proposed Development; 218 Washington Ave. Portland, ME
Attachment 1

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for the Proposed Development. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five (5) years and shall be available for review. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

Item	Maintenance Required & Frequency	Date Completed	Maintenance Personnel	Comments
Ditches and Swales	Inspect after major rainfall event producing greater than 3" of rain in 2 hours.			
	Repair erosion or damage immediately.			
Catch Basins and Culverts	Remove accumulated sediment and debris			
	Sump depth			
Vegetated Areas	Inspect Slopes			
	Replant Bare Areas			
	Check after Major Storms			
Winter Sanding	Clean annually (Spring)			
	Remove sand and sediment from roadway shoulders			
Bioretention Cell	Inspect system thru inspection ports following major storm event			
	Remove sediment/debris from inlet structure annually			
Stormtech	Follow manufacturer's recommendations			

Attachment B

Stormwater Quality Calculations

TABLE 2: GENERAL STANDARD CALCULATIONS
218 Washington Avenue
JOB #06172

SUBAREA ID	TOTAL AREA	TOTAL IMPERVIOUS AREA	IMPERVIOUS AREA REQUIRING TREATMENT	IMPERVIOUS AREA RECEIVING TREATMENT	NEW LANDSCAPED AREA	TOTAL DEVELOPED AREA	DEVELOPED AREA REQUIRING TREATMENT	DEVELOPED AREA RECEIVING TREATMENT	TREATMENT METHOD
	(S.F.)	(S.F.)	(S.F.)	(S.F.)		(S.F.)	(S.F.)	(S.F.)	ID (PRIMARY)
1	5926	1458	1458	0	0	1458	1458	0	NONE
2	18465	985	985	0	0	985	985	0	NONE
3	25411	25411	0	0	0	25411	0	0	NONE
4	6785	6785	6785	6785	0	6785	6785	6785	SSF #1
5	7524	7524	7524	7524	0	7524	7524	7524	SSF #1
6	2604	2604	2604	2604	0	2604	2604	2604	SSF #1
7	547	547	547	547	0	547	547	547	SSF #1
8	2116	428	0	0	1688	2116	0	0	NONE
EXISTING HOUSE	2911	2911	0	1747	0	0	0	0	CREDIT
TOTAL (AC.)	1.660	1.117	0.457	0.441	0.039	1.089	0.457	0.401	

*IMPERVIOUS AND DEVELOPED AREAS TO BE TREATED ARE ASSOCIATED WITH THE DEVELOPMENT. OFFSITE AREAS NOT INCLUDED IN THE SITE TREATMENT CALCULATION
*THE EXISTING HOUSE TO BE DEMOLISHED IS NOT REQUIRED TO BE TREATED AS IT WAS CONSTRUCTED PRIOR TO STORMWATER LAW. THE EXISTING HOUSE AREA EQUALS A TOTAL OF 2,911 S.F. TIMES 60% ALLOWED FOR CREDIT EQUALS 1,747 S.F. CREDIT TOWARDS PROPOSED IMPERVIOUS

TOTAL IMPERVIOUS AREA REQUIRING TREATMENT (SF)	19,903
TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (SF)	19,207
% OF IMPERVIOUS AREA RECEIVING TREATMENT (SF)	97%

TOTAL DEVELOPED AREA REQ. TREATMENT (SF)	19,903
TOTAL DEVELOPED AREA RECEIVING TREATMENT (SF)	17,460
% OF DEVELOPED AREA RECEIVING TREATMENT (SF)	88%

SEBAGO TECHNICS, INC.
75 John Roberts Road Suite 1A
South Portland, Maine 04106
Tel. (207) 200-2100

JOB	06172 - 218 Washington Ave.		
SHEET NO.	1	OF	1
CALCULATED BY	KDG	DATE	11/29/2016
FILE NAME	06172_Subsurface Sand Filter BMP.xls	PRNT DATE	12/15/2016

UNDERDRAINED SUBSURFACE SAND FILTER

Task: Calculate water quality volume per MDEP chapter 500 regulations

References
1. Maine DEP Chapter 500, Section 4.B.(2)(b)
   a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area"
2. Maine DEP Best Management Practices Stormwater Manual, Section 7.3.2
   a. "detain runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area"
   b. "surface area of the sand filter bed and chamber system must be at least equal to 5% of the impervious area draining to it and 2% of the landscaped area."
   c. "treatment flow rate for the Stormtech Isolcator Row is the projected one year peak flow rate for the drainage area feeding the Isolator Row"

Flow rates:

SC-310	0.10	cfs/chamber
SC-740	0.20	cfs/chamber
DC-780	0.20	cfs/chamber
MC-3500	0.30	cfs/chamber

Tributary to Subsurface Sand Filter #1

Landscaped Area	0	SF
Impervious Area	17,460	SF

Minimum Surface Area for sand filter and chamber system

Required (2% X Landscaped + 5%" X Impervious)

Total Landscaped Area	0	SF	Area	0	SF
Total Impervious Area	17,460	SF	Area	873	SF
Required Minimum Surface Area				873	SF
Provided Surface Area				1,541	SF

Channel Protection Volume (CPV)

Required (0.4" X Landscaped + 1.0" X Impervious)

Landscaped Area	0	SF	Volume	0	
Impervious Area	17,460	SF	Volume	1,455	
CPV Required				1,455	CF (0.033 AF)
Provided CPV				1,489	CF (Elevation 52.06)

Sediment Pre-Treatment

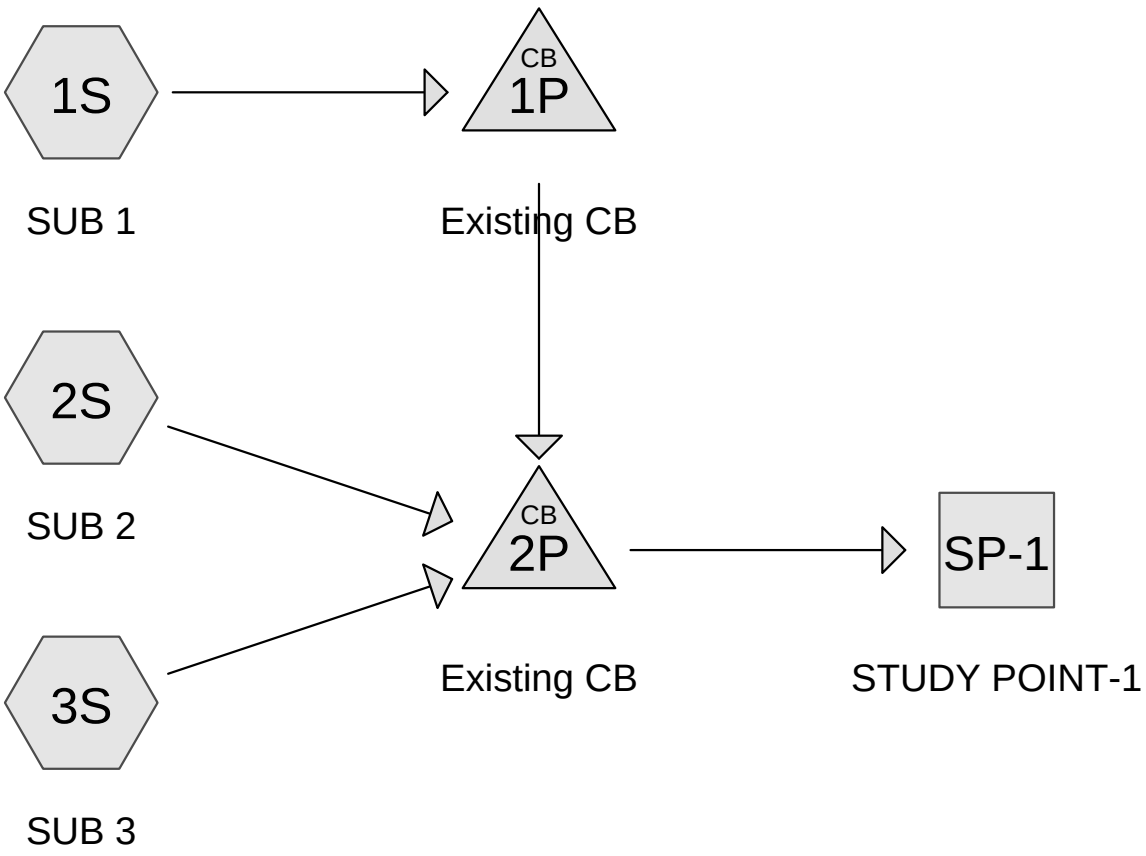
Per Reference 2.c above

One year flow rate output from HydroCAD:	1.04	cfs
Iso Row sizing for: **MC-3500**	**0.3**	cfs
Total number of Isolator Row Chambers required:	4	

Attachment C

HydroCAD Output

Pre Development



Subcat Reach Pond Link

Routing Diagram for 06172 Pre Development
Prepared by Sebago Technics, Inc., Printed 12/15/2016
HydroCAD® 10.00-18 s/n 01856 © 2016 HydroCAD Software Solutions LLC

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=0.28"
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.05 cfs 402 cf

Subcatchment 2S: SUB 2 Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=0.44"
Flow Length=338' Tc=12.0 min CN=62 Runoff=0.16 cfs 972 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=2.87"
Flow Length=338' Tc=5.0 min CN=98 Runoff=1.82 cfs 6,073 cf

Reach SP-1: STUDY POINT-1 Inflow=1.88 cfs 7,447 cf
Outflow=1.88 cfs 7,447 cf

Pond 1P: Existing CB Peak Elev=12.78' Inflow=0.05 cfs 402 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.05 cfs 402 cf

Pond 2P: Existing CB Peak Elev=12.78' Inflow=1.88 cfs 7,447 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=1.88 cfs 7,447 cf

Total Runoff Area = 69,378 sf Runoff Volume = 7,447 cf Average Runoff Depth = 1.29"
58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.05 cfs @ 12.31 hrs, Volume= 402 cf, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
17,396	57	Woods/grass comb., Poor, HSG A
17,396		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	95	0.4000	0.25		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.2	73	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
7.0	309	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 0.16 cfs @ 12.23 hrs, Volume= 972 cf, Depth= 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
23,325	57	Woods/grass comb., Poor, HSG A
3,246	98	Paved parking, HSG A
26,571	62	Weighted Average
23,325		87.78% Pervious Area
3,246		12.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 1.82 cfs @ 12.07 hrs, Volume= 6,073 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 1.29" for 2-YR event
Inflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf
Outflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 0.28" for 2-YR event
Inflow = 0.05 cfs @ 12.31 hrs, Volume= 402 cf
Outflow = 0.05 cfs @ 12.31 hrs, Volume= 402 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.05 cfs @ 12.31 hrs, Volume= 402 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.78' @ 12.09 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.05 cfs @ 12.31 hrs HW=12.67' TW=12.48' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.05 cfs @ 0.89 fps)

Summary for Pond 2P: Existing CB

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 1.29" for 2-YR event
Inflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf
Outflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.78' @ 12.07 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.00'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.87 cfs @ 12.07 hrs HW=12.78' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.87 cfs @ 3.93 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.32 cfs 1,303 cf

Subcatchment 2S: SUB 2 Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=1.20"
Flow Length=338' Tc=12.0 min CN=62 Runoff=0.62 cfs 2,653 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=4.36"
Flow Length=338' Tc=5.0 min CN=98 Runoff=2.72 cfs 9,241 cf

Reach SP-1: STUDY POINT-1 Inflow=3.37 cfs 13,196 cf
Outflow=3.37 cfs 13,196 cf

Pond 1P: Existing CB Peak Elev=13.40' Inflow=0.32 cfs 1,303 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.32 cfs 1,303 cf

Pond 2P: Existing CB Peak Elev=13.38' Inflow=3.37 cfs 13,196 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=3.37 cfs 13,196 cf

Total Runoff Area = 69,378 sf Runoff Volume = 13,196 cf Average Runoff Depth = 2.28"
58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
17,396	57	Woods/grass comb., Poor, HSG A
17,396		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	95	0.4000	0.25		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.2	73	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
7.0	309	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 0.62 cfs @ 12.18 hrs, Volume= 2,653 cf, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
23,325	57	Woods/grass comb., Poor, HSG A
3,246	98	Paved parking, HSG A
26,571	62	Weighted Average
23,325		87.78% Pervious Area
3,246		12.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 2.72 cfs @ 12.07 hrs, Volume= 9,241 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 2.28" for 10-YR event
Inflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf
Outflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 0.90" for 10-YR event
Inflow = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf
Outflow = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.40' @ 12.09 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.51 cfs @ 12.12 hrs HW=13.25' TW=13.17' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.51 cfs @ 1.13 fps)

Summary for Pond 2P: Existing CB

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 2.28" for 10-YR event
Inflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf
Outflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.38' @ 12.08 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.00'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.37 cfs @ 12.08 hrs HW=13.38' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.37 cfs @ 4.29 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=1.56"
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.64 cfs 2,256 cf

Subcatchment 2S: SUB 2 Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=1.95"
Flow Length=338' Tc=12.0 min CN=62 Runoff=1.09 cfs 4,329 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=5.56"
Flow Length=338' Tc=5.0 min CN=98 Runoff=3.43 cfs 11,778 cf

Reach SP-1: STUDY POINT-1 Inflow=4.74 cfs 18,362 cf
Outflow=4.74 cfs 18,362 cf

Pond 1P: Existing CB Peak Elev=14.28' Inflow=0.64 cfs 2,256 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.64 cfs 2,256 cf

Pond 2P: Existing CB Peak Elev=14.24' Inflow=4.74 cfs 18,362 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=4.74 cfs 18,362 cf

Total Runoff Area = 69,378 sf Runoff Volume = 18,362 cf Average Runoff Depth = 3.18"
58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf, Depth= 1.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
17,396	57	Woods/grass comb., Poor, HSG A
17,396		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	95	0.4000	0.25		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.2	73	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
7.0	309	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 1.09 cfs @ 12.18 hrs, Volume= 4,329 cf, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
23,325	57	Woods/grass comb., Poor, HSG A
3,246	98	Paved parking, HSG A
26,571	62	Weighted Average
23,325		87.78% Pervious Area
3,246		12.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 3.43 cfs @ 12.07 hrs, Volume= 11,778 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 3.18" for 25-YR event
Inflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf
Outflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 1.56" for 25-YR event
Inflow = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf
Outflow = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 14.28' @ 12.09 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.05 cfs @ 12.11 hrs HW=14.22' TW=14.09' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.05 cfs @ 1.33 fps)

Summary for Pond 2P: Existing CB

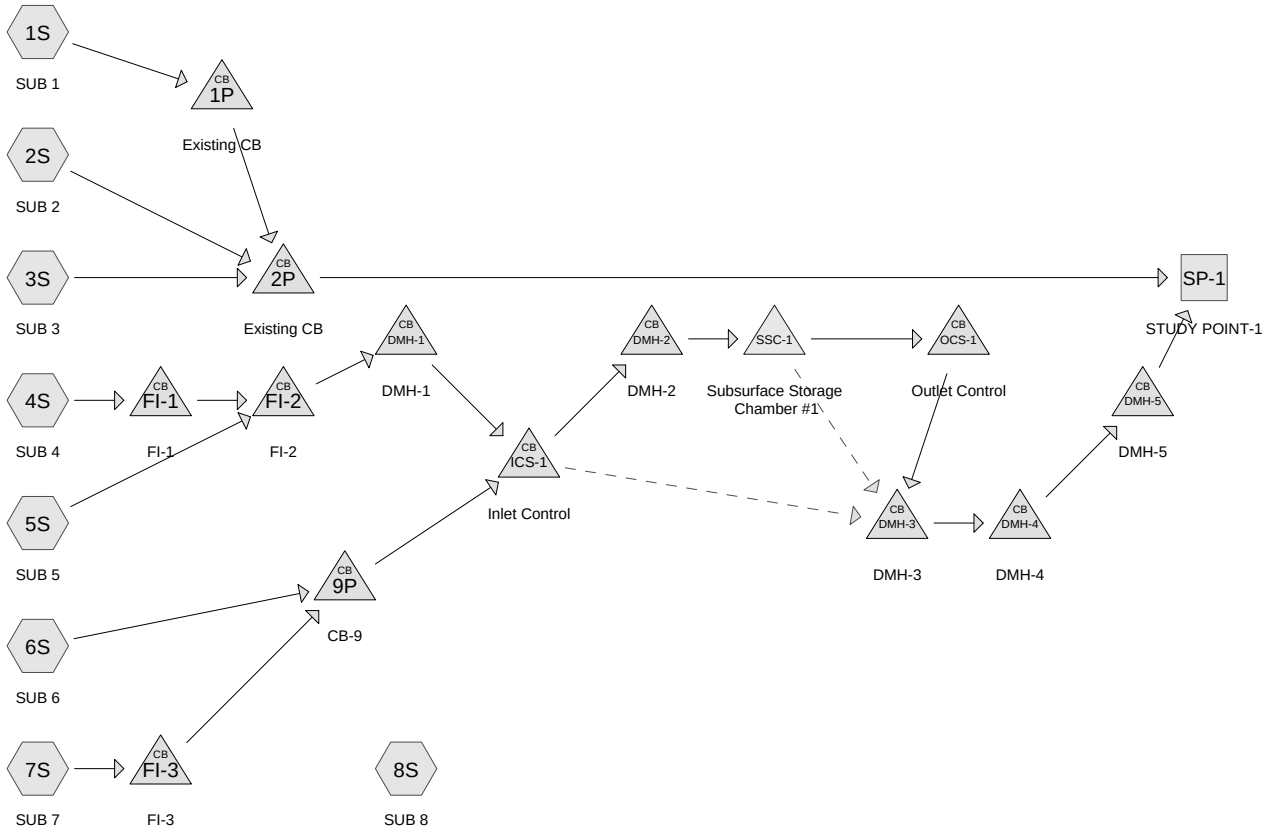
Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 3.18" for 25-YR event
Inflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf
Outflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 14.24' @ 12.08 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.00'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.74 cfs @ 12.08 hrs HW=14.23' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.74 cfs @ 6.03 fps)

Post Development



Subcat Reach Pond Link

Routing Diagram for 06172 Post Development
Prepared by Sebago Technics, Inc., Printed 12/15/2016
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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=0.64"
Flow Length=333' Tc=5.0 min CN=67 Runoff=0.09 cfs 314 cf

Subcatchment 2S: SUB 2 Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=0.34"
Flow Length=338' Tc=12.0 min CN=59 Runoff=0.07 cfs 520 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=2.87"
Flow Length=338' Tc=5.0 min CN=98 Runoff=1.82 cfs 6,073 cf

Subcatchment 4S: SUB 4 Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.49 cfs 1,622 cf

Subcatchment 5S: SUB 5 Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.54 cfs 1,798 cf

Subcatchment 6S: SUB 6 Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.19 cfs 622 cf

Subcatchment 7S: SUB 7 Runoff Area=547 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=98 Runoff=0.04 cfs 131 cf

Subcatchment 8S: SUB 8 Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=1.26"
Tc=5.0 min CN=79 Runoff=0.07 cfs 223 cf

Reach SP-1: STUDY POINT-1 Inflow=1.99 cfs 11,080 cf
Outflow=1.99 cfs 11,080 cf

Pond 1P: Existing CB Peak Elev=12.77' Inflow=0.09 cfs 314 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.09 cfs 314 cf

Pond 2P: Existing CB Peak Elev=12.68' Inflow=1.91 cfs 6,907 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=1.91 cfs 6,907 cf

Pond 9P: CB-9 Peak Elev=53.23' Inflow=0.23 cfs 753 cf
12.0" Round Culvert n=0.012 L=44.0' S=0.0382 '/' Outflow=0.23 cfs 753 cf

Pond DMH-1: DMH-1 Peak Elev=53.02' Inflow=1.02 cfs 3,420 cf
12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.02 cfs 3,420 cf

Pond DMH-2: DMH-2 Peak Elev=52.15' Inflow=1.25 cfs 4,173 cf
15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=1.25 cfs 4,173 cf

Pond DMH-3: DMH-3 Peak Elev=47.13' Inflow=0.09 cfs 4,173 cf
15.0" Round Culvert n=0.012 L=30.0' S=0.1210 '/' Outflow=0.09 cfs 4,173 cf

Pond DMH-4: DMH-4 Peak Elev=24.11' Inflow=0.09 cfs 4,173 cf
15.0" Round Culvert n=0.012 L=83.0' S=0.1202 '/' Outflow=0.09 cfs 4,173 cf

Pond DMH-5: DMH-5 Peak Elev=14.13' Inflow=0.09 cfs 4,173 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.1170 '/' Outflow=0.09 cfs 4,173 cf

Pond FI-1: FI-1 Peak Elev=55.74' Inflow=0.49 cfs 1,622 cf
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Outflow=0.49 cfs 1,622 cf

Pond FI-2: FI-2 Peak Elev=55.19' Inflow=1.02 cfs 3,420 cf
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=1.02 cfs 3,420 cf

Pond FI-3: FI-3 Peak Elev=53.89' Inflow=0.04 cfs 131 cf
12.0" Round Culvert n=0.012 L=40.0' S=0.0200 '/' Outflow=0.04 cfs 131 cf

Pond ICS-1: Inlet Control Peak Elev=52.15' Inflow=1.25 cfs 4,173 cf
Primary=1.25 cfs 4,173 cf Secondary=0.00 cfs 0 cf Outflow=1.25 cfs 4,173 cf

Pond OCS-1: Outlet Control Peak Elev=54.50' Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Pond SSC-1: Subsurface Storage Chamber #1 Peak Elev=52.15' Storage=1,597 cf Inflow=1.25 cfs 4,173 cf
Primary=0.00 cfs 0 cf Secondary=0.09 cfs 4,173 cf Outflow=0.09 cfs 4,173 cf

Total Runoff Area = 69,378 sf Runoff Volume = 11,302 cf Average Runoff Depth = 1.95"
34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 314 cf, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
4,468	57	Woods/grass comb., Poor, HSG A
1,458	98	Paved parking, HSG C
5,926	67	Weighted Average
4,468		75.40% Pervious Area
1,458		24.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	35	0.5000	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	157	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
1.4					**Direct Entry,**
5.0	333	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 0.07 cfs @ 12.33 hrs, Volume= 520 cf, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
17,480	57	Woods/grass comb., Poor, HSG A
985	98	Paved parking, HSG A
18,465	59	Weighted Average
17,480		94.67% Pervious Area
985		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 1.82 cfs @ 12.07 hrs, Volume= 6,073 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Subcatchment 4S: SUB 4

Runoff = 0.49 cfs @ 12.07 hrs, Volume= 1,622 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
6,785	98	Paved parking, HSG A
6,785		100.00% Impervious Area

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

Summary for Subcatchment 5S: SUB 5

Runoff = 0.54 cfs @ 12.07 hrs, Volume= 1,798 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
7,524	98	Paved parking, HSG A
7,524		100.00% Impervious Area

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

Summary for Subcatchment 6S: SUB 6

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 622 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
2,604	98	Paved parking, HSG A
2,604		100.00% Impervious Area

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

Summary for Subcatchment 7S: SUB 7

Runoff = 0.04 cfs @ 12.07 hrs, Volume= 131 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
547	98	Paved parking, HSG A
547		100.00% Impervious Area

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

Summary for Subcatchment 8S: SUB 8

Runoff = 0.07 cfs @ 12.08 hrs, Volume= 223 cf, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
428	98	Paved parking, HSG A
1,688	74	>75% Grass cover, Good, HSG C
2,116	79	Weighted Average
1,688		79.77% Pervious Area
428		20.23% Impervious Area

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

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 67,262 sf, 67.37% Impervious, Inflow Depth = 1.98" for 2-YR event
Inflow = 1.99 cfs @ 12.07 hrs, Volume= 11,080 cf
Outflow = 1.99 cfs @ 12.07 hrs, Volume= 11,080 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 5,926 sf, 24.60% Impervious, Inflow Depth = 0.64" for 2-YR event
Inflow = 0.09 cfs @ 12.09 hrs, Volume= 314 cf
Outflow = 0.09 cfs @ 12.09 hrs, Volume= 314 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 12.09 hrs, Volume= 314 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.77' @ 12.08 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 11.80' S= 0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.09 cfs @ 12.09 hrs HW=12.76' TW=12.66' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.09 cfs @ 0.84 fps)

Summary for Pond 2P: Existing CB

Inflow Area = 49,802 sf, 55.93% Impervious, Inflow Depth = 1.66" for 2-YR event
Inflow = 1.91 cfs @ 12.07 hrs, Volume= 6,907 cf
Outflow = 1.91 cfs @ 12.07 hrs, Volume= 6,907 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.91 cfs @ 12.07 hrs, Volume= 6,907 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.68' @ 12.07 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.80'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.80' / 11.50' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.91 cfs @ 12.07 hrs HW=12.68' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.91 cfs @ 3.47 fps)

Summary for Pond 9P: CB-9

Inflow Area = 3,151 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.23 cfs @ 12.07 hrs, Volume= 753 cf
Outflow = 0.23 cfs @ 12.07 hrs, Volume= 753 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.23 cfs @ 12.07 hrs, Volume= 753 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.23' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.00'	**12.0" Round Culvert** L= 44.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.00' / 51.32' S= 0.0382 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.23 cfs @ 12.07 hrs HW=53.23' TW=52.07' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.23 cfs @ 1.64 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf
Outflow = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.02' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	52.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 52.50' / 51.32' S= 0.0737 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.02 cfs @ 12.07 hrs HW=53.02' TW=52.07' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.02 cfs @ 2.46 fps)

Summary for Pond DMH-2: DMH-2

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf
Outflow = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.15' @ 13.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**15.0" Round Culvert** L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.28' / 51.25' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.25 cfs @ 12.07 hrs HW=51.94' TW=51.49' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.25 cfs @ 2.76 fps)

Summary for Pond DMH-3: DMH-3

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.09 cfs @ 11.62 hrs, Volume= 4,173 cf
Outflow = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf, Atten= 0%, Lag= 0.6 min
Primary = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.13' @ 11.63 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	**15.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.00' / 43.37' S= 0.1210 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 11.63 hrs HW=47.13' TW=24.11' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-4: DMH-4

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf
Outflow = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 24.11' @ 11.63 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	23.98'	**15.0" Round Culvert**

L= 83.0' CPP, square edge headwall, Ke= 0.500
Inlet / Outlet Invert= 23.98' / 14.00' S= 0.1202 '/' Cc= 0.900
n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 11.63 hrs HW=24.11' TW=14.13' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-5: DMH-5

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf
Outflow = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 11.63 hrs, Volume= 4,173 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 14.13' @ 11.63 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	14.00'	**15.0" Round Culvert**
			L= 56.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 14.00' / 7.45' S= 0.1170 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 11.63 hrs HW=14.13' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond FI-1: FI-1

Inflow Area = 6,785 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.49 cfs @ 12.07 hrs, Volume= 1,622 cf
Outflow = 0.49 cfs @ 12.07 hrs, Volume= 1,622 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.49 cfs @ 12.07 hrs, Volume= 1,622 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.74' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	55.30'	**10.0" Round Culvert**
			L= 97.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 55.30' / 54.52' S= 0.0080 '/' Cc= 0.900
			n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=0.48 cfs @ 12.07 hrs HW=55.74' TW=55.19' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.48 cfs @ 2.39 fps)

Summary for Pond FI-2: FI-2

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf
Outflow = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.02 cfs @ 12.07 hrs, Volume= 3,420 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.19' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.52'	**10.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.52' / 54.41' S= 0.0079 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=1.02 cfs @ 12.07 hrs HW=55.19' TW=53.02' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.02 cfs @ 2.99 fps)

Summary for Pond FI-3: FI-3

Inflow Area = 547 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 0.04 cfs @ 12.07 hrs, Volume= 131 cf
Outflow = 0.04 cfs @ 12.07 hrs, Volume= 131 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.04 cfs @ 12.07 hrs, Volume= 131 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.89' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.80'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.80' / 53.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.04 cfs @ 12.07 hrs HW=53.89' TW=53.23' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.04 cfs @ 1.04 fps)

Summary for Pond ICS-1: Inlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf
Outflow = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 52.15' @ 13.25 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.32'	**15.0" Round Culvert** L= 4.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 51.28' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	51.32'	**12.0" Round By-pass Pipe** L= 129.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 47.00' S= 0.0335 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=1.23 cfs @ 12.07 hrs HW=52.07' TW=51.94' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 1.23 cfs @ 2.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.32' TW=47.00' (Dynamic Tailwater)
└─**2=By-pass Pipe** (Controls 0.00 cfs)
└─**3=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond OCS-1: Outlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 0.00" for 2-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.50' @ 0.51 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.67'	**15.0" Round Outlet Pipe** L= 9.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.67' / 47.00' S= 0.0744 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=47.67' TW=47.00' (Dynamic Tailwater)
└─**1=Outlet Pipe** (Controls 0.00 cfs)
└─**2=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond SSC-1: Subsurface Storage Chamber #1

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 2.87" for 2-YR event
Inflow = 1.25 cfs @ 12.07 hrs, Volume= 4,173 cf
Outflow = 0.09 cfs @ 11.62 hrs, Volume= 4,173 cf, Atten= 93%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.09 cfs @ 11.62 hrs, Volume= 4,173 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 52.15' @ 13.24 hrs Surf.Area= 1,541 sf Storage= 1,597 cf
Flood Elev= 61.25' Surf.Area= 1,541 sf Storage= 5,142 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 138.8 min (894.9 - 756.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	50.50'	2,224 cf	**15.58'W x 98.91'L x 5.50'H Field A** 8,477 cf Overall - 2,918 cf Embedded = 5,559 cf x 40.0% Voids
#2A	51.25'	2,918 cf	**ADS_StormTech MC-3500 d +Cap** x 26 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 2 Rows of 13 Chambers Cap Storage= +14.9 cf x 2 x 2 rows = 59.6 cf
		5,142 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Secondary	47.67'	**6.0" Vert. 6" Underdrain** C= 0.600
#2	Device 1	50.50'	**2.410 in/hr Filtration to Underdrains over Surface area**
#3	Primary	51.25'	**15.0" Round Chamber Outlet Pipe** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.25' / 51.16' S= 0.0180 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=50.50' TW=47.67' (Dynamic Tailwater)
└─**3=Chamber Outlet Pipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.09 cfs @ 11.62 hrs HW=50.61' TW=47.13' (Dynamic Tailwater)
└─**1=6" Underdrain** (Passes 0.09 cfs of 1.55 cfs potential flow)
└─**2=Filtration to Underdrains** (Exfiltration Controls 0.09 cfs)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=1.53"
Flow Length=333' Tc=5.0 min CN=67 Runoff=0.24 cfs 756 cf

Subcatchment 2S: SUB 2 Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=1.01"
Flow Length=338' Tc=12.0 min CN=59 Runoff=0.34 cfs 1,561 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=4.36"
Flow Length=338' Tc=5.0 min CN=98 Runoff=2.72 cfs 9,241 cf

Subcatchment 4S: SUB 4 Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.73 cfs 2,467 cf

Subcatchment 5S: SUB 5 Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.80 cfs 2,736 cf

Subcatchment 6S: SUB 6 Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.28 cfs 947 cf

Subcatchment 7S: SUB 7 Runoff Area=547 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.06 cfs 199 cf

Subcatchment 8S: SUB 8 Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=2.46"
Tc=5.0 min CN=79 Runoff=0.15 cfs 434 cf

Reach SP-1: STUDY POINT-1 Inflow=3.23 cfs 17,907 cf
Outflow=3.23 cfs 17,907 cf

Pond 1P: Existing CB Peak Elev=13.28' Inflow=0.24 cfs 756 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.24 cfs 756 cf

Pond 2P: Existing CB Peak Elev=13.26' Inflow=3.15 cfs 11,558 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=3.15 cfs 11,558 cf

Pond 9P: CB-9 Peak Elev=53.29' Inflow=0.34 cfs 1,146 cf
12.0" Round Culvert n=0.012 L=44.0' S=0.0382 '/' Outflow=0.34 cfs 1,146 cf

Pond DMH-1: DMH-1 Peak Elev=53.23' Inflow=1.53 cfs 5,204 cf
12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.53 cfs 5,204 cf

Pond DMH-2: DMH-2 Peak Elev=53.23' Inflow=1.87 cfs 6,348 cf
15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=1.87 cfs 6,348 cf

Pond DMH-3: DMH-3 Peak Elev=47.13' Inflow=0.09 cfs 6,349 cf
15.0" Round Culvert n=0.012 L=30.0' S=0.1210 '/' Outflow=0.09 cfs 6,349 cf

Pond DMH-4: DMH-4 Peak Elev=24.11' Inflow=0.09 cfs 6,349 cf
15.0" Round Culvert n=0.012 L=83.0' S=0.1202 '/' Outflow=0.09 cfs 6,349 cf

Pond DMH-5: DMH-5 Peak Elev=14.13' Inflow=0.09 cfs 6,349 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.1170 '/' Outflow=0.09 cfs 6,349 cf

Pond FI-1: FI-1 Peak Elev=55.89' Inflow=0.73 cfs 2,467 cf
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Outflow=0.73 cfs 2,467 cf

Pond FI-2: FI-2 Peak Elev=55.40' Inflow=1.53 cfs 5,204 cf
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=1.53 cfs 5,204 cf

Pond FI-3: FI-3 Peak Elev=53.92' Inflow=0.06 cfs 199 cf
12.0" Round Culvert n=0.012 L=40.0' S=0.0200 '/' Outflow=0.06 cfs 199 cf

Pond ICS-1: Inlet Control Peak Elev=53.23' Inflow=1.87 cfs 6,349 cf
Primary=1.87 cfs 6,348 cf Secondary=0.00 cfs 0 cf Outflow=1.87 cfs 6,348 cf

Pond OCS-1: Outlet Control Peak Elev=54.50' Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Pond SSC-1: Subsurface Storage Chamber #1 Peak Elev=53.23' Storage=2,884 cf Inflow=1.87 cfs 6,348 cf
Primary=0.00 cfs 0 cf Secondary=0.09 cfs 6,349 cf Outflow=0.09 cfs 6,349 cf

Total Runoff Area = 69,378 sf Runoff Volume = 18,341 cf Average Runoff Depth = 3.17"
34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.24 cfs @ 12.08 hrs, Volume= 756 cf, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
4,468	57	Woods/grass comb., Poor, HSG A
1,458	98	Paved parking, HSG C
5,926	67	Weighted Average
4,468		75.40% Pervious Area
1,458		24.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	35	0.5000	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	157	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
1.4					**Direct Entry,**
5.0	333	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 0.34 cfs @ 12.19 hrs, Volume= 1,561 cf, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
17,480	57	Woods/grass comb., Poor, HSG A
985	98	Paved parking, HSG A
18,465	59	Weighted Average
17,480		94.67% Pervious Area
985		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 2.72 cfs @ 12.07 hrs, Volume= 9,241 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Subcatchment 4S: SUB 4

Runoff = 0.73 cfs @ 12.07 hrs, Volume= 2,467 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
6,785	98	Paved parking, HSG A
6,785		100.00% Impervious Area

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

Summary for Subcatchment 5S: SUB 5

Runoff = 0.80 cfs @ 12.07 hrs, Volume= 2,736 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
7,524	98	Paved parking, HSG A
7,524		100.00% Impervious Area

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

Summary for Subcatchment 6S: SUB 6

Runoff = 0.28 cfs @ 12.07 hrs, Volume= 947 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
2,604	98	Paved parking, HSG A
2,604		100.00% Impervious Area

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

Summary for Subcatchment 7S: SUB 7

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 199 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
547	98	Paved parking, HSG A
547		100.00% Impervious Area

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

Summary for Subcatchment 8S: SUB 8

Runoff = 0.15 cfs @ 12.08 hrs, Volume= 434 cf, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
428	98	Paved parking, HSG A
1,688	74	>75% Grass cover, Good, HSG C
2,116	79	Weighted Average
1,688		79.77% Pervious Area
428		20.23% Impervious Area

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

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 67,262 sf, 67.37% Impervious, Inflow Depth = 3.19" for 10-YR event
Inflow = 3.23 cfs @ 12.07 hrs, Volume= 17,907 cf
Outflow = 3.23 cfs @ 12.07 hrs, Volume= 17,907 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 5,926 sf, 24.60% Impervious, Inflow Depth = 1.53" for 10-YR event
Inflow = 0.24 cfs @ 12.08 hrs, Volume= 756 cf
Outflow = 0.24 cfs @ 12.08 hrs, Volume= 756 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.24 cfs @ 12.08 hrs, Volume= 756 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.28' @ 12.08 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 11.80' S= 0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.27 cfs @ 12.08 hrs HW=13.28' TW=13.26' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.27 cfs @ 0.57 fps)

Summary for Pond 2P: Existing CB

Inflow Area = 49,802 sf, 55.93% Impervious, Inflow Depth = 2.78" for 10-YR event
Inflow = 3.15 cfs @ 12.07 hrs, Volume= 11,558 cf
Outflow = 3.15 cfs @ 12.07 hrs, Volume= 11,558 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.15 cfs @ 12.07 hrs, Volume= 11,558 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.26' @ 12.07 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.80'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.80' / 11.50' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.14 cfs @ 12.07 hrs HW=13.26' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 3.14 cfs @ 4.00 fps)

Summary for Pond 9P: CB-9

Inflow Area = 3,151 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.34 cfs @ 12.07 hrs, Volume= 1,146 cf
Outflow = 0.34 cfs @ 12.07 hrs, Volume= 1,146 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.34 cfs @ 12.07 hrs, Volume= 1,146 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.29' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.00'	**12.0" Round Culvert** L= 44.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.00' / 51.32' S= 0.0382 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.34 cfs @ 12.07 hrs HW=53.29' TW=52.27' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.34 cfs @ 1.82 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf
Outflow = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.23' @ 14.33 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	52.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 52.50' / 51.32' S= 0.0737 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.53 cfs @ 12.07 hrs HW=53.16' TW=52.27' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.53 cfs @ 2.77 fps)

Summary for Pond DMH-2: DMH-2

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf
Outflow = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.23' @ 14.31 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**15.0" Round Culvert** L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.28' / 51.25' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.63 cfs @ 12.07 hrs HW=52.14' TW=51.98' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.63 cfs @ 2.53 fps)

Summary for Pond DMH-3: DMH-3

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.09 cfs @ 10.95 hrs, Volume= 6,349 cf
Outflow = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf, Atten= 0%, Lag= 0.6 min
Primary = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.13' @ 10.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	**15.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.00' / 43.37' S= 0.1210 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.96 hrs HW=47.13' TW=24.11' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-4: DMH-4

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf
Outflow = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 24.11' @ 10.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	23.98'	**15.0" Round Culvert**

L= 83.0' CPP, square edge headwall, Ke= 0.500
Inlet / Outlet Invert= 23.98' / 14.00' S= 0.1202 '/' Cc= 0.900
n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.96 hrs HW=24.11' TW=14.13' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-5: DMH-5

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf
Outflow = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 10.96 hrs, Volume= 6,349 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 14.13' @ 10.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	14.00'	**15.0" Round Culvert**
			L= 56.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 14.00' / 7.45' S= 0.1170 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.96 hrs HW=14.13' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond FI-1: FI-1

Inflow Area = 6,785 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.73 cfs @ 12.07 hrs, Volume= 2,467 cf
Outflow = 0.73 cfs @ 12.07 hrs, Volume= 2,467 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.73 cfs @ 12.07 hrs, Volume= 2,467 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.89' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	55.30'	**10.0" Round Culvert**
			L= 97.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 55.30' / 54.52' S= 0.0080 '/' Cc= 0.900
			n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=0.72 cfs @ 12.07 hrs HW=55.89' TW=55.40' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.72 cfs @ 2.46 fps)

Summary for Pond FI-2: FI-2

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf
Outflow = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.53 cfs @ 12.07 hrs, Volume= 5,204 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.40' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.52'	**10.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.52' / 54.41' S= 0.0079 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=1.53 cfs @ 12.07 hrs HW=55.40' TW=53.16' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.53 cfs @ 3.31 fps)

Summary for Pond FI-3: FI-3

Inflow Area = 547 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 0.06 cfs @ 12.07 hrs, Volume= 199 cf
Outflow = 0.06 cfs @ 12.07 hrs, Volume= 199 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.06 cfs @ 12.07 hrs, Volume= 199 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.92' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.80'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.80' / 53.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.06 cfs @ 12.07 hrs HW=53.92' TW=53.29' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.06 cfs @ 1.16 fps)

Summary for Pond ICS-1: Inlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 1.87 cfs @ 12.07 hrs, Volume= 6,349 cf
Outflow = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 53.23' @ 14.32 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.32'	**15.0" Round Culvert** L= 4.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 51.28' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	51.32'	**12.0" Round By-pass Pipe** L= 129.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 47.00' S= 0.0335 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=1.67 cfs @ 12.07 hrs HW=52.27' TW=52.14' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 1.67 cfs @ 2.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.32' TW=47.00' (Dynamic Tailwater)
└─**2=By-pass Pipe** (Controls 0.00 cfs)
└─**3=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond OCS-1: Outlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 0.00" for 10-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.50' @ 0.51 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.67'	**15.0" Round Outlet Pipe** L= 9.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.67' / 47.00' S= 0.0744 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=47.67' TW=47.00' (Dynamic Tailwater)
└─**1=Outlet Pipe** (Controls 0.00 cfs)
└─**2=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond SSC-1: Subsurface Storage Chamber #1

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 4.36" for 10-YR event
Inflow = 1.87 cfs @ 12.07 hrs, Volume= 6,348 cf
Outflow = 0.09 cfs @ 10.95 hrs, Volume= 6,349 cf, Atten= 95%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.09 cfs @ 10.95 hrs, Volume= 6,349 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 53.23' @ 14.31 hrs Surf.Area= 1,541 sf Storage= 2,884 cf
Flood Elev= 61.25' Surf.Area= 1,541 sf Storage= 5,142 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 274.0 min (1,022.5 - 748.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	50.50'	2,224 cf	**15.58'W x 98.91'L x 5.50'H Field A** 8,477 cf Overall - 2,918 cf Embedded = 5,559 cf x 40.0% Voids
#2A	51.25'	2,918 cf	**ADS_StormTech MC-3500 d +Cap** x 26 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 2 Rows of 13 Chambers Cap Storage= +14.9 cf x 2 x 2 rows = 59.6 cf
		5,142 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Secondary	47.67'	**6.0" Vert. 6" Underdrain** C= 0.600
#2	Device 1	50.50'	**2.410 in/hr Filtration to Underdrains over Surface area**
#3	Primary	51.25'	**15.0" Round Chamber Outlet Pipe** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.25' / 51.16' S= 0.0180 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=50.50' TW=47.67' (Dynamic Tailwater)
└─**3=Chamber Outlet Pipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.09 cfs @ 10.95 hrs HW=50.61' TW=47.13' (Dynamic Tailwater)
└─**1=6" Underdrain** (Passes 0.09 cfs of 1.55 cfs potential flow)
└─**2=Filtration to Underdrains** (Exfiltration Controls 0.09 cfs)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SUB 1 Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=2.38"
Flow Length=333' Tc=5.0 min CN=67 Runoff=0.39 cfs 1,175 cf

Subcatchment 2S: SUB 2 Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=1.71"
Flow Length=338' Tc=12.0 min CN=59 Runoff=0.64 cfs 2,635 cf

Subcatchment 3S: SUB 3 Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=5.56"
Flow Length=338' Tc=5.0 min CN=98 Runoff=3.43 cfs 11,778 cf

Subcatchment 4S: SUB 4 Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.92 cfs 3,145 cf

Subcatchment 5S: SUB 5 Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=1.02 cfs 3,487 cf

Subcatchment 6S: SUB 6 Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.35 cfs 1,207 cf

Subcatchment 7S: SUB 7 Runoff Area=547 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.07 cfs 254 cf

Subcatchment 8S: SUB 8 Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=3.50"
Tc=5.0 min CN=79 Runoff=0.21 cfs 617 cf

Reach SP-1: STUDY POINT-1 Inflow=4.31 cfs 23,679 cf
Outflow=4.31 cfs 23,679 cf

Pond 1P: Existing CB Peak Elev=13.89' Inflow=0.39 cfs 1,175 cf
12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.39 cfs 1,176 cf

Pond 2P: Existing CB Peak Elev=13.88' Inflow=4.22 cfs 15,589 cf
12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=4.22 cfs 15,589 cf

Pond 9P: CB-9 Peak Elev=54.38' Inflow=0.43 cfs 1,460 cf
12.0" Round Culvert n=0.012 L=44.0' S=0.0382 '/' Outflow=0.43 cfs 1,460 cf

Pond DMH-1: DMH-1 Peak Elev=54.38' Inflow=1.93 cfs 6,632 cf
12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.93 cfs 6,632 cf

Pond DMH-2: DMH-2 Peak Elev=54.38' Inflow=2.36 cfs 8,090 cf
15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=2.36 cfs 8,090 cf

Pond DMH-3: DMH-3 Peak Elev=47.13' Inflow=0.09 cfs 8,091 cf
15.0" Round Culvert n=0.012 L=30.0' S=0.1210 '/' Outflow=0.09 cfs 8,091 cf

Pond DMH-4: DMH-4 Peak Elev=24.11' Inflow=0.09 cfs 8,091 cf
15.0" Round Culvert n=0.012 L=83.0' S=0.1202 '/' Outflow=0.09 cfs 8,091 cf

Pond DMH-5: DMH-5 Peak Elev=14.13' Inflow=0.09 cfs 8,091 cf
15.0" Round Culvert n=0.012 L=56.0' S=0.1170 '/' Outflow=0.09 cfs 8,091 cf

Pond FI-1: FI-1 Peak Elev=56.05' Inflow=0.92 cfs 3,145 cf
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Outflow=0.92 cfs 3,145 cf

Pond FI-2: FI-2 Peak Elev=55.65' Inflow=1.93 cfs 6,632 cf
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=1.93 cfs 6,632 cf

Pond FI-3: FI-3 Peak Elev=54.38' Inflow=0.07 cfs 254 cf
12.0" Round Culvert n=0.012 L=40.0' S=0.0200 '/' Outflow=0.07 cfs 254 cf

Pond ICS-1: Inlet Control Peak Elev=54.38' Inflow=2.36 cfs 8,093 cf
Primary=2.36 cfs 8,090 cf Secondary=0.00 cfs 0 cf Outflow=2.36 cfs 8,090 cf

Pond OCS-1: Outlet Control Peak Elev=54.50' Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Pond SSC-1: Subsurface Storage Chamber #1 Peak Elev=54.38' Storage=4,074 cf Inflow=2.36 cfs 8,090 cf
Primary=0.00 cfs 0 cf Secondary=0.09 cfs 8,091 cf Outflow=0.09 cfs 8,091 cf

Total Runoff Area = 69,378 sf Runoff Volume = 24,299 cf Average Runoff Depth = 4.20"
34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf

Summary for Subcatchment 1S: SUB 1

Runoff = 0.39 cfs @ 12.08 hrs, Volume= 1,175 cf, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
4,468	57	Woods/grass comb., Poor, HSG A
1,458	98	Paved parking, HSG C
5,926	67	Weighted Average
4,468		75.40% Pervious Area
1,458		24.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	35	0.5000	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	157	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.74	14.80	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 '/' Top.W=11.50' n= 0.013 Asphalt, smooth
1.4					**Direct Entry,**
5.0	333	Total			

Summary for Subcatchment 2S: SUB 2

Runoff = 0.64 cfs @ 12.18 hrs, Volume= 2,635 cf, Depth= 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
17,480	57	Woods/grass comb., Poor, HSG A
985	98	Paved parking, HSG A
18,465	59	Weighted Average
17,480		94.67% Pervious Area
985		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	150	0.2300	0.22		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
12.0	338	Total			

Summary for Subcatchment 3S: SUB 3

Runoff = 3.43 cfs @ 12.07 hrs, Volume= 11,778 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
25,411	98	Paved parking, HSG A
25,411		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	150	0.0400	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.10"
0.1	47	0.1200	7.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	141	0.0100	4.68	20.46	**Trap/Vee/Rect Channel Flow,** Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 '/' Top.W=16.50' n= 0.013 Asphalt, smooth
3.1					**Direct Entry,**
5.0	338	Total			

Summary for Subcatchment 4S: SUB 4

Runoff = 0.92 cfs @ 12.07 hrs, Volume= 3,145 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
6,785	98	Paved parking, HSG A
6,785		100.00% Impervious Area

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

Summary for Subcatchment 5S: SUB 5

Runoff = 1.02 cfs @ 12.07 hrs, Volume= 3,487 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
7,524	98	Paved parking, HSG A
7,524		100.00% Impervious Area

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

Summary for Subcatchment 6S: SUB 6

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,207 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
2,604	98	Paved parking, HSG A
2,604		100.00% Impervious Area

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

Summary for Subcatchment 7S: SUB 7

Runoff = 0.07 cfs @ 12.07 hrs, Volume= 254 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
547	98	Paved parking, HSG A
547		100.00% Impervious Area

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

Summary for Subcatchment 8S: SUB 8

Runoff = 0.21 cfs @ 12.07 hrs, Volume= 617 cf, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
428	98	Paved parking, HSG A
1,688	74	>75% Grass cover, Good, HSG C
2,116	79	Weighted Average
1,688		79.77% Pervious Area
428		20.23% Impervious Area

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

Summary for Reach SP-1: STUDY POINT-1

Inflow Area = 67,262 sf, 67.37% Impervious, Inflow Depth = 4.22" for 25-YR event
Inflow = 4.31 cfs @ 12.08 hrs, Volume= 23,679 cf
Outflow = 4.31 cfs @ 12.08 hrs, Volume= 23,679 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Existing CB

Inflow Area = 5,926 sf, 24.60% Impervious, Inflow Depth = 2.38" for 25-YR event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 1,175 cf
Outflow = 0.39 cfs @ 12.08 hrs, Volume= 1,176 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.39 cfs @ 12.08 hrs, Volume= 1,176 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.89' @ 12.09 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.50'	**12.0" Round Culvert** L= 93.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.50' / 11.80' S= 0.0075 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.25 cfs @ 12.08 hrs HW=13.88' TW=13.87' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.25 cfs @ 0.31 fps)

Summary for Pond 2P: Existing CB

Inflow Area = 49,802 sf, 55.93% Impervious, Inflow Depth = 3.76" for 25-YR event
Inflow = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf
Outflow = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 13.88' @ 12.08 hrs
Flood Elev= 59.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.80'	**12.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.80' / 11.50' S= 0.0060 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.21 cfs @ 12.08 hrs HW=13.87' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 4.21 cfs @ 5.37 fps)

Summary for Pond 9P: CB-9

Inflow Area = 3,151 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.43 cfs @ 12.07 hrs, Volume= 1,460 cf
Outflow = 0.43 cfs @ 12.07 hrs, Volume= 1,460 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 12.07 hrs, Volume= 1,460 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 15.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.00'	**12.0" Round Culvert** L= 44.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.00' / 51.32' S= 0.0382 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.43 cfs @ 12.07 hrs HW=53.32' TW=52.64' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.43 cfs @ 1.94 fps)

Summary for Pond DMH-1: DMH-1

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf
Outflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 15.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	52.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 52.50' / 51.32' S= 0.0737 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.93 cfs @ 12.07 hrs HW=53.27' TW=52.64' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.93 cfs @ 2.98 fps)

Summary for Pond DMH-2: DMH-2

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf
Outflow = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 15.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	51.28'	**15.0" Round Culvert** L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.28' / 51.25' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.80 cfs @ 12.07 hrs HW=52.55' TW=52.45' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.80 cfs @ 1.47 fps)

Summary for Pond DMH-3: DMH-3

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.09 cfs @ 10.28 hrs, Volume= 8,091 cf
Outflow = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf, Atten= 0%, Lag= 0.6 min
Primary = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 47.13' @ 10.29 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	**15.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.00' / 43.37' S= 0.1210 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.29 hrs HW=47.13' TW=24.11' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-4: DMH-4

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf
Outflow = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 24.11' @ 10.29 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	23.98'	**15.0" Round Culvert**

L= 83.0' CPP, square edge headwall, Ke= 0.500
Inlet / Outlet Invert= 23.98' / 14.00' S= 0.1202 '/' Cc= 0.900
n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.29 hrs HW=24.11' TW=14.13' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond DMH-5: DMH-5

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf
Outflow = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 10.29 hrs, Volume= 8,091 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 14.13' @ 10.29 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	14.00'	**15.0" Round Culvert**
			L= 56.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 14.00' / 7.45' S= 0.1170 '/' Cc= 0.900
			n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.09 cfs @ 10.29 hrs HW=14.13' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.09 cfs @ 1.24 fps)

Summary for Pond FI-1: FI-1

Inflow Area = 6,785 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.92 cfs @ 12.07 hrs, Volume= 3,145 cf
Outflow = 0.92 cfs @ 12.07 hrs, Volume= 3,145 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.92 cfs @ 12.07 hrs, Volume= 3,145 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 56.05' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	55.30'	**10.0" Round Culvert**
			L= 97.0' CPP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 55.30' / 54.52' S= 0.0080 '/' Cc= 0.900
			n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=0.91 cfs @ 12.07 hrs HW=56.04' TW=55.65' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.91 cfs @ 2.34 fps)

Summary for Pond FI-2: FI-2

Inflow Area = 14,309 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf
Outflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf, Atten= 0%, Lag= 0.0 min
Primary = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 55.65' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	54.52'	**10.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.52' / 54.41' S= 0.0079 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf

Primary OutFlow Max=1.93 cfs @ 12.07 hrs HW=55.65' TW=53.27' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.93 cfs @ 3.55 fps)

Summary for Pond FI-3: FI-3

Inflow Area = 547 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 0.07 cfs @ 12.07 hrs, Volume= 254 cf
Outflow = 0.07 cfs @ 12.07 hrs, Volume= 254 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.07 cfs @ 12.07 hrs, Volume= 254 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 15.19 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	53.80'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.80' / 53.00' S= 0.0200 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.07 cfs @ 12.07 hrs HW=53.93' TW=53.32' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.07 cfs @ 1.23 fps)

Summary for Pond ICS-1: Inlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf
Outflow = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.38' @ 15.16 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	51.32'	**15.0" Round Culvert** L= 4.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 51.28' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Secondary	51.32'	**12.0" Round By-pass Pipe** L= 129.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.32' / 47.00' S= 0.0335 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=1.82 cfs @ 12.07 hrs HW=52.64' TW=52.55' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.82 cfs @ 1.49 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.32' TW=47.00' (Dynamic Tailwater)
└─**2=By-pass Pipe** (Controls 0.00 cfs)
└─**3=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond OCS-1: Outlet Control

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 0.00" for 25-YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 54.50' @ 0.51 hrs
Flood Elev= 61.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	47.67'	**15.0" Round Outlet Pipe** L= 9.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 47.67' / 47.00' S= 0.0744 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#2	Device 1	54.50'	**6.0' long Overflow Weir** 2 End Contraction(s)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=47.67' TW=47.00' (Dynamic Tailwater)
└─**1=Outlet Pipe** (Controls 0.00 cfs)
└─**2=Overflow Weir** (Controls 0.00 cfs)

Summary for Pond SSC-1: Subsurface Storage Chamber #1

Inflow Area = 17,460 sf,100.00% Impervious, Inflow Depth = 5.56" for 25-YR event
Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,090 cf
Outflow = 0.09 cfs @ 10.28 hrs, Volume= 8,091 cf, Atten= 96%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.09 cfs @ 10.28 hrs, Volume= 8,091 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.38' @ 15.14 hrs Surf.Area= 1,541 sf Storage= 4,074 cf
Flood Elev= 61.25' Surf.Area= 1,541 sf Storage= 5,142 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 395.3 min (1,139.8 - 744.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	50.50'	2,224 cf	**15.58'W x 98.91'L x 5.50'H Field A** 8,477 cf Overall - 2,918 cf Embedded = 5,559 cf x 40.0% Voids
#2A	51.25'	2,918 cf	**ADS_StormTech MC-3500 d +Cap** x 26 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 2 Rows of 13 Chambers Cap Storage= +14.9 cf x 2 x 2 rows = 59.6 cf
		5,142 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Secondary	47.67'	**6.0" Vert. 6" Underdrain** C= 0.600
#2	Device 1	50.50'	**2.410 in/hr Filtration to Underdrains over Surface area**
#3	Primary	51.25'	**15.0" Round Chamber Outlet Pipe** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 51.25' / 51.16' S= 0.0180 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

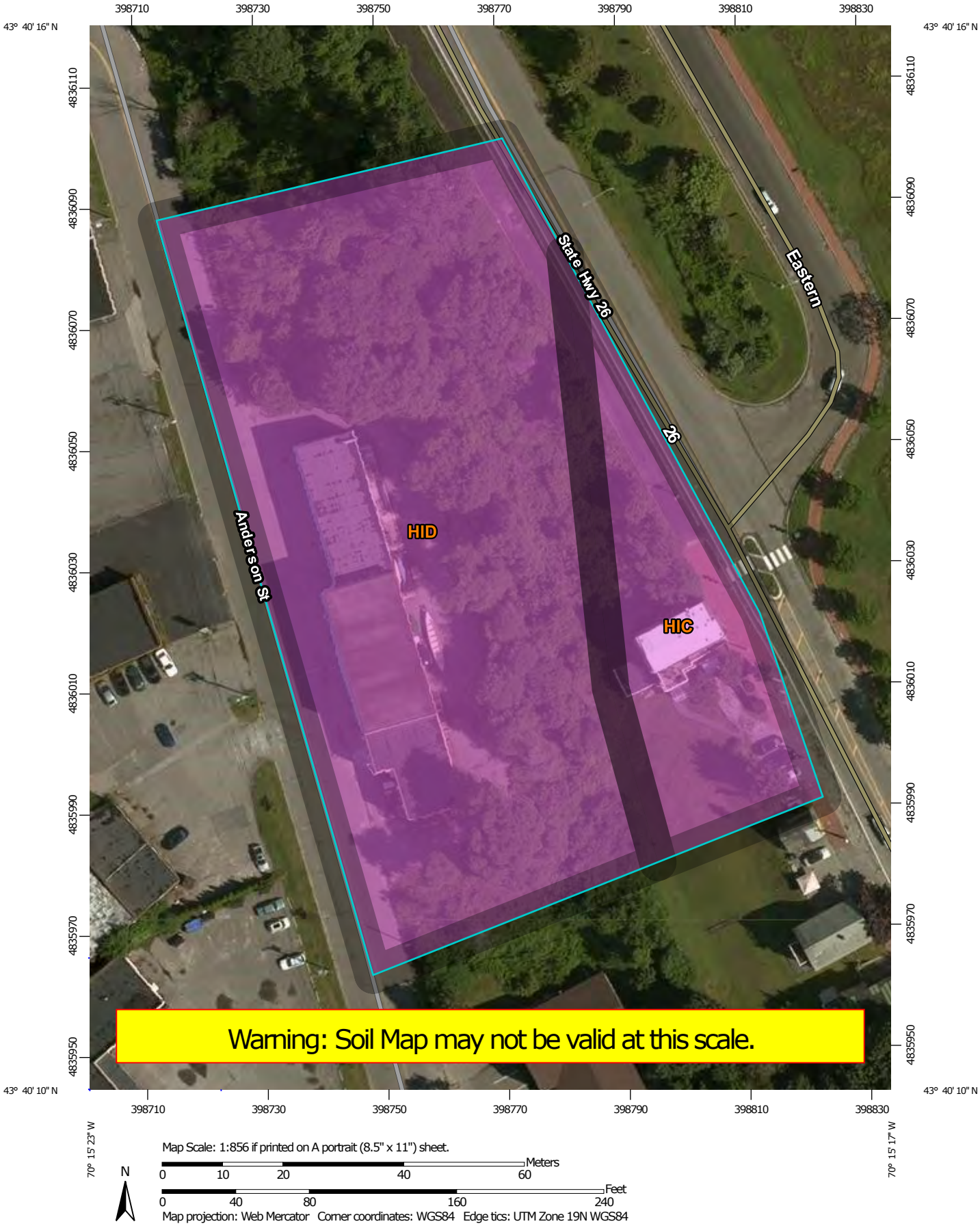
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=50.50' TW=47.67' (Dynamic Tailwater)
└─**3=Chamber Outlet Pipe** (Controls 0.00 cfs)

Secondary OutFlow Max=0.09 cfs @ 10.28 hrs HW=50.61' TW=47.13' (Dynamic Tailwater)
└─**1=6" Underdrain** (Passes 0.09 cfs of 1.55 cfs potential flow)
└─**2=Filtration to Underdrains** (Exfiltration Controls 0.09 cfs)

Attachment D

Soils Report

Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine
(218 Washington Ave)



Map Scale: 1:856 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 11, Sep 17, 2015

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

Date(s) aerial images were photographed: Jul 31, 2013—Aug 11, 2013

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

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Cumberland County and Part of Oxford County, Maine (ME005)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
HIC	Hinckley loamy sand, 8 to 15 percent slopes	A	0.4	20.3%
HID	Hinckley loamy sand, 15 to 25 percent slopes	A	1.8	79.7%
Totals for Area of Interest			**2.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION M – CITY MASTER PLANS

THERE ARE NO CITY MASTER PLANS RELATED TO THIS SITE .

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION N - UTILITIES

THIS PROJECT WILL BE SERVED WITH WATER SUPPLY FROM THE PORTLAND WATER DISTRICT – AN ABILITY TO SERVE LETTER IS ATTACHED.

PUBLIC SEWER WILL BE PROVIDED BY THE CITY OF PORTLAND – A WASTEWATER CAPACITY APPLICATION IS ATTACHED.

ELECTRICAL SERVICE WILL BE PROVIDED BY CENTRAL MAINE POWER, NATURAL GAS WILL BE SERVED BY UNITIL, PHONE AND DATA WILL BE PROVIDED BY FAIRPOINT AND TIME WARNER CABLE.

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

November 3, 2016

Will Conway
75 John Roberts Road Suite 1A
South Portland, ME 04106

Re: 218 Washington Avenue, PO
Ability to Serve with PWD Water

Dear Mr. Conway:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on August 24, 2016. Based on the information provided per concept plans submitted to PWD 11/1/16, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter does not constitute approval of this project from the District. Review and approval of final plans is required.**

Conditions of Service

The following conditions of service apply:

- A new 4-inch domestic service may be installed from the water main in Washington Avenue. A separate fire service line to be sized by your sprinkler designer will need to be approved by PWD when this becomes available. Backflow prevention devices are required on both service lines. The services should enter through the properties frontage on Washington Avenue at least 10-feet from any side property lines and at least 3-feet face to face separation between service lines.

- The existing building is currently served with a ¾-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.774.5961 FAX: 207.761.8307 WEB: WWW.PWD.ORG

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line, located as shown on the attached water service card, provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main in Washington Avenue and a public fire hydrant located 430 feet from the site. The most recent static pressure reading was 80 psi on August 25, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

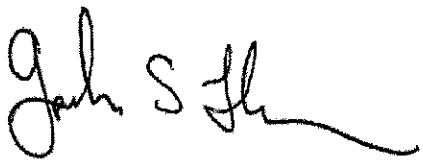
Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Gordon S. Johnson, P.E.
Engineering Services Manager

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Date: _____

Bradley Roland, P.E.
Water Resources Division

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

Site Address: 218 - 220 Washington Avenue
Chart Block Lot Number: Map 10 Block A Lot 10 +15

Proposed Use: 45 Residential Condos
Previous Use: 1 & 2 bedroom home
Existing Sanitary Flows: 180 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

_____

_____

Site Category:
- [ ] Commercial *(see part 4 below)*
- [ ] Industrial *(complete part 5 below)*
- [ ] Governmental
- [x] Residential
- [ ] Other *(specify)*

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

2. Please, Submit Contact Information.

City Planner's Name: TBD Phone: —
Owner/Developer Name: 218 - 220 Washington Avenue LLC
Owner/Developer Address: 199 Elderberry Road South Portland ME 04106
Phone: 749.0000 Fax: — E-mail: marietta@aol.com
Engineering Consultant Name: Sebago Technics Inc - Will Conway
Engineering Consultant Address: 75 John Roberts Road So. Portland 04106
Phone: 200.2055 Fax: 856.2206 E-mail: wconway@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: 6780 GPD
Peaking Factor/ Peak Times: N/A
Specify the source of design guidelines: *(i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)* _____

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

(22) One Bedroom Units @ 120 gpd = 2640 gpd
(23) Two Bedroom Units @ 180 gpd = 4140 gpd

6780 gpd Total

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____

Size of External Grease Interceptor: _____

Retention Tiine: _____

Peaking Factor/ Peak Times: _____

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: _____GPD

Do you currently hold Federal or State discharge permits? Yes_____No ____

Is the process wastewater termed categorical under CFR 40? Yes_____No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

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

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

_____

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION O- SOLID WASTE

THIS PROJECT WILL GENERATE APPROXIMATELY 1500 CUBIC YARDS OF CONSTRUCTION DEBRIS. NORMAL HOUSEHOLD WASTE WILL BE GENERATED AT A RATE OF 150 CUBIC YARDS PER MONTH. ALL CONSTRUCTION DEBRIS AND HOUSEHOLD WASTES WILL BE TRANSPORTED TO AN APPROVED SOLID WASTE HANDLING FACILITY.

Att. P

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION P - FIRE

THE PORTLAND FIRE DEPARTMENT CHECKLIST AND REQUESTED INFORMATION IS ATTACHED.

PORTLAND FIRE DEPARTMENT
SITE REVIEW
FIRE DEPARTMENT CHECKLIST

(See next 2 pages)

A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

1. Name, address, telephone number of applicant
2.
3. Name address, telephone number of architect

4. Proposed uses of any structures [NFPA and IBC classification]
5.
6. Square footage of all structures [total and per story]

7. Elevation of all structures

8. Proposed fire protection of all structures
   - ***As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)***

9. Hydrant locations

10. Water main[s] size and location

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

12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

Some structures may require Fire flows using annex H of NFPA 1

Portland Fire Department Site Review - Checklist

Project: 218 Washington Ave

To: Portland Fire Department

Site Review Checklist:

1. Applicant Information:
   218 Washington Avenue LLC
   199 Elderberry Rd
   South Portland, ME 04106
2.
3. Architect Information:
   Archetype Architects
   48 Union Wharf
   Portland, ME 04101
   207-772-6022
4. Proposed Use: Apartment (R-2) over Garage (S-2)
5.
6. Square Footage:

Ground Level/Parking:	13,625 sqft
First Floor:	13,750 sqft
Second Floor:	14,300 sqft
Third Floor:	14,300 sqft
Fourth Floor:	13,445 sqft
Total:	69,420 sqft

7. Building Elevations:
   See 'Building Elevations' sheet (Sheet A2.01) in submitted set.
8. Proposed fire protection:
   NFPA 13-R Sprinkler System
9. Hydrant Locations:
   See submitted utility/site plan.
10. Water main size:
    See submitted utility/site plan.
11. Access to structure
    See submitted site plan.
12. Code Summary:
    See below.

NFPA 1 – Chapter 18: Fire Department Access and Water Supply

18.2 Fire Department Access:

The project is fully accessible on two sides.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 *Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).*

Not applicable.

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

As depicted on site plans, the proposed building layout provides for a minimum of two sides of access to all structures.

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

-Building Height
-Building Occupancy
-Construction Type
-Impediments to the Structure
-Safety Features Provided

There are no required building setbacks by zoning.

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

The building will provide an exterior door on public sidewalk.

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

N/A. Access to building is through doors on public sidewalk.

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

Elevator with be 2500#, which meets the standard.

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

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

Att. Q

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION Q – DESIGN REVIEW

DESIGN REVIEW IS NOT REQUIRED FOR THIS PROJECT.

Att. R

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION R - HVAC

THE HVAC EQUIPMENT HAS NOT BEEN SELECTED AT THIS TIME. THE APPLICANT REQUESTS THAT THIS INFORMATION BE PROVIDED PRIOR TO ISSUANCE OF A FULL BUILDING PERMIT.

Att. S

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION S -1 SITE LIGHTING

THERE ARE ONLY TWO SITE LIGHTING FIXTURES PROPOSED FOR THIS PROJECT, AT THE SITE ENTRANCE DRIVEWAY. THESE WILL BE SPAULDING CIMMARON LED FIXTURES ON 20 FOOT POLES, A CUT SHEET OF THE FIXTURE IS ATTACHED.

CIMARRON LED	Cat.#		Approvals	SPAULDING LIGHTING
	Job	Type		

SPECIFICATIONS

Construction:
- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft²
- Features exclusive wiHUBB technology -Wireless system for On/Off and 0-10VDC full range dimming control -Programmable autonomous operation
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

Optics:
- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- CCT: 3000K (80 CRI), 4200K (70 CRI), 5100K (67 CRI), and turtle friendly Amber LED options
- CRI: 70

Electrical:
- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection of 10KA 8/20 µSec wave; clamping voltage of 320V & surge rating of 273J

Lumen maintenance:
- L90 at 60,000 hours (Projected per IESNA TM-21-11)

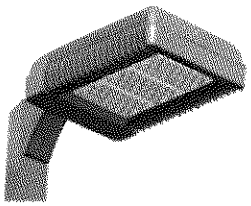
Installation:
- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

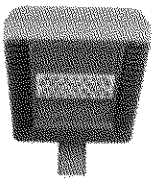
Finish:
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

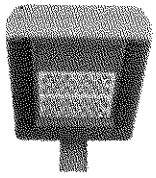
Warranty:
Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

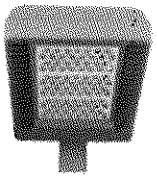
Listings:
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: http://www.designlights.org/QPL
- IDA approved • IP65

PRODUCT IMAGE(S)

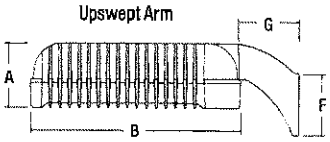

90 LED 3/4 VIEW

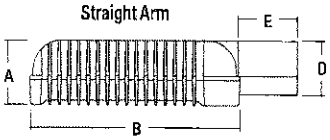

30 LED

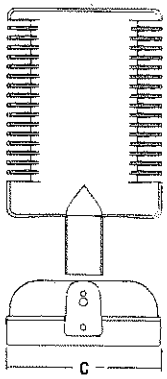

60 LED


90 LED

DIMENSIONS







A	B	C	D	E	F	G
6 3/4" 171mm	21 3/4" 552mm	16" 406mm	6 5/8" 168mm	6 5/16" 160mm	5 5/8" 143mm	6 1/8" 155mm

CERTIFICATIONS/LISTINGS

ORDERING INFORMATION SEE NEXT PAGE

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ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

CL1 - [ ] - [ ] [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

SERIES
CL1 Cimarron LED

NO. OF LEDS
90L 90 High brightness LEDs
60L 60 High brightness LEDs
30L 30 High brightness LEDs

MOUNTING
A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)
AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations)
MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm

VOLTAGE
U[3] Universal 120V-277V, 50/60 Hz
1[7] 120V
2[7] 208V
3[7] 240V
4[7] 277V
5 480V, 60 Hz
F 347V, 60 Hz
E[4] 220V, 50 Hz

CCT
3K 3000K
4K 4200K
5K 5100K
AM[8] Amber (590 nm available for "Turtle Friendly" applications (consult factory)

DISTRIBUTION
2 Type II
3 Type III
4 Type IV
5M Type V Medium
5S Type V Short
5W Type V Wide
2L Type II Rotated 90° left
3L Type III Rotated 90° left
4L Type IV Rotated 90° left
2R Type II Rotated 90° right
3R Type III Rotated 90° right
4R Type IV Rotated 90° right

DRIVE CURRENT
Leave blank for 700mA (standard)
035 350mA Amber CCT only
105 1050 mA (use with 90L only for higher lumen output)

COLOR
DB Dark Bronze
BL Black
WH White
GR Gray
PS Platinum Silver
RO Red (premium color)
FG Forest Green (premium color)
CC Custom Color

OPTIONS
BC[5] Backlight control
BL[1,2,5] Bi-level control
CD[2] Continuous dimming
WB Wall bracket
RPA3 3" Round pole adapter
RPA4 4" Round pole adapter
RPA5 5" Round pole adapter
RPA6 6" Round pole adapter
F(X)[3,4] Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, 6-347V)
SSB Stainless steel LED bezel
VG Vandal guard

CONTROL OPTIONS
SCO Motion sensor On/Off control, No light output when no motion detected
SCP Programmable motion control, factory default is 50%
PR(X)[5] NEMA Photo cell receptacle (replace X with voltage: U=120-277, 5=480, 6 =347)
WIH[7] In-fixture wireless control module (120, 277, 347 & 480V)

Notes: 1- For BL option 30L and 60L: N/A 347V & 480V
2 - BL & CD cannot be combined
3 - Fuse option not available with universal voltage
4 - Select F3 fusing option for 220V
5 - Photocell receptacle not available with BL option
6 - Recommended for Type III and IV distributions only
7 - Select only when using voltage specific option (i.e. WIH)
8 - Available in 350mA drive current only Type IV, 5M

ENERGY SAVING DATA

ENERGY DATA	
Power Factor	>.9
Total Harmonic Distortion	<10%

LIGHT ENGINE	INPUT WATTS		LUMENS DELIVERED						DRIVERS CURRENT
	120V-277V	347V-480V	TYPE 2	TYPE 3	TYPE 4	TYPE 5M	TYPE 5S	TYPE 5W	
30L-5K	70	87	6384	6164	6641	7108	6999	6619	2@700mA
60L-5K	140	157	13300	12842	13125	13185	13675	12954	4@700mA
90L-5K	210	227	19684	19006	19202	20592	19610	18973	6@700mA
90L-5K-105	336	363	26974	25351	26548	25793	27445	25195	6@1050mA
30L-4K	70	87	6089	6109	6104	6417	6439	6046	2@700mA
60L-4K	140	157	11583	11468	12036	12038	12581	11807	4@700mA
90L-4K	210	227	17143	16973	17648	18521	20220	17394	6@700mA
90L-4K-105	336	363	23896	23912	24199	24583	25357	23128	6@1050mA
30L-3K	70	87	4606	4668	4686	4858	4902	4601	2@700mA
60L-3K	140	157	9013	9175	9216	9409	9461	8844	4@700mA
90L-3K	210	227	13360	13601	13575	13923	14004	13902	6@700mA
90L-3K-105	336	363	17645	17612	17469	17950	18271	17330	6@1050mA

ACCESSORIES SEE NEXT PAGE

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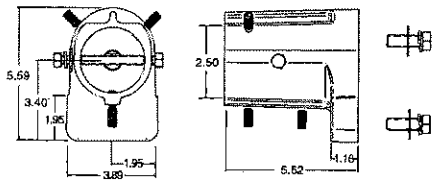
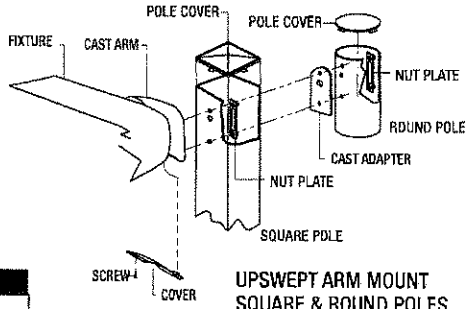
ACCESSORIES

Catalog Number	Description
CR-RPA3-XX[1]	Round pole adapter for straight arm (3¼ - 3¾")
CR-RPA4-XX[1]	Round pole adapter for straight arm (3⅞ - 4½")
CR-RPA5-XX[1]	Round pole adapter for straight arm (5")
CR-RPA6-XX[1]	Round pole adapter for straight arm (6")
CRD-RPA2-XX[1]	Round pole adapter for upswept arm (2¼ - 3⅛")
CRD-RPA3-XX[1]	Round pole adapter for upswept arm (3¼ - 3¾")
CRD-RPA4-XX[1]	Round pole adapter for upswept arm (3⅞ - 4½")
CRD-RPA5-XX[1]	Round pole adapter for upswept arm (5")
CRD-RPA6-XX[1]	Round pole adapter for upswept arm (6")
WB-CR-XX[1]	Wall bracket
TPLB-XX[1]	Twin parallel luminaire bracket
MAF-CL-XX[3]	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture)

1 Replace XX with color choice, eg.: DB for Dark Bronze
2 When ordering poles, specify Pole Drill Pattern #2
3 Fixture must include standard 6" arm



MAF – HORIZONTAL MAST ARM FITTER



UPSWEPT ARM MOUNT
SQUARE & ROUND POLES

MOUNTING ACCESSORIES

Catalog Number	Description
ARM-CL-K-TA-XX[1]	Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.
ARM-CL-TK-TA-XX[1]	Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs.
ARM-CL-K-S-XX[2]	10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.

1 Replace XX with color choice, eg.: DB for Dark Bronze
2 Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX
ARM-CL-TK-TA-XX

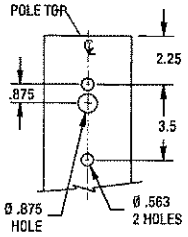
ARM-CL-K-S-XX

TENON TOP POLE BRACKET ACCESSORIES

(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

Catalog Number	Description
SETA-XX[1]	Square pole tenon adapter (4 at 90 degrees)
RETA-XX[1]	Round pole tenon adapter (4 at 90 degrees)
TETA-XX[1]	Hexagonal pole tenon adapter (3 at 120 degrees)

1 Replace XX with color choice, eg.: DB for Dark Bronze

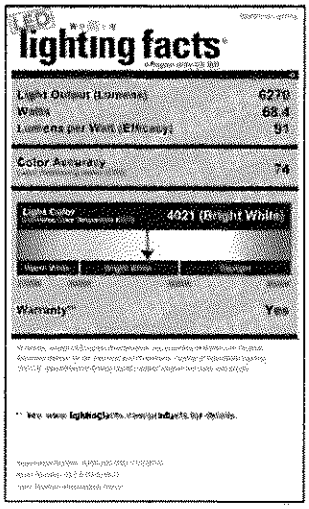


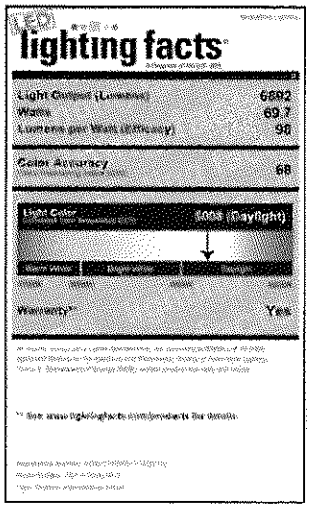
#2 DRILL PATTERN FOR POLES

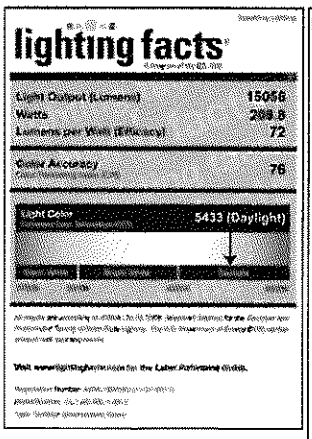
PHOTOCONTROL EQUIPMENT

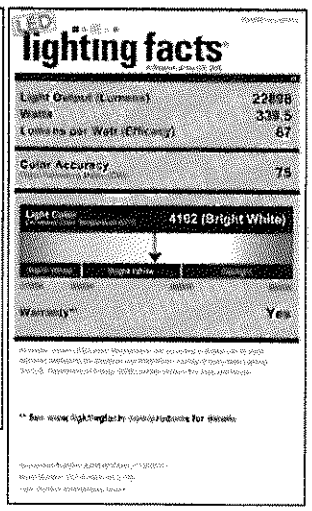
Catalog Number	Description
PTL-1	Photocontrol - twist-lock cell (120V)
PTL-8	Photocontrol - twist-lock cell (120-277V)
PTL-5	Photocontrol - twist-lock cell (480V)
PTL-6	Photocontrol - twist-lock cell (347V)
PSC	Shorting cap - twist-lock

LIGHTING FACTS









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Att. T

SITE PLAN APPLICATION
218-220 WASHINGTON AVENUE
WRITTEN SUBMISSION S-2A RETAINING WALL

THE RETAINING WALL AT THE REAR OF THE BUILDING IS A VERY IMPORTANT ELEMENT OF THIS PROJECT. THE SELECTED PRODUCT IS MANUFACTURED BY REDI ROCK, BLOCK STYLE "LEDGEWOOD", DARK BROWN COLOR, AS DEPICTED IN WRIITEN SUBMISSION S – 2B.

© 2016 Redi-Rock International, LLC

Att. U

I, William Conway of Sebago Technics Inc., hereby certify that a neighborhood meeting was held on January 4, 2017 at 5:30 PM , at the Portland Public Library, Meeting Room No. 3 .

I also certify that on 12/15/16, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (imy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

William Conway 1/5/17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign – in sheet
3. Meeting minutes

SEBAGO
TECHNICS

December 15, 2016

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for residential condominiums to be located at **218-220 Washington Ave.**

Meeting Location: **Portland Public Library, 5 Monument Square, Meeting Room #3**
Meeting Date: **January 4, 2017**
Meeting Time: **5:30 pm – 6:30 pm**

The City requires that the property owners with 500 feet of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in-sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.
If you have any questions, please call, William Conway (Sebago Technics) 207-200-2055.

Sincerely,

SEBAGO TECHNICS, INC.

William T. Conway

William T. Conway, RLA / LEED AP

Neighborhood Meeting Sign In Sheet
218-220 Washington Avenue Project
January 4, 2017 Portland Public Library 5:30 Pm

Name and Adress

Craig Church 192 Washington Ave / adcope1@yahoo.c
Allan Jaeger 219 Anderson St.
DAN GREENSTEIN 420 BAKER BLVD
Glen Morse 218 Washington Ave
Stephen & Sheila Sewall 203 Anderson St

Neighborhood Meeting Minutes
218 – 220 Washington Avenue Project
January 4 , 2017 Portland Public Library 5:30 PM

The meeting convened with an introduction of the site plan and architectural design by William Conway, Sebago Technics and Michael Coyne, Archetype Architects.

Approximately six members of the public attended the meeting ; following are the topics discussed :

1. Building materials proposed are fiber cement siding, metal panels and wood elements to accent building entrances. Final design and color selection pending Planning Board review.
2. Building will have a central corridor with units facing Washington Avenue and Anderson Street.
3. Building width approximately 68 feet , all living areas and bedrooms will have windows and natural lighting.
4. Construction of the project will be challenging given the sloping terrain. At the rear of the building a retaining wall will be constructed to create a level platform for the building. The retaining wall will be built using precast concrete segmented blocks with grid reinforcing. The face of the wall will be textured for an appearance of natural stone. Many noted this is common in the neighborhood.
5. The building will not block any views from existing nearby homes.
6. Many complimented the project and stated it will be a nice improvement to the neighborhood.
7. The applicant has yet to determine if units will be condos or apartments, and price ranges have not been determined.

The meeting concluded at approximately 6: 15 PM.

Washington Ave

Site Standard Compliance

The site standards that applies to multiple-family development in Portland include a requirement asking for open space on the site. This open space is to complement and enhance the building form and development. Open space can include buffers and screening from the streets and neighboring properties, yard space for residents, play area and planting strips along the perimeter.

The site sits on Washington Ave where the building is held back from the property line to allow for plantings to buffer the building from the sidewalk. The new sidewalk going in is also going to include and esplanade with street trees offering a second layer of buffer from the street. One of the great benefits of this site is that directly across Washington Ave from the building is the Easter Promenade park, accessible by a designated crosswalk giving the residents immediate access to green space far greater than is typical for urban living. The vehicular access to the site is also located along Washington Ave, and where the drive turns back to the building and creates a patch of land, planted areas are proposed. This will act as a buffer and a focal point at the entry.

On the north side of the parcel, the property line abuts a State of Maine Parcel that is currently covered in natural vegetation including mature trees and this area would remain undisturbed. The west side of the building faces 295 and the Back Cove so the vegetation would create a dense buffer.

The west façade is the most complicated in terms of site work because there is a steep slope which will be addressed with a retaining wall running all the way from the northern end of the building to the outer edge of the vehicular access at the south end. In order to build the wall, approximately 10' of earth in front will have to be disrupted – Along the other sides of the building and the drive access, the foundation/retaining wall will be built from the inside. The wall will be held back 10' from the property line to achieve this and then that swath of land will be replanted with evergreen to create a year-round buffer against the retaining wall. The property line on this side is neighbored by the Rockingham Electric Co which has similar vegetation to the State of Maine Parcel and which would also remain. This buffer would help to shield views of the retaining wall but the slope would allow the vegetation to drop below the height of the building to the architecture would be distantly visible from the highway and Back Cove. This is one of the great benefits of this site, it's residents will be able to take full advantage of the beautiful views.

At the driveway end of the west façade, there is an area of land that has been designated as a no-build zone. This area will remain as it is with grasses and shrubs and there will be a break in the retaining wall to allow access to the green space. This driveway also runs alongside the residential property on the south side of the site. The benefit of this is that the building is held back a good distance from the residence keeping it from block the views down to the Back Cove.

Along with all of the buffering and green space surrounding the building, the majority of the units are designed with decks so the users have their own personal outdoor space to enjoy.

Conditional Use for Ensuring Workforce Housing
Inclusionary Zoning
Planning Board Review
Application
Portland, Maine

Planning and Urban Development Department
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

A. Ensuring Workforce Housing: Standards -Section 14-484

(d) Workforce Housing Minimum At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

(e) Standards

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.

3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.

4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.

6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability for Required Workforce Units
10%	Longest term permitted under federal, state and local laws and ordinances
25%	30 years
50%	20 years
100%	10 years

(f) Implementing Regulations. Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be "in the same neighborhood".

B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.

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

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division	**Housing and Community Development**	**Office Hours**
Fourth Floor, City Hall	Room 313, Third Floor, City Hall	Monday thru Friday
389 Congress Street	389 Congress Street	8:00 a.m. – 4:30 p.m.
(207)874-8719	(207)482-5028	

PROJECT NAME:
218 - 220 Washington Avenue

PROPOSED DEVELOPMENT ADDRESS:
218 - 220 Washington Avenue

CHART/BLOCK/LOT (s): MAP 10 / BLOCK A / LOT 10 AND 15 **Applicable Zone:** B1b

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: 218 - 220 Washington Avenue LLC Business Name, if applicable: Address: 199 Elderberry Road City/State: So. Portland ME Zip Code: 04106	**Applicant Contact Information** Work # — Home# — Cell # 207.749.0000 Fax# e-mail: Marietta@aol.com
Owner – (if different from Applicant) Name: — Address: City/State : Zip Code:	**Owner Contact Information** Work # — Home# Cell # Fax# e-mail:
Billing Information Name: Sebago Technics Address: 75 John Roberts Road City/State So. Portland, ME Zip Code: 04106	**Billing Information** Work # Will Conway Cell # Fax# 207.200.2055 e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: WILL CONWAY
e-mail: wconway@sebagotechnics.com

Name:
e-mail:

Name:
e-mail:

RIGHT, TITLE OR INTEREST:

SEE SITE PLAN APPLICATION

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

EXISTING USE: Describe the existing use of the subject property.

1 SINGLE FAMILY HOME

PROJECT DESCRIPTION:

45 RESIDENTIAL CONDOMINIUM UNITS

INCLUSIONARY ZONING:	
# IZ Units	5
On-Site IZ Units	5
Off-Site IZ Units	
# IZ Homeownership Units	
# IZ Rental Units	
# IZ Efficiencies	
# IZ 1-Beds	3
# IZ 2-Beds	2
# IZ 3-Beds	
IZ Fee In-Lieu	

APPLICATION FEES:

✓ Conditional Use Review to Ensure Workforce Housing ($100.00) (Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

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

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

   Applying Online Instructions

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

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

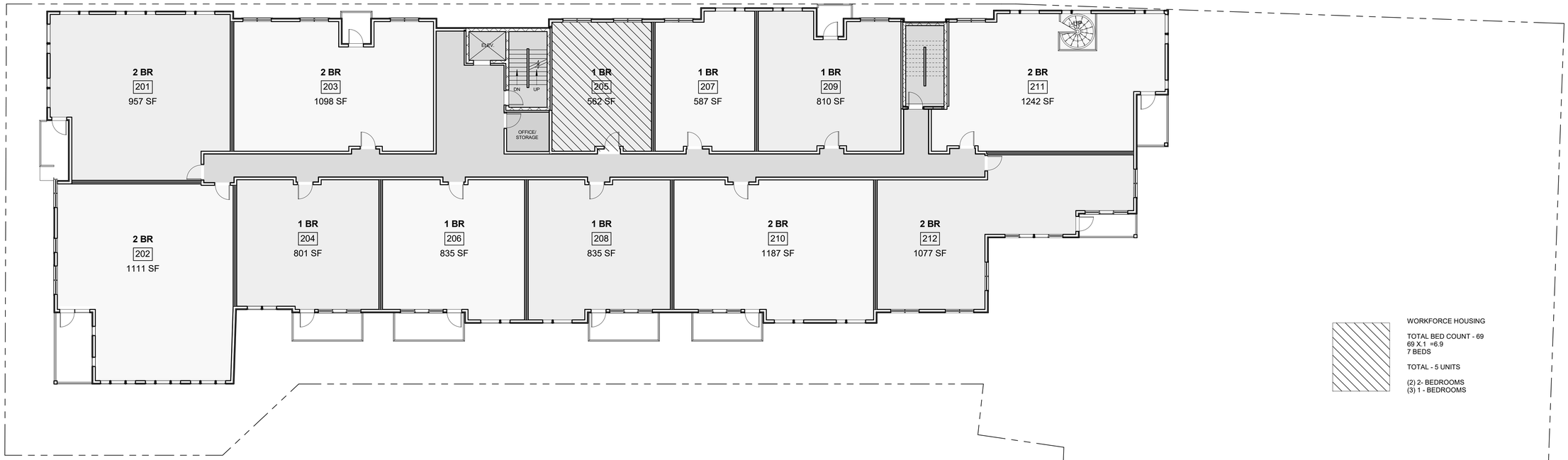
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
✓		1	Completed Application Form
		1	Cover letter stating the nature of the project.
✓		1	Evidence of right, title and interest.
✓		1	Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count
		1	Draft Workforce Housing Agreement
		1	Proposed Marketing Strategy
		1	Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.
		1	If the project is to be phased, provide written description of project phasing and accommodation of workforce units.
			Plans and Construction Details Submission Checklist
✓		1	An accompanying site plan application, as applicable.
✓		1	Floor Plans of all units and identifying proposed designated workforce housing units
		1	Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities
		1	If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project.

APPLICANT SIGNATURE:

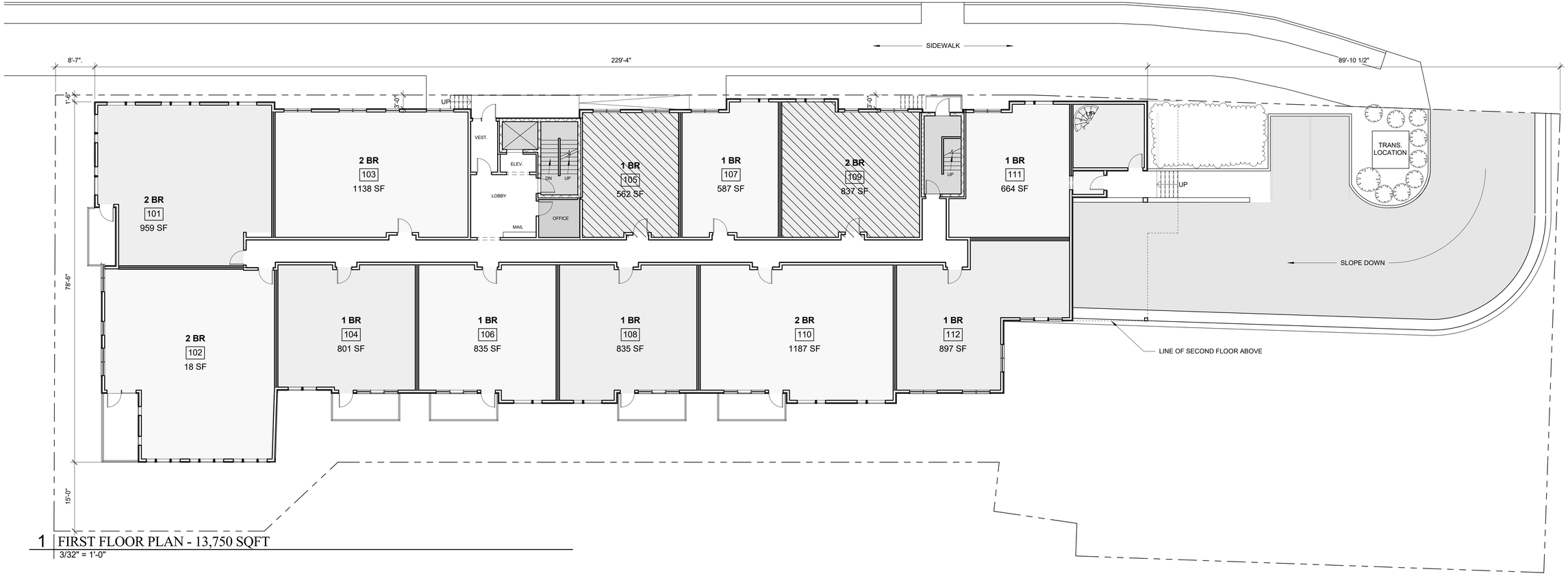
I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition,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

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

Signature of Applicant:	**Date:**
Vincent A Mauro	5/5/17



2 | SECOND FLOOR PLAN
3/32" = 1'-0"



1 | FIRST FLOOR PLAN - 13,750 SQFT
3/32" = 1'-0"

Prepared For:
218 Washington Avenue LLC

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
218 WASHINGTON AVE
218 WASHINGTON AVE
PORTLAND MAINE

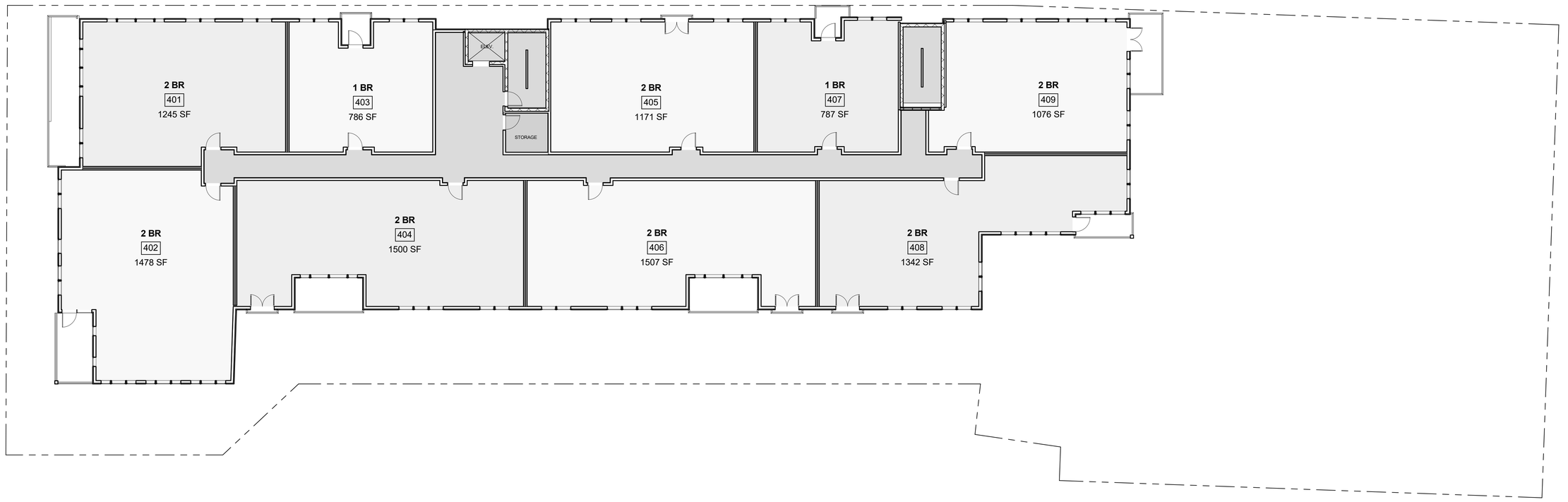
Revisions:
3
A2.01

Scale: 3/32" = 1'-0"

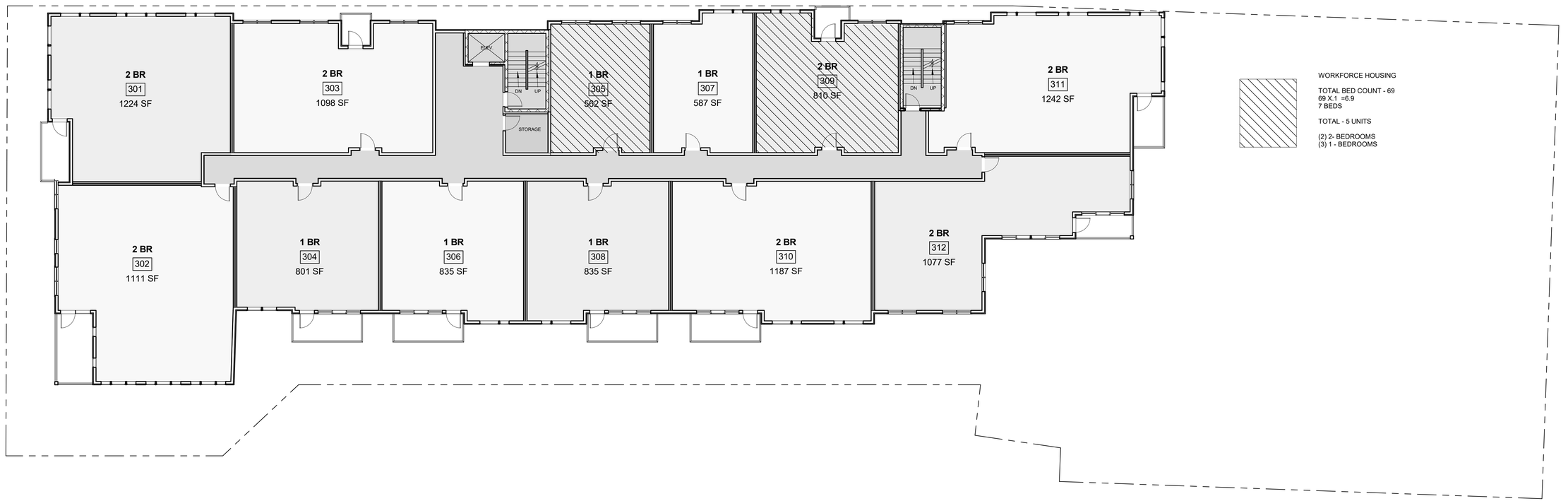
Date: 5/5/2017

FIRST & SECOND FLOOR PLANS

A1.01



2 FOURTH FLOOR PLAN
3/32" = 1'-0"



1 SECOND AND THIRD FLOOR
3/32" = 1'-0"

Prepared For:
218 Washington Avenue LLC
Address
City, State

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
218 WASHINGTON AVE
218 WASHINGTON AVE
PORTLAND MAINE

Revisions:

Scale: 3/32" = 1'-0"

Date: 5/5/2017

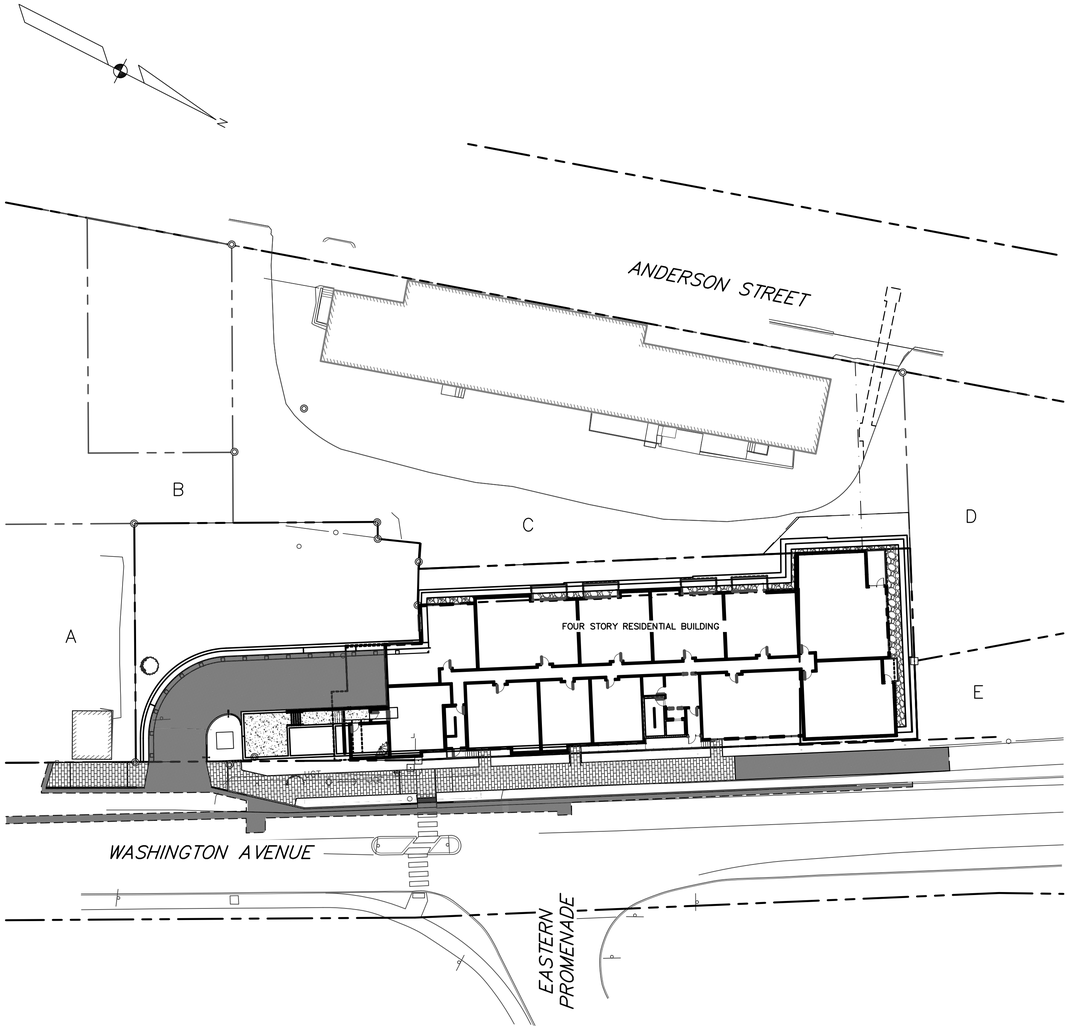
THIRD AND FOURTH FLOOR PLAN

A1.02

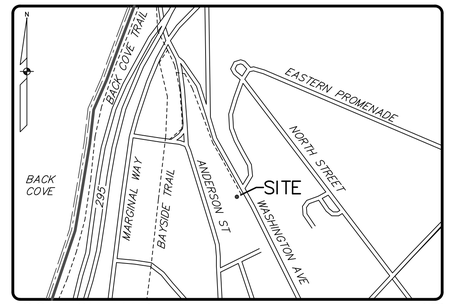
Plan 1

218-220 WASHINGTON AVENUE

218-220 WASHINGTON AVENUE
PORTLAND, MAINE



SCALE: 1" = 30'



LOCATION MAP NTS

APPLICANT:

218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

ENGINEER/SURVEYOR:

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. Suite 1A, South Portland, ME 04106, Tel. 207-200-2100
250 Goddard Rd. Suite B, Lewiston, ME 04240, Tel. 207-783-5656

PROJECT ARCHITECT:

ARCHETYPE ARCHITECTS
48 UNION WHARF
PORTLAND, MAINE

LIST OF ABUTTERS:

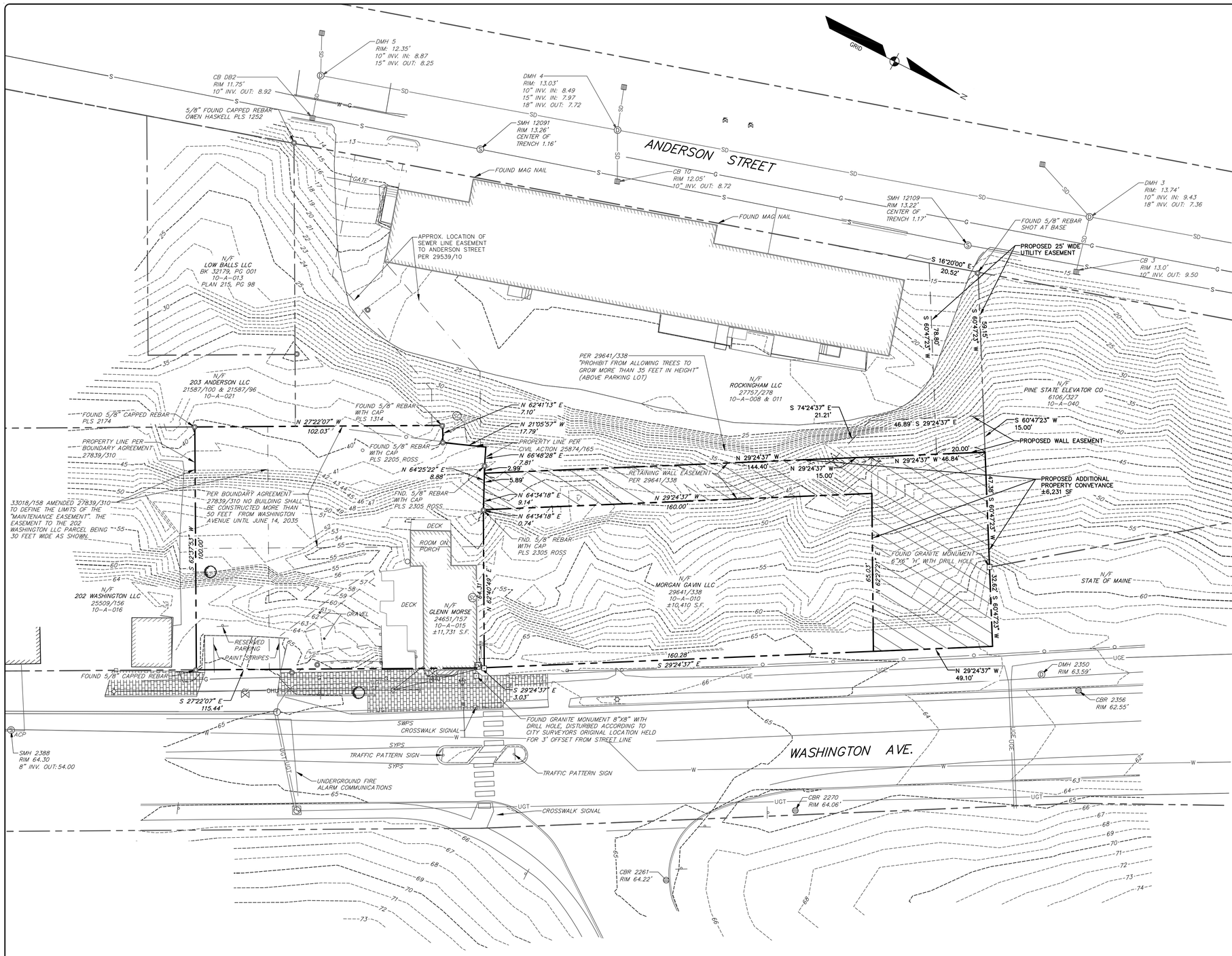
KEY	ABUTTER	BOOK/PAGE
A	202 WASHINGTON LLC	25509/156
B	203 ANDERSON LLC	21587/100 & 21587/96
C	ROCKINGHAM LLC	27757/278
D	PINE STATE ELEVATOR CO.	6106/327
E	STATE OF MAINE	-

SHEET INDEX:

INDEX OF PLANS	
SHEET NO.	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	SUBDIVISION PLAT
4A	DEMOLITION PLAN
4B	DEMOLITION PLAN
5A	SITE PLAN LOWER LEVEL
5B	SITE PLAN LOWER LEVEL
5C	SITE PLAN UPPER LEVEL
5D	SITE PLAN UPPER LEVEL
6	UTILITY PLAN
7A	GRADING PLAN LOWER LEVEL
7B	GRADING PLAN LOWER LEVEL
7C	GRADING PLAN UPPER LEVEL
7D	GRADING PLAN UPPER LEVEL
7E	PRE DEVELOPMENT WATERSHED PLAN
7F	POST-DEVELOPMENT WATERSHED PLAN
8A	DETAILS
8B	DETAILS
8C	DETAILS
8D	DETAILS
8E	DETAILS
9A	LANDSCAPE PLAN
9B	LANDSCAPE PLAN

REVISED THROUGH 12-15-16

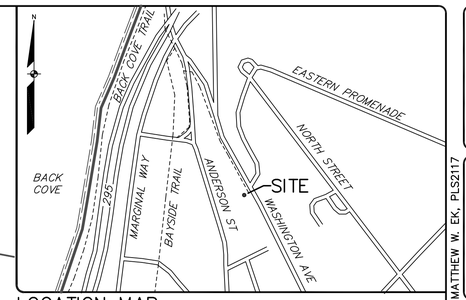
06172C.dwg, TAB:C



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.



LOCATION MAP N.T.S.

GENERAL NOTES:

1. THE RECORD OWNERS OF THE PARCELS ARE AS FOLLOWS:
   TAX MAP 10 BLOCK A LOT 15: GLENN MORSE PER DEED BOOK 24651 PAGE 157 WITH REVISIONS IN DEED BOOK 25874 PAGE 165 AND 27839 PAGE 310.
   TAX MAP 10 BLOCK A LOT 10: MORGAN GAVIN LLC PER DEED BOOK 29641 PAGE 338.
   - ALL DEEDS REFERENCED ARE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD)
2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHNICS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
3. PLAN REFERENCES:
   A. STANDARD BOUDNARY SURVEY, AS-BUILT TOPOGRAPHY AND DEED ANALYSIS LOT AT 218 WASHINGTON AVENUE, PORTLAND FOR GLENN MORSE, BY ROSS BOUNDARY SURVEYS, (JOB NO. 20604P), LAST DATED JULY 2013.
   B. WASHINGTON AVENUE SIDE PATH EXISTING SITE CONDITIONS BETWEEN #198 AND INTERSTATE 295 OFF RAMP, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 881/35, LAST DATED OCTOBER 28, 2010.
   C. STREET LINE RETRACEMENT AND EXISTING MONUMENTATION PLAN, ANDERSON STREET, FOX STREET, GOULD STREET & PLOWMAN STREET, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 1017/29, LAST DATED FEBRUARY 27, 2005.
   D. SITE PLAN OF TAX MAP 10 BLOCK A LOT 10, WASHINGTON AVE, PORTLAND MAINE FOR GLENN MORSE, BY STEPHEN SELLECK, JOB NUMBER 2303, LAST DATED FEBRUARY 17, 2013.
   E. BOUNDARY SURVEY AT 207 ANDERSON STREET, FOR ROCKINGHAM LLC, BY OWEN HASKELL, INC. LAST DATED MARCH 25, 2013, AND RECORDED IN CCRD PLAN BOOK 215 PAGE 98.
4. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS AND CHECKED WITH CITY CONTROL POINTS. ELEVATIONS DEPICTED HEREON ARE ON THE CITY OF PORTLAND DATUM BASED UPON 2 BENCHMARKS PROVIDED BY THE CITY.
5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- EASEMENT
- MONUMENT
- IRON PIPE/ROD
- C1/L1 CURVE/LINE NO.
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- 120 118 CONTOURS
- CHAIN LINK FENCE
- STOCKADE FENCE
- RETAINING WALL
- DECIDUOUS TREE
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- W WATER
- WATER SHUT OFF
- S SANITARY SEWER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- SD STORM DRAIN
- DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- TRANSFORMER PAD
- TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE

MATTHEW W. EK, P.L.S.2117

Plan 2

STATE OF MAINE · MATTHEW W. EK · 2117 · REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED	CHECKED
MWE	CDM

REV.	BY:	DATE:	STATUS
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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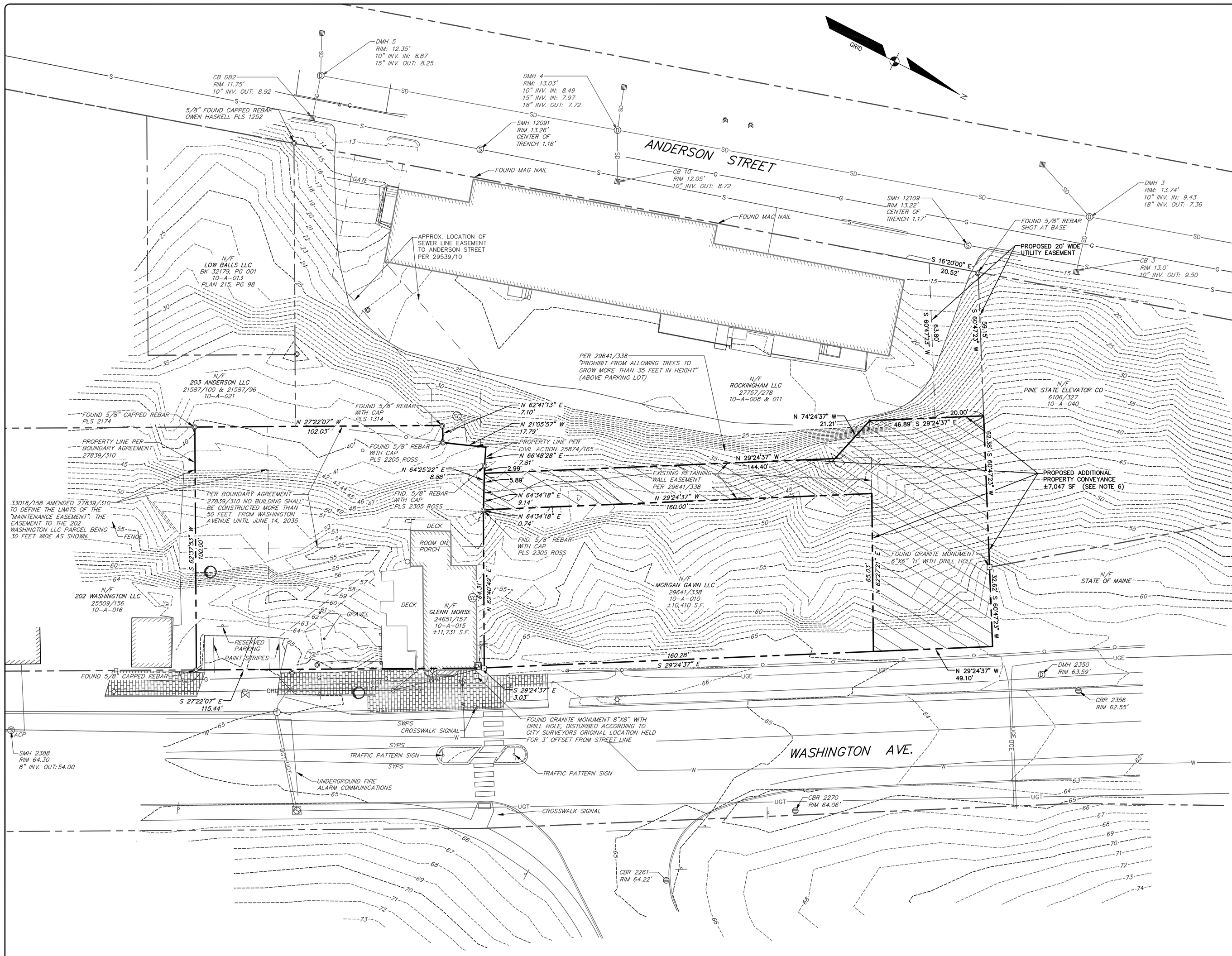
75 John Roberts Rd. Suite 1A South Portland, ME 04106 Tel: 207-200-2100
250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-755-5535

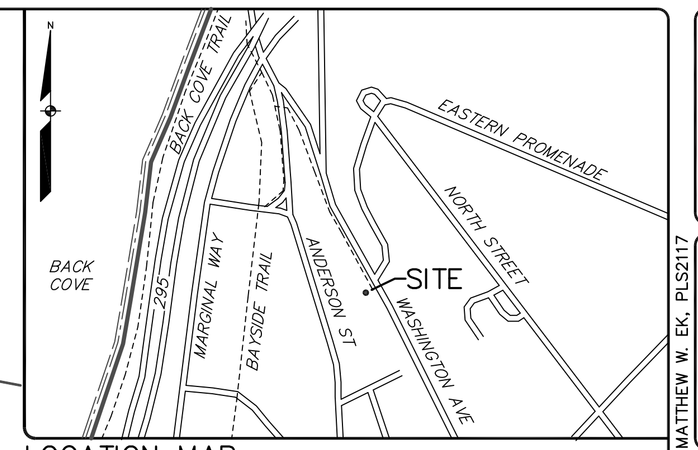
EXISTING CONDITIONS PLAN
OF:
218-220 WASHINGTON AVENUE
218 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 2 OF 23

06172EC.dwg, TAB: EC





LOCATION MAP N.T.S.

GENERAL NOTES:

1. THE RECORD OWNERS OF THE PARCELS ARE AS FOLLOWS:
   TAX MAP 10 BLOCK A LOT 15: GLENN MORSE PER DEED BOOK 24651 PAGE 157 WITH REVISIONS IN DEED BOOK 25874 PAGE 165 AND 27839 PAGE 310.
   TAX MAP 10 BLOCK A LOT 10: MORGAN GAVIN LLC PER DEED BOOK 29641 PAGE 338.
   • ALL DEEDS REFERENCED ARE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD)
2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHNICS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
3. PLAN REFERENCES:
   A. STANDARD BOUDNARY SURVEY, AS-BUILT TOPOGRAPHY AND DEED ANALYSIS LOT AT 218 WASHINGTON AVENUE, PORTLAND FOR GLENN MORSE, BY ROSS BOUNDARY SURVEYS, (JOB NO. 20604P), LAST DATED JULY 2013.
   B. WASHINGTON AVENUE SIDE PATH EXISTING SITE CONDITIONS BETWEEN #198 AND INTERSTATE 295 OFF RAMP, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 881/35, LAST DATED OCTOBER 28, 2010.
   C. STREET LINE RETRACEMENT AND EXISTING MONUMENTATION PLAN, ANDERSON STREET, FOX STREET, GOULD STREET & PLOWMAN STREET, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 1017/29, LAST DATED FEBRUARY 27, 2005.
   D. SITE PLAN OF TAX MAP 10 BLOCK A LOT 10, WASHINGTON AVE, PORTLAND MAINE FOR GLENN MORSE, BY STEPHEN SELLECK, JOB NUMBER 2013, LAST DATED FEBRUARY 17, 2013.
   E. BOUNDARY SURVEY AT 207 ANDERSON STREET, FOR ROCKINGHAM LLC, BY OWEN HASKELL, INC. LAST DATED MARCH 25, 2013, AND RECORDED IN CCRD PLAN BOOK 215 PAGE 98.
4. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS AND CHECKED WITH CITY CONTROL POINTS. ELEVATIONS DEPICTED HEREON ARE ON THE CITY OF PORTLAND DATUM BASED UPON 2 BENCHMARKS PROVIDED BY THE CITY.
5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
6. PROPOSED PROPERTY LINES AND EASEMENT SHOWN HEREON ARE BASED UPON THIS BOUNDARY SURVEY AND THE CONTRACT FOR THE SALE OF REAL ESTATE DATED OCTOBER 19, 2016.

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- EASEMENT
- MONUMENT
- IRON PIPE/ROD
- C1/L1 CURVE/LINE NO.
- BUILDING
- DECK/STEPS/OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- 120 118 CONTOURS
- CHAIN LINK FENCE
- STOCKADE FENCE
- RETAINING WALL
- DECIDUOUS TREE
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- W WATER
- WATER SHUT OFF
- S SANITARY SEWER
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- TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

MATTHEW W. EK, PLS2117

DESIGNED	CHECKED
MWE	CDM

REV.	BY:	DATE:	STATUS
B	WTC	2/6/17	REVISED PROPOSED PROPERTY LINES PER NOTE 6.
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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OF:
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218 WASHINGTON AVENUE
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FOR:
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199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 2 OF 23

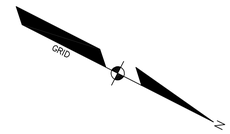
06172EC.dwg, TAB: EC

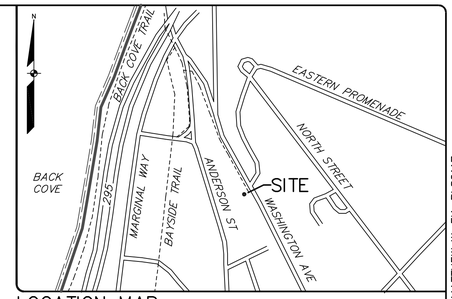
CONDITIONS OF APPROVAL

WAIVERS GRANTED

UNIT AREA SUMMARY

LEVEL	NUMBER	ROOM TYPE	AREA
1ST FLOOR	101	2 BR	1136 SF
1ST FLOOR	102	2 BR	1496 SF
1ST FLOOR	103	2 BR	1138 SF
1ST FLOOR	104	1 BR	801 SF
1ST FLOOR	105	1 BR	562 SF
1ST FLOOR	106	1 BR	835 SF
1ST FLOOR	107	1 BR	587 SF
1ST FLOOR	108	1 BR	835 SF
1ST FLOOR	109	1 BR	837 SF
1ST FLOOR	110	2 BR	1187 SF
1ST FLOOR	111	1 BR	664 SF
1ST FLOOR	112	1 BR	897 SF
2ND FLOOR	201	2 BR	1136 SF
2ND FLOOR	202	2 BR	1496 SF
2ND FLOOR	203	2 BR	1098 SF
2ND FLOOR	204	1 BR	801 SF
2ND FLOOR	205	1 BR	562 SF
2ND FLOOR	206	1 BR	835 SF
2ND FLOOR	207	1 BR	587 SF
2ND FLOOR	208	1 BR	835 SF
2ND FLOOR	209	1 BR	810 SF
2ND FLOOR	210	2 BR	1187 SF
2ND FLOOR	211	2 BR	1242 SF
2ND FLOOR	212	2 BR	1077 SF
3RD FLOOR	301	2 BR	1136 SF
3RD FLOOR	302	2 BR	1496 SF
3RD FLOOR	303	2 BR	1098 SF
3RD FLOOR	304	1 BR	801 SF
3RD FLOOR	305	1 BR	562 SF
3RD FLOOR	306	1 BR	835 SF
3RD FLOOR	307	1 BR	587 SF
3RD FLOOR	308	1 BR	835 SF
3RD FLOOR	309	1 BR	810 SF
3RD FLOOR	310	2 BR	1187 SF
3RD FLOOR	311	2 BR	1242 SF
3RD FLOOR	312	2 BR	1077 SF
4TH FLOOR	401	2 BR	1245 SF
4TH FLOOR	402	2 BR	1478 SF
4TH FLOOR	403	1 BR	786 SF
4TH FLOOR	404	2 BR	1500 SF
4TH FLOOR	405	2 BR	1171 SF
4TH FLOOR	406	2 BR	1507 SF
4TH FLOOR	407	1 BR	787 SF
4TH FLOOR	408	2 BR	1342 SF
4TH FLOOR	409	2 BR	1076 SF





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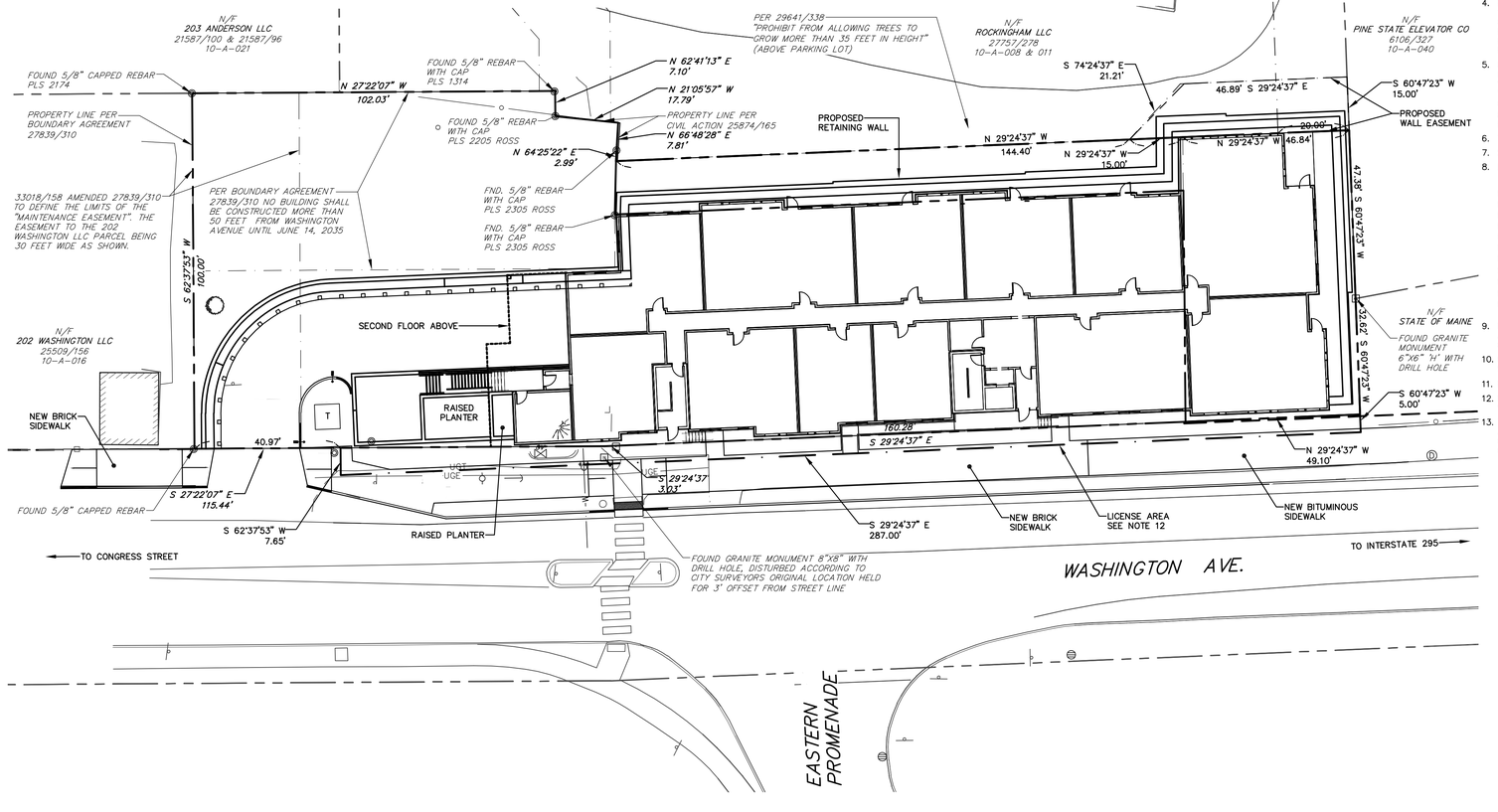
6. TOTAL AREA OF SITE IS 28,372 SQUARE FEET.
7. SITE IS LOCATED IN THE B1b ZONE.
8. B1b DIMENSIONAL REQUIREMENTS :

	(REQUIRED)	(PROPOSED)
MIN. LOT SIZE	NONE	28,372 SF
MIN LOT AREA PER DU	435 SF	630 SF
MIN. STREET FRONTAGE	20 FT	327.85 FT
MIN. LOT WIDTH	NONE	327.85 FT
MAX. FRONT YARD	10 FT	5 FT
MIN. REAR YARD	NONE	NONE
MIN. SIDE YARD	NONE	NONE
STRUCTURE SETBACKS	N / A	N / A
MAX. STRUCTURE HEIGHT	45 FT	45 FT
MAX FLOOR AREA	N / A	N / A
MAX. IMPERVIOUS AREA	90 %	79 %

9. PLAN DEPICTS FIRST FLOOR LEVEL OF BUILDING. BUILDING INCLUDES FOUR FLOORS AND A TOTAL AREA OF 69,459 SQUARE FEET. 45 TOTAL RESIDENTIAL UNITS PROPOSED - 22 ONE BEDROOM UNITS AND 23 TWO BEDROOM UNITS.
10. OFF STREET PARKING REQUIRED - 1 SPACE PER UNIT - 45 SPACES REQUIRED 45 SPACES PROPOSED BELOW FIRST FLOOR LEVEL.
11. BICYCLE SPACES REQUIRED - 18 SPACES / 18 SPACES PROPOSED.
12. PLAN DEPICTS A LICENSE AREA TO ALLOW BUILDING FOUNDATIONS AND LANDSCAPING WITHIN THE STREET RIGHT OF WAY.
13. THE NEAREST FIRE HYDRANT IS LOCATED AT THE I-295 NORTHBOUND ON - RAMP, APPROXIMATELY 240 FEET NORTH OF THE SITE. A SECOND HYDRANT IS LOCATED AT THE CORNER OF WASHINGTON AVENUE AND GOULD STREET, APPROXIMATELY 330 FEET SOUTH OF THE SITE.



GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- EASEMENT
- MONUMENT
- IRON PIPE/ROD
- C1/L1 CURVE/LINE NO.
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- EDGE GRAVEL
- CURB LINE
- 120 118 CONTOURS
- CHAIN LINK FENCE
- STOCKADE FENCE
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- DECIDUOUS TREE
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- W WATER
- WATER SHUT OFF
- S SANITARY SEWER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- SD STORM DRAIN
- DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- T TRANSFORMER PAD
- TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- GUARD RAIL
- LICENSE AREA

APPROVAL- CITY OF PORTLAND PLANNING BOARD

_____ DATE

_____ CHAIRPERSON

_____

_____

_____

_____

_____

_____

_____

STATE OF MAINE

CUMBERLAND COUNTY SS REGISTRY OF DEEDS
RECEIVED _____, 20____
AT ___h _____m _____M. AND RECORDED IN
PLAN BOOK _____ PAGE _____

ATTEST _____ REGISTRAR

Plan 3

MATTHEW W. EK, PLS2117

DESIGNED	CHECKED
WTC	MWE

REV.	BY	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-753-5656

SUBDIVISION PLAT
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 3 OF 23

06172SB.dwg, TAB:SB

DEMOLITION NOTES:

1. CONTRACTOR SHALL NOTIFY DIGSAFE FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. EXISTING MATERIALS TO BE SALVAGED AND RE - USED SHALL BE STORED AND PROTECTED DURING CONSTRUCTION.
3. EXISTING HOUSE, DECK AND MISCELLANEOUS ITEMS SHALL BE REMOVED AFTER ELECTRICAL AND NATURAL GAS SERVICES HAVE BEEN REMOVED. REMOVE ALL FOUNDATIONS AS PART OF THIS DEMOLITION.
4. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE TO ALL APPLICABLE CODES AND REGULATIONS.

DEMOLITION KEY:

1 SAW CUT PAVEMENT
2 REMOVE ASPHALT PAVING
3 REMOVE AND SALVAGE BRICK PAVERS
4 REMOVE AND SLAVAGE GRANITE CURB
5 REMOVE TREE
6 REMOVE WOOD FENCING
7 REMOVE CHAIN LINK FENCING
8 REMOVE SIGN
9 REMOVE AND SALVAGE SIGN
10 OVERHEAD POWER AND UTILITY POLE TO BE REMOVED BY CMP
11 UNDERGROUND ELECTRIC CONDUIT TO REMAIN
12 UNDERGROUND TELEPHONE CONDUIT TO REMAIN
13 WATER SERVICE TO BE TERMINATED AS REQUIRED BY THE PORTLAND WATER DISTRICT
14 TRAFFIC SIGNAL POLE TO REMAIN
15 REMOVE AND SALVAGE TACTILE WARNING PANEL
16 REMOVE AND SALVAGE RIGHT OF WAY MONUMENTS
17 REMOVE PLANTER STONES AND SHRUBS
18 NATURAL GAS SERVICE TO BE REMOVED AND REPLACED BY UNITIL
19 WATER MAIN TO REMAIN

MATCH LINE

DECK
ROOM ON EORCH
DECK
REMOVE EXISTING BUILDING - SEE NOTES
SMH 2388
RIM 64.30
8" INV. OUT: 54.00
ACP
WASHINGTON AVENUE
EASTERN PROMENADE
MATCH LINE

LEGEND

EXISTING	PROPOSED
PROPERTY LINE/R.O.W.	
ABUTTER LINE/R.O.W.	
EASEMENT	
MONUMENT	
IRON PIPE/ROD	
BUILDING	
DECK/STEPS/ OVERHANG	
EDGE PAVEMENT	
PAVEMENT SAWCUT	
EDGE CONCRETE	
PAVEMENT PAINT	
EDGE GRAVEL	
CURB LINE	
RETAINING WALL	
DECIDUOUS TREE	
SIGN	
DEMOLITION KEY	4

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

Plan 4

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONNOR
No. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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DEMOLITION PLAN
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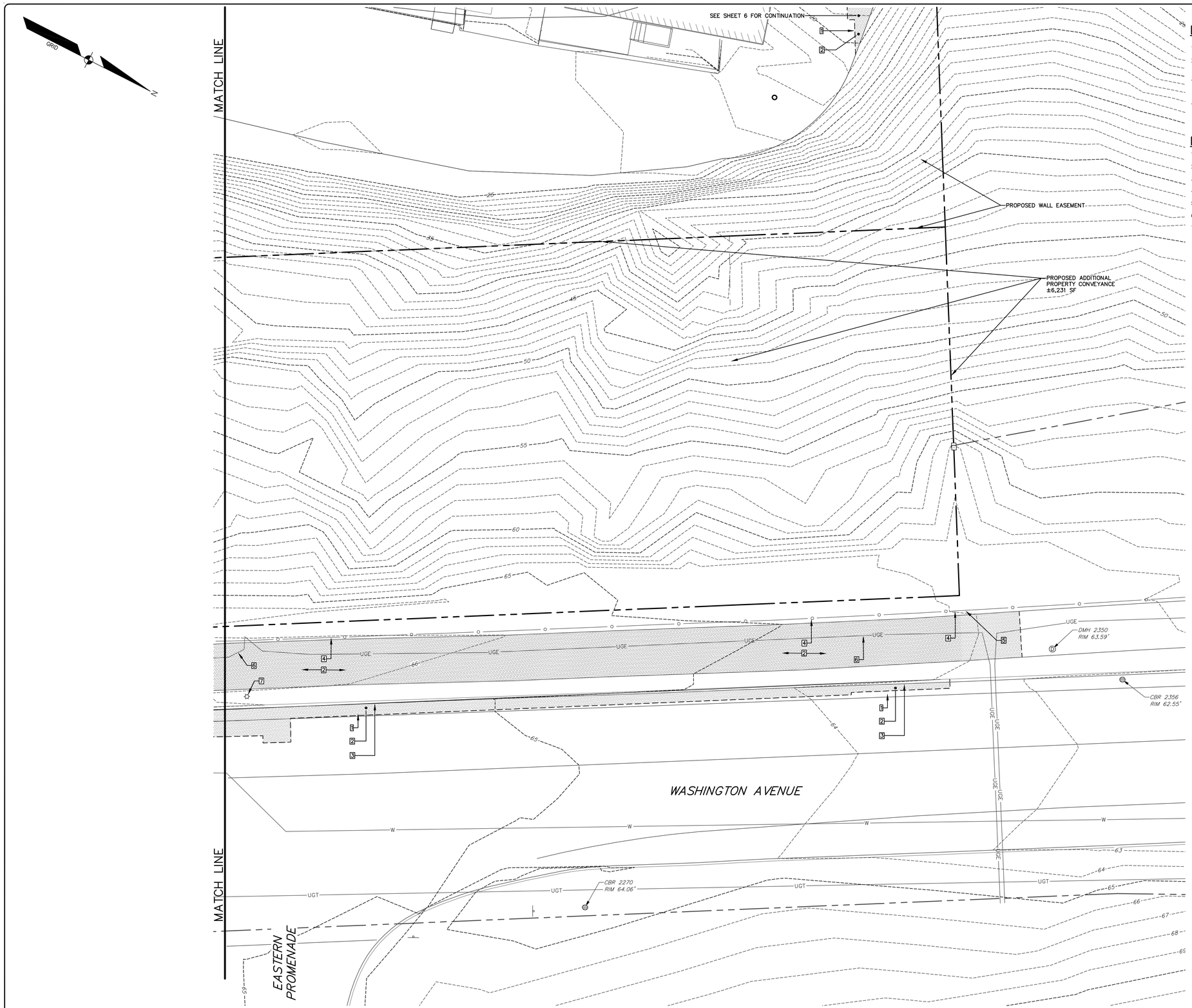
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 4A OF 23

06172DEMO.dwg, TAB:06172DEMO-1



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DEMOLITION KEY:

1 SAW CUT PAVEMENT
2 REMOVE ASPHALT PAVING
3 REMOVE AND SLAVAGE GRANITE CURB
4 REMOVE CHAIN LINK FENCING
5 CHAIN LINK FENCING TO REMAIN
6 UNDERGROUND ELECTRIC CONDUIT TO REMAIN
7 STREET LIGHT TO REMAIN

LEGEND

EXISTING	PROPOSED
PROPERTY LINE/R.O.W.	
ABUTTER LINE/R.O.W.	
EASEMENT	
MONUMENT	
IRON PIPE/ROD	
BUILDING	
DECK/STEPS/ OVERHANG	
EDGE PAVEMENT	
PAVEMENT SAWCUT	
EDGE CONCRETE	
PAVEMENT PAINT	
EDGE GRAVEL	
CURB LINE	
RETAINING WALL	
DECIDUOUS TREE	
SIGN	
DEMOLITION KEY	4

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONWAY
NO. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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DEMOLITION PLAN
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218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
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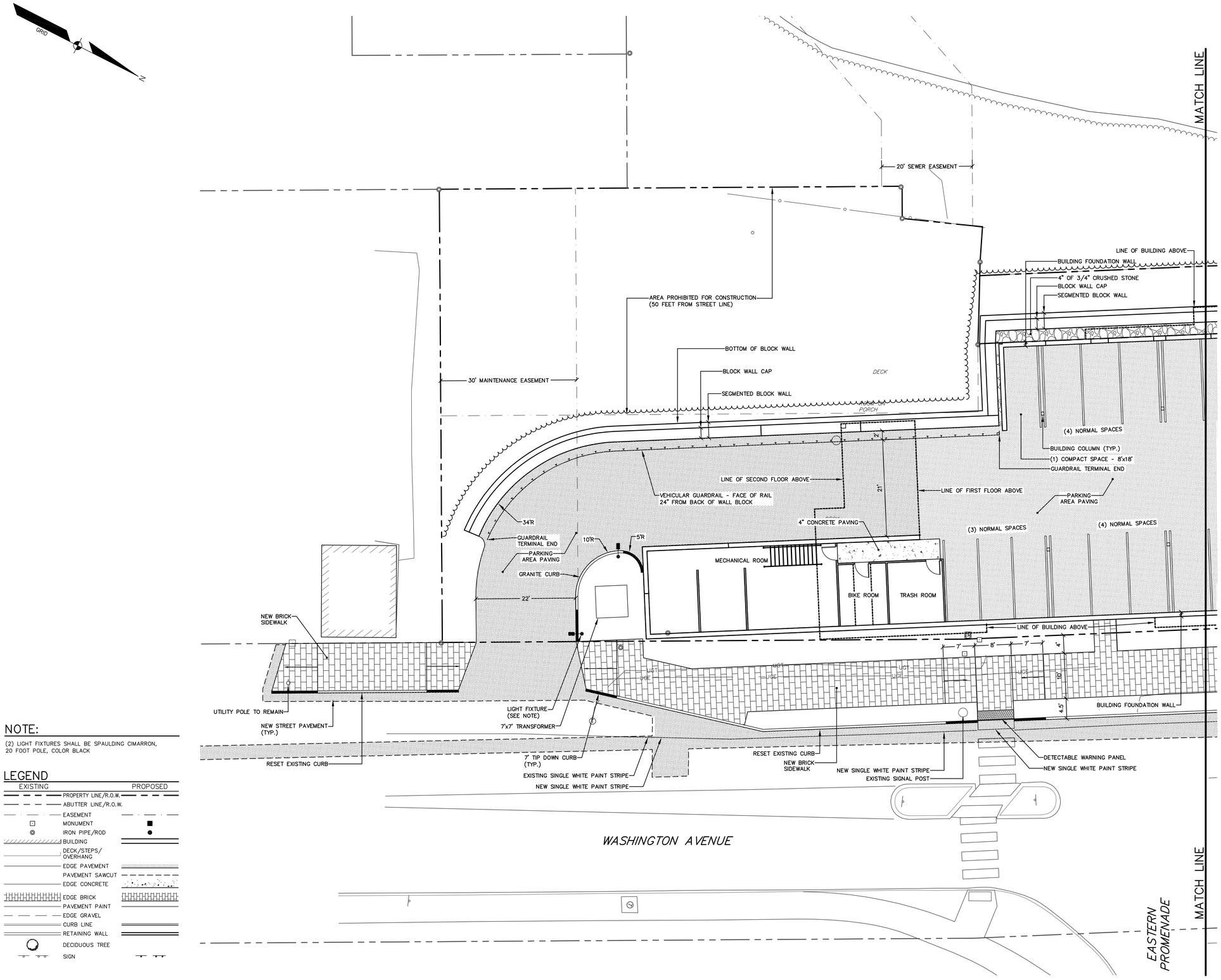
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 4B OF 23

06172DEMO.dwg, TAB:06172DEMO-2



NOTE:

(2) LIGHT FIXTURES SHALL BE SPAULDING CIMARRON, 20 FOOT POLE, COLOR BLACK

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
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	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

Plan 5

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONWAY
NO. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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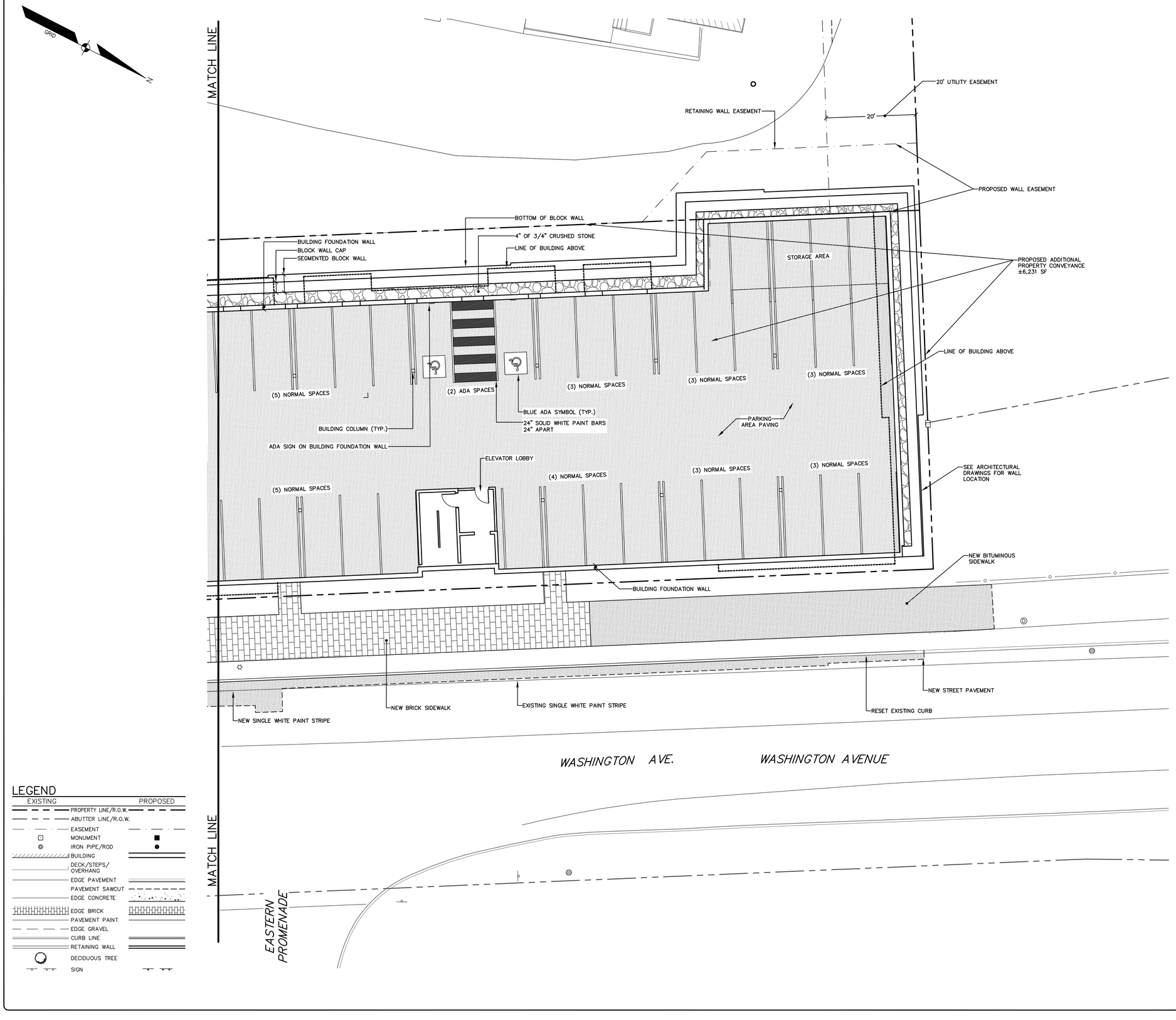
75 John Roberts Rd. Suite 1A South Portland, ME 04106 tel. 207-200-2100
250 Goddard Rd. Suite B Lewiston, ME 04240 tel. 207-795-3535

SITE PLAN LOWER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 5A OF 23

06172S.dwg, TAB:06172S-1



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
⊡	MONUMENT	■
◎	IRON PIPE/ROD	●
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONWAY
No. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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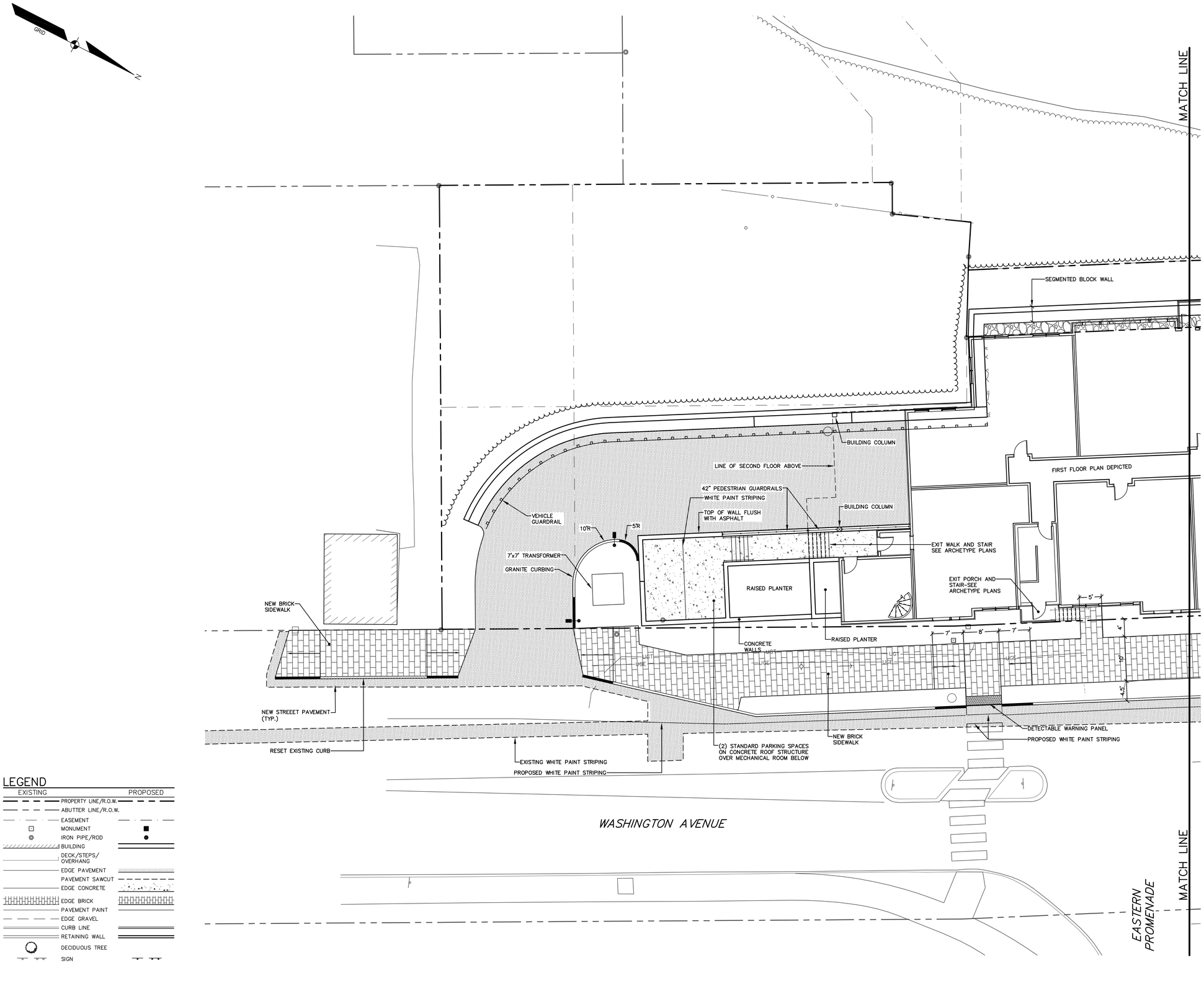
250 Goddard Rd. Suite B Lewiston, ME. 04240 Tel. 207-783-3565

SITE PLAN LOWER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
119 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 5B OF 23

061725.dwg, TAB:061725-2



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONWAY
NO. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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SITE PLAN UPPER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 5C OF 23

061725-1.dwg, TAB:061725-3

GRID N

MATCH LINE

NOTE: NO PROPOSED CONTOURS SHOWN AT BASE OF RETAINING WALLS. EXISTING CONTOURS WILL REMAIN.

PROPOSED TREELINE

BW 36.00
TW 64.00
BW 41.00
TW 64.00
64.00 AVG. FINISH GRADE NO. 3
BW 38.00
TW 64.00
BW 40.00
BW 44.00
TW 64.00
64.00
BW 50.00
BW 60.00
TW 64.00
64.25 AVG. FINISH GRADE NO. 4

25 35 50 55 60 61 69.00 66.00 68.95 68.95 66.70 66.36 65.67 64.15 63.95 63.86 63.28 65.47 65.38 64.80 66.06 65.97 65.39 64 65 66 63 64 65 66 67 68 69 70 71

FB

WASHINGTON AVENUE

EASTERN PROMENADE

MATCH LINE

UGT

AVERAGE FINISH GRADE

66.25	AVG. FINISH GRADE NO. 1
64.00	AVG. FINISH GRADE NO. 2
64.00	AVG. FINISH GRADE NO. 3
64.25	AVG. FINISH GRADE NO. 4

258.50 SUM OF (4) CORNERS/4 =
64.63 AVERAGE FINISH GRADE

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	
--120-- --118--	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	FILTER BARRIER	FB

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

KEITH D. GRAY, PE#13313

STATE OF MAINE KEITH D GRAY 13313 REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV	BY:	DATE:	STATUS
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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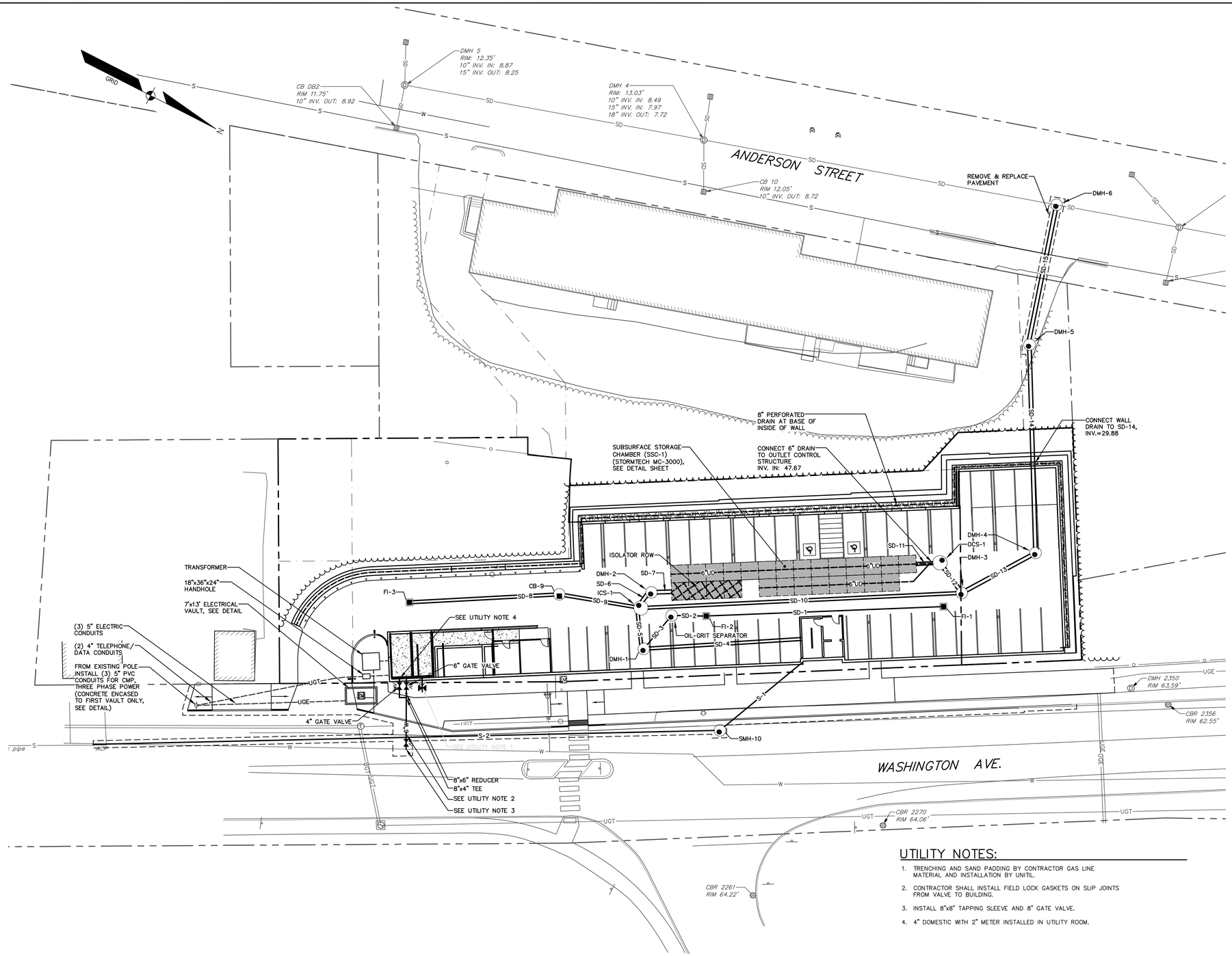
GRADING PLAN UPPER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 7D OF 23

06172GU.dwg, TAB: 06172GU-5



STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-9	58.70	53.00 (SD-8)	53.00 (SD-9)	48"
DMH-1	58.90	52.50 (SD-4) 54.05 (SD-3)	52.50 (SD-5)	48"
DMH-2	58.60	51.25 (SD-7)	51.32 (SD-6)	48"
DMH-3	58.40	47.00 (SD-10) 47.00 (SD-12)	47.00 (SD-13)	48"
DMH-4	58.80	14.00 (SD-14) 43.37 (SD-13)		48"
DMH-5	35.08	7.45 (SD-15)	23.98 (SD-14)	48"
DMH-6	18.44		14.00 (SD-15)	48"
FI-1	58.30		55.30 (SD-1)	???"
FI-2	58.30	54.52 (SD-1) 54.41 (SD-2)		???"
FI-3	62.55		53.80 (SD-8)	???"
ICS-1	58.50	51.28 (SD-6) 51.32 (SD-9) 51.32 (SD-5)	51.32 (SD-10)	60"
OCS-1	58.60	51.16 (SD-11)	47.67 (SD-12)	60"
OIL-GRIT SEPARATOR	58.40		54.52 (SD-2) 54.41 (SD-3)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	10"	95'	0.817%
SD-2	10"	11'	1.016%
SD-3	10"	14'	2.580%
SD-4	12"	62'	2.064%
SD-5	12"	13'	9.212%
SD-6	15"	4'	1.187%
SD-7	15"	6'	0.505%
SD-8	12"	58'	1.377%
SD-9	12"	29'	5.741%
SD-10	12"	127'	3.408%
SD-11	12"	7'	1.274%
SD-12	15"	11'	6.283%
SD-13	15"	30'	12.000%
SD-14	15"	81'	12.296%
SD-15	15"	54'	12.069%

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-10	65.30	57.75 (S-1)	57.65 (S-2)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
S-1	8"	41'	1.503%
S-2	8"	254'	1.122%

UTILITY NOTES:

1. TRENCHING AND SAND PADDING BY CONTRACTOR GAS LINE MATERIAL AND INSTALLATION BY UNITIL.
2. CONTRACTOR SHALL INSTALL FIELD LOCK GASKETS ON SLIP JOINTS FROM VALVE TO BUILDING.
3. INSTALL 8"x8" TAPPING SLEEVE AND 8" GATE VALVE.
4. 4" DOMESTIC WITH 2" METER INSTALLED IN UTILITY ROOM.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
□	MONUMENT	■
◎	IRON PIPE/ROD	●
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

Plan 6

KEITH D. GRAY, PE#13313

STATE OF MAINE KEITH D. GRAY 13313 REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV:	BY:	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.
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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WWW.SEBAGOTECHNICS.COM
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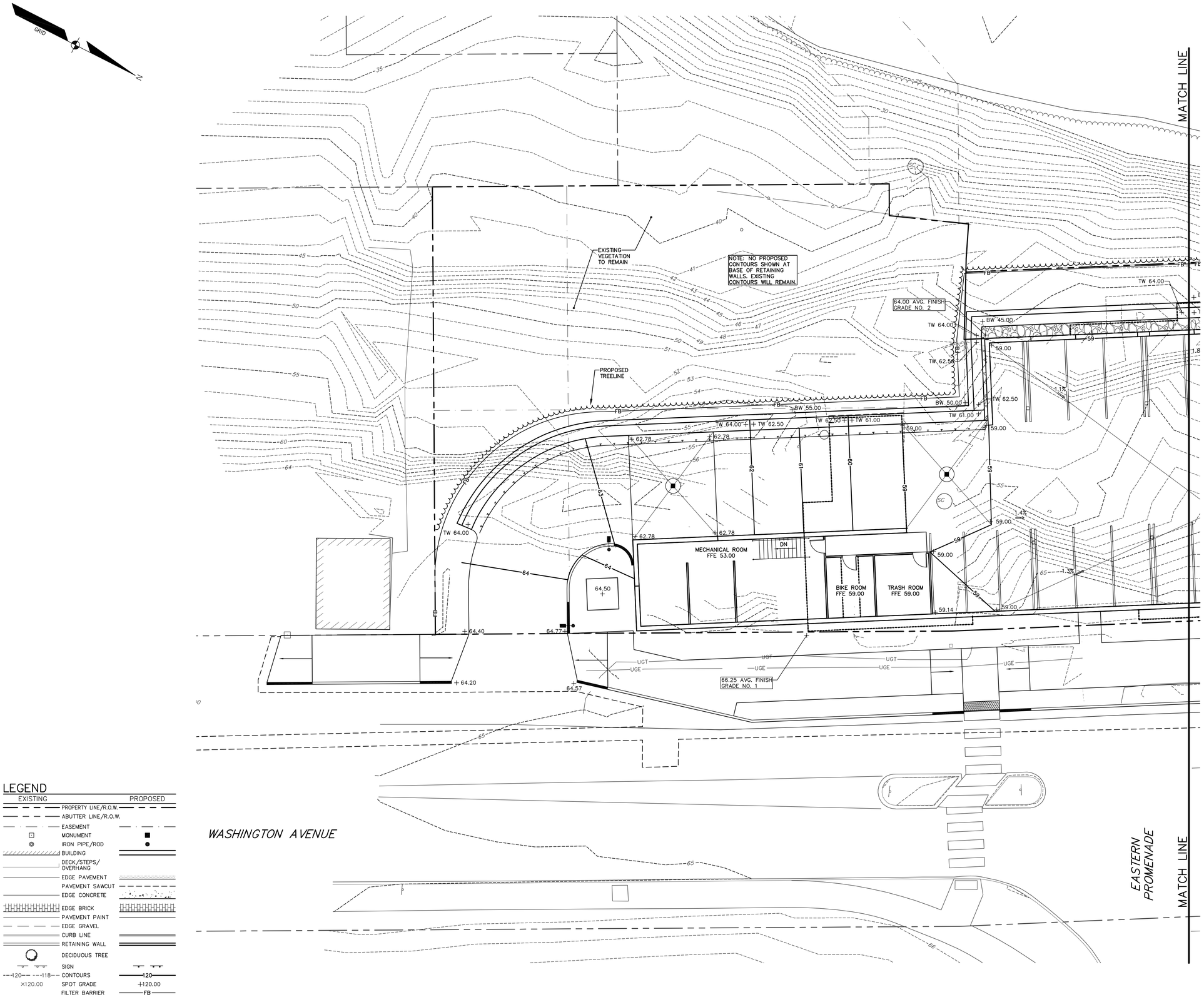
250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-753-9536

UTILITY PLAN
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 6 OF 23

06172GU.dwg, TAB: 06172GU-1



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	
--120-- --118--	CONTOURS	120
X120.00	SPOT GRADE	+120.00
	FILTER BARRIER	FB

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

Plan 7

KEITH D. GRAY, PE#13313

STATE OF MAINE · KEITH D. GRAY 13313 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-795-3535

GRADING PLAN LOWER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 7A OF 23

06172GU.dwg, TAB: 06172GU-2

MATCH LINE

GRID

NOTE: NO PROPOSED CONTOURS SHOWN AT BASE OF RETAINING WALLS. EXISTING CONTOURS WILL REMAIN.

PROPOSED TREELINE

BW 44.00
TW 64.00
BW 40.00
BW 38.00
TW 64.00
BW 36.00
TW 64.00
BW 41.00
64.00 AVG. FINISH GRADE NO. 3
BW 50.00
BW 60.00
TW 64.00
64.25 AVG. FINISH GRADE NO. 4

59.23 1.5% 59.23
59.0 1.8%
59.05 1.1%
58.30
1.4% 59.05 1.4%
1.6% 59.0
3.5% 59.0
1.5% 59.00
1.3%
3.5%

MATCH LINE

WASHINGTON AVENUE

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
⊡	MONUMENT	■
◎	IRON PIPE/ROD	●
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	
--120-- --118--	CONTOURS	120
X120.00	SPOT GRADE	+120.00
	FILTER BARRIER	FB

KEITH D. GRAY, PE#13313

STATE OF MAINE · KEITH D. GRAY · 13313 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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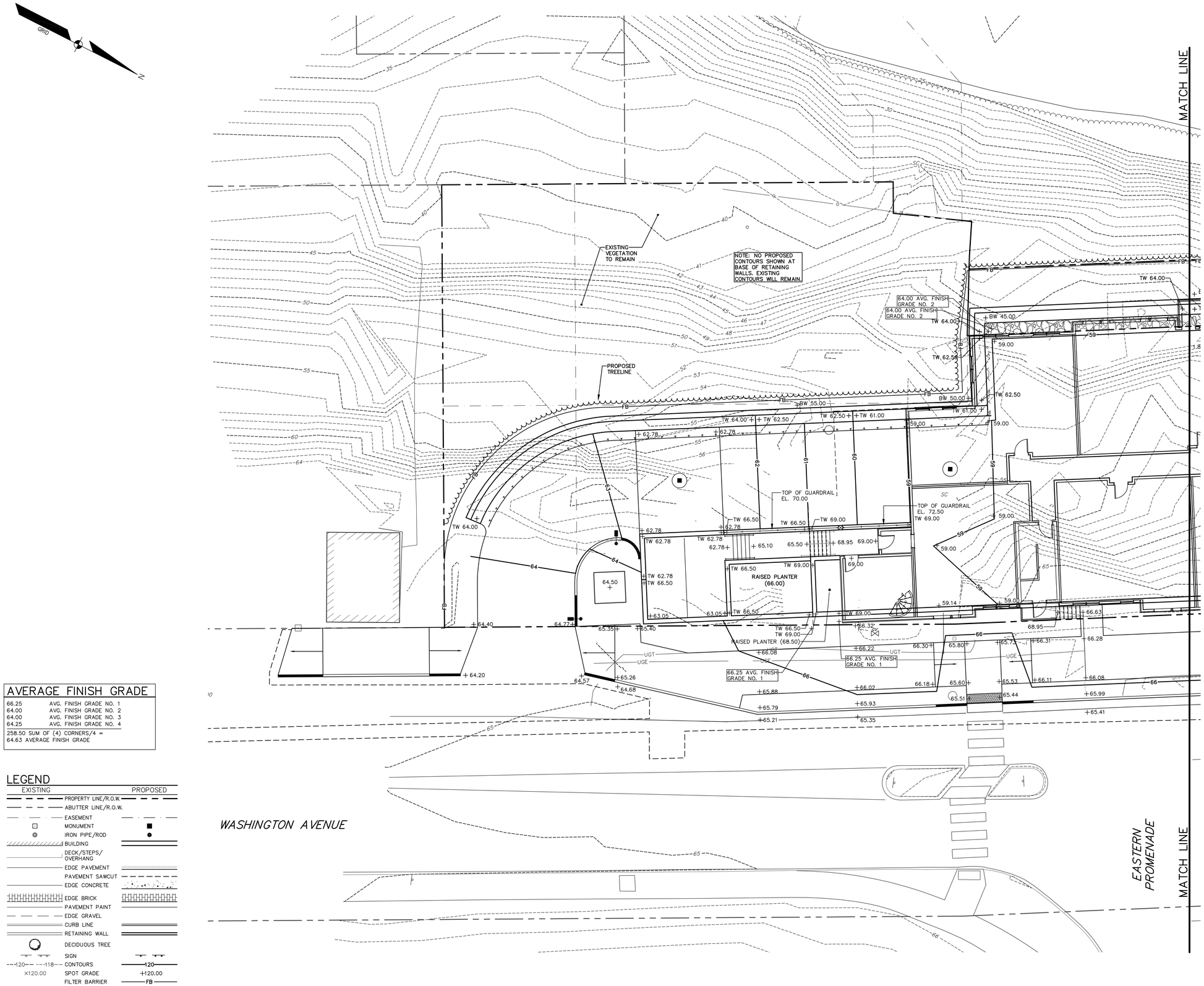
GRADING PLAN LOWER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 7B OF 23

06172GDJ.dwg, TAB:06172GDJ-3



AVERAGE FINISH GRADE

66.25	AVG. FINISH GRADE NO. 1
64.00	AVG. FINISH GRADE NO. 2
64.00	AVG. FINISH GRADE NO. 3
64.25	AVG. FINISH GRADE NO. 4

258.50 SUM OF (4) CORNERS/4 =
64.63 AVERAGE FINISH GRADE

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
⊡	MONUMENT	■
⊗	IRON PIPE/ROD	●
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	
--120-- --118--	CONTOURS	120
X120.00	SPOT GRADE	+120.00
	FILTER BARRIER	FB

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

KEITH D. GRAY, PE#13313

STATE OF MAINE · KEITH D. GRAY 13313 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
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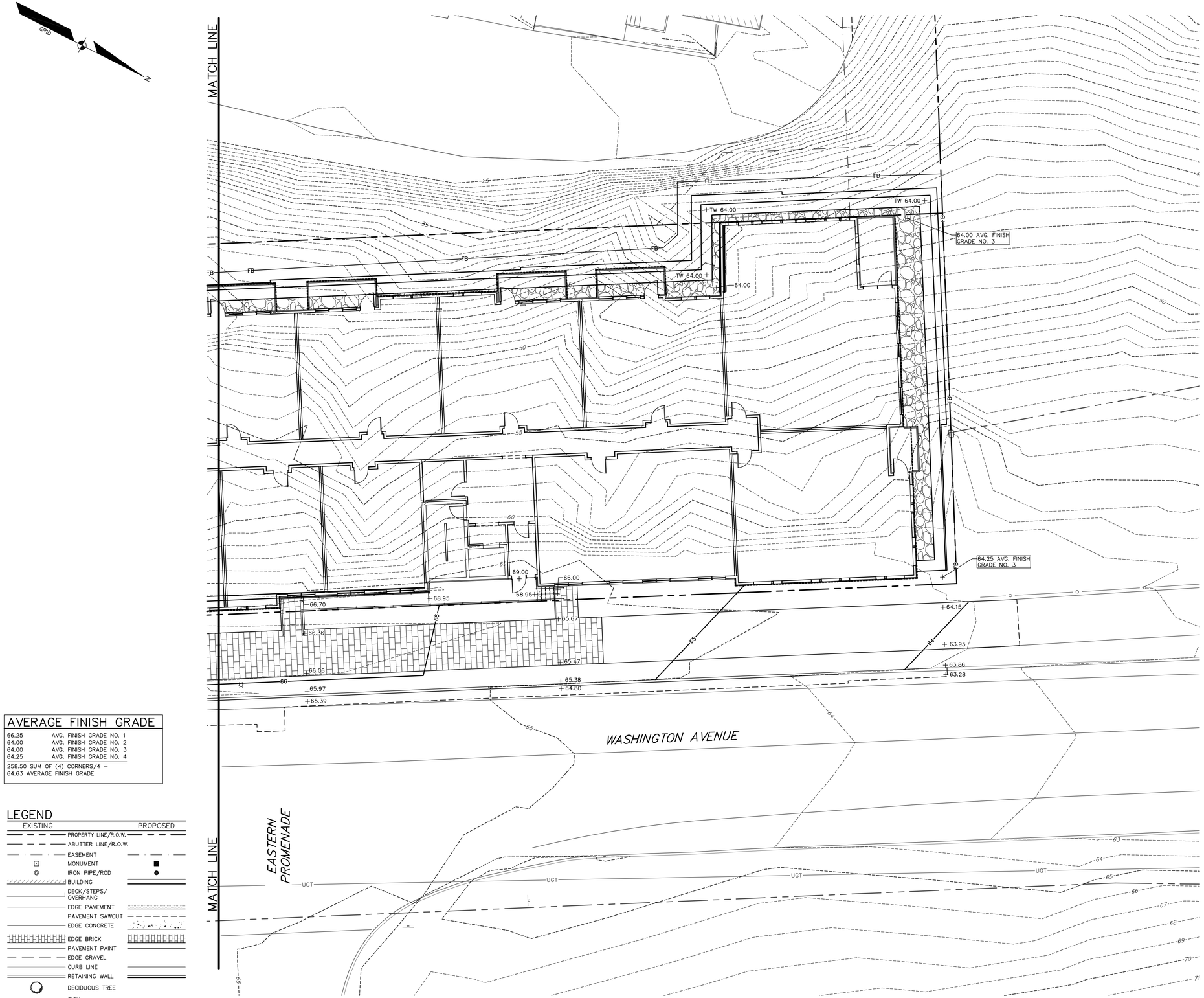
GRADING PLAN UPPER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 7C OF 23

06172GU.dwg, TAB: 06172GU-4



AVERAGE FINISH GRADE

66.25	AVG. FINISH GRADE NO. 1
64.00	AVG. FINISH GRADE NO. 2
64.00	AVG. FINISH GRADE NO. 3
64.25	AVG. FINISH GRADE NO. 4

258.50 SUM OF (4) CORNERS/4 =
64.63 AVERAGE FINISH GRADE

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
□	MONUMENT	■
◎	IRON PIPE/ROD	●
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	
--120-- --118--	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	FILTER BARRIER	FB

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

KEITH D. GRAY, PE#13313

STATE OF MAINE KEITH D. GRAY 13313 REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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GRADING PLAN UPPER LEVEL
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

06172GDU.dwg, TAB: 06172GDU-5

EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED FROM RUNNING ONTO THE STOCKPILE. MAINTAIN THE SEDIMENT BARRIERS BY REMOVING ACCUMULATED SEDIMENT, OR REMOVING AND REPLACING THE BARRIER, UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. WHERE A DISCHARGE TO A STORM DRAIN INLET OCCURS, IF THE STORM DRAIN CARRIES WATER DIRECTLY TO A SURFACE WATER AND YOU HAVE AUTHORITY TO ACCESS THE STORM DRAIN INLET, YOU MUST INSTALL AND MAINTAIN PROTECTION MEASURES THAT REMOVE SEDIMENT FROM THE DISCHARGE.

PRIOR TO CONSTRUCTION, PROPERLY INSTALL A STABILIZED CONSTRUCTION ENTRANCE (SCE) AT ALL POINTS OF EGRESS FROM THE SITE. THE SCE IS A STABILIZED PAD OF AGGREGATE, UNDERLAIN BY A GEOTEXTILE FILTER FABRIC, USED TO PREVENT TRAFFIC FROM TRACKING MATERIAL AWAY FROM THE SITE ONTO PUBLIC ROWS. MAINTAIN THE SCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

DURING CONSTRUCTION

1. INSPECTION AND CORRECTIVE ACTION:
   INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.

2. MAINTENANCE:
   IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPS OR SIGNIFICANT REPAIR OF BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

3. DOCUMENTATION:
   KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.

   THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

POST-CONSTRUCTION

1. PLAN:
   CARRY OUT AN APPROVED INSPECTION AND MAINTENANCE PLAN THAT IS CONSISTENT WITH THE MINIMUM REQUIREMENTS OF THIS SECTION. THE PLAN MUST ADDRESS INSPECTION AND MAINTENANCE OF THE PROJECT'S PERMANENT EROSION CONTROL MEASURES AND STORMWATER MANAGEMENT SYSTEM. THIS PLAN MAY BE COMBINED WITH THE PLAN LISTED IN SECTION 2(A) OF THIS APPENDIX. SEE SECTION 7(C)(2) FOR SUBMISSION REQUIREMENTS.

2. INSPECTION AND MAINTENANCE:
   ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS. THE FOLLOWING AREAS, FACILITIES, AND MEASURES MUST BE INSPECTED AND IDENTIFIED DEFICIENCIES MUST BE CORRECTED. AREAS, FACILITIES, AND MEASURES OTHER THAN THOSE LISTED BELOW MAY ALSO REQUIRE INSPECTION ON A SPECIFIC SITE. INSPECTION OR MAINTENANCE TASKS OTHER THAN THOSE DISCUSSED BELOW MUST BE INCLUDED IN THE MAINTENANCE PLAN DEVELOPED FOR A SPECIFIC SITE.

3. REGULAR MAINTENANCE:
   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. GRADING OF GRAVEL ROADS, OR GRADING OF THE GRAVEL SHOULDERS OF GRAVEL OR PAVED ROADS, MUST BE ROUTINELY PERFORMED TO ENSURE THAT STORMWATER DRAINS IMMEDIATELY OFF THE ROAD SURFACE TO ADJACENT BUFFER AREAS OR STABLE DITCHES, AND IS NOT IMPEDED BY ACCUMULATIONS OF GRADED MATERIAL ON THE ROAD SHOULDER OR BY EXCAVATION OF FALSE DITCHES IN THE SHOULDER. IF WATER BARS OR OPEN-TOP CULVERTS ARE USED TO DIVERT RUNOFF FROM ROAD SURFACES, CLEAN-OUT ANY SEDIMENTS WITHIN OR AT THE OUTLET OF THESE STRUCTURES TO RESTORE THEIR FUNCTION.

4. DOCUMENTATION:
   KEEP A LOG (REPORT) SUMMARIZING INSPECTIONS, MAINTENANCE, AND ANY CORRECTIVE ACTIONS TAKEN. THE LOG MUST INCLUDE THE DATE ON WHICH EACH INSPECTION OR MAINTENANCE TASK WAS PERFORMED, A DESCRIPTION OF THE INSPECTION FINDINGS OR MAINTENANCE COMPLETED, AND THE NAME OF THE INSPECTOR OR MAINTENANCE PERSONNEL PERFORMING THE TASK. IF A MAINTENANCE TASK REQUIRES THE CLEAN-OUT OF ANY SEDIMENTS OR DEBRIS, INDICATE WHERE THE SEDIMENT AND DEBRIS WAS DISPOSED AFTER REMOVAL. THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY PROVIDED TO THE DEPARTMENT UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST FIVE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

EROSION CONTROL APPLICATIONS & MEASURES

THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED WITHIN THE CURRENT MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION CHAPTER 500 RULES, THE DEPARTMENTS BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN.

1. POLLUTION PREVENTION:
   WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 48 HOURS.

2. TEMPORARY MULCHING:
   ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 7 DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 15%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
   TYPES OF MULCH:
   HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).
   EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.
   EROSION CONTROL 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.

3. 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.

4. NATURAL RESOURCES PROTECTION:
   ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE STABILIZED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1. OF THIS SECTION) OR OTHER NON-ERODIBLE COVER WITHIN 48 HOURS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4. OF THIS SECTION) SHALL BE PLACED BETWEEN 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. IF DISTURBANCE TAKES PLACE LESS THAN 30 FEET FROM A PROTECTED RESOURCE AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TO THE RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED.

5. SEDIMENT BARRIERS:
   PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 85%-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

   SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

   HAY BALES: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

   EROSION CONTROL MIX: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

   CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER 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.

6. TEMPORARY CHECK DAMS:
   SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALE ARE ESTABLISHED WITH AT LEAST 85%-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: SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS: WE DO NOT RECOMMEND THE USE OF HAY BALES AS CHECK DAMS.

MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

1. STORMDRAIN INLET PROTECTION:
   INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLETOR 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.

2. STABILIZED CONSTRUCTION EXIT:
   PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT OR WASHED TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS.

3. DUST CONTROL:
   DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE.

4. TEMPORARY VEGETATION:
   TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

5. PERMANENT VEGETATION:
   REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

   SEEDBED PREPARATION:
   A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

   B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)	18.4 LBS./1,000 S.F.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS./1,000 S.F.

   C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

   APPLICATION OF SEED:
   A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (MDEP SEED MIX 2 IS DISPLAYED)

SEED TYPE	APPLICATION RATE
CREEPING RED FESCUE	0.46 LBS/1,000 S.F. (20 LBS/ACRE)
REDTOP	0.05 LBS/1,000 S.F. (2 LBS/ACRE)
TALL FESCUE	0.46 LBS/1,000 S.F. (20 LBS/ACRE)
TOTAL:	0.97 LBS/1,000 S.F. (42 LBS/ACRE)

   NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER.

   B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

   C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

SODDING:

FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION:

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 8% (12.5H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIP RAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.

B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY NOVEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

C. STABILIZE THE SLOPE WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF EROSION CONTROL MIX ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. DO NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 1H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 8%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.

B. STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

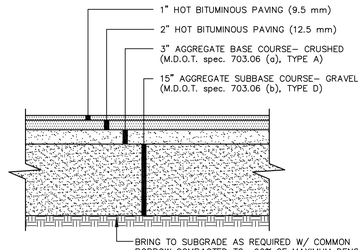
C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

D. STABILIZE THE SOIL WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A MINIMUM TWO-INCH LAYER OF EROSION CONTROL MIX ON THE SOIL BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE.

CONSTRUCTION SCHEDULE

SITE IMPROVEMENTS WILL MOST LIKELY BEGIN IN ____ DEPENDING UPON FINAL PROJECT APPROVAL. THE FOLLOWING SCHEDULE IS ANTICIPATED:

1.	ESTIMATED CONSTRUCTION TIME:	-- MONTHS
2.	EROSION CONTROL MEASURES PLACED	WEEK 1 - WEEK 2
3.	SITE CLEARING AND GRUBBING	WEEK 2 - WEEK 5
4.	CONSTRUCTION OF ROAD SUBBASE FOR ACCESS	WEEK 5 - WEEK 13
5.	STORMWATER MANAGEMENT AREA CONSTRUCTION	WEEK 7 - WEEK 9
6.	UTILITY IMPROVEMENTS AND ROADWAY CONSTRUCTION	WE

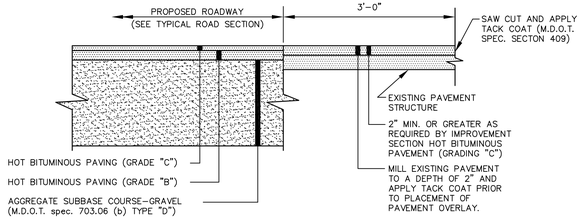


NOTES:

1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

TYP. PAVED DRIVEWAY SECTION

NOT TO SCALE



PAVEMENT SAW CUT DETAIL

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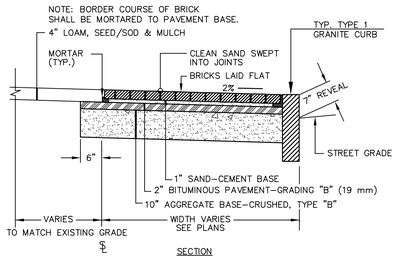

BRICK SIDEWALK DETAIL

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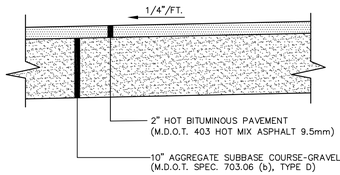

BITUMINOUS SIDEWALK

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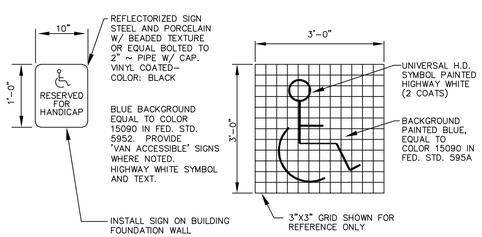
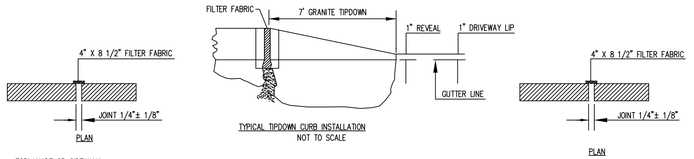


STRIPING DETAIL

HANDICAP SIGNS AND STRIPING

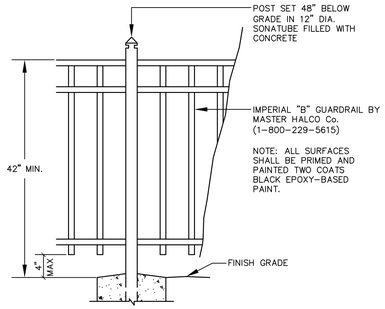
NOT TO SCALE



NOTE: NO GRANITE CURB SECTIONS SHALL BE INSTALLED LESS THAN 4 FT. IN LENGTH.

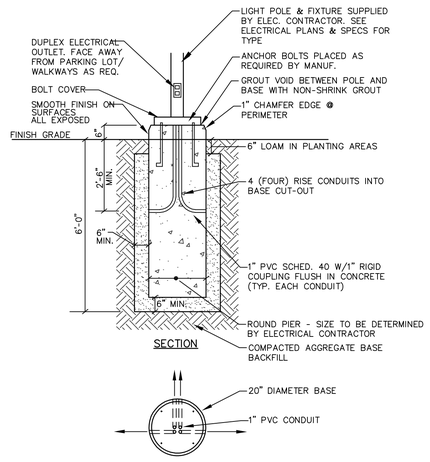
INSTALLATION OF CURB, TYPE 1

NOT TO SCALE



PEDESTRIAN GUARDRAIL (ALUMINUM TUBING)

NOT TO SCALE

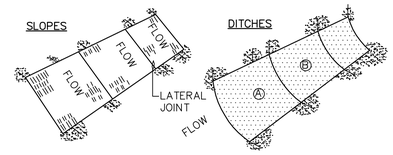


NOTES:

1. CONCRETE f'c=5000 psi. @ 28 DAYS WITH STEEL REINFORCEMENT.
2. CONDUIT AND ANCHOR BOLTS PLACED AS REQUIRED PROVIDED BY ELECTRICAL CONSTRACTOR.
3. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
4. INSTALL BASE 3'–0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
5. LIGHT POLE BASE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL

20" ROUND LIGHT POLE BASE

NOT TO SCALE

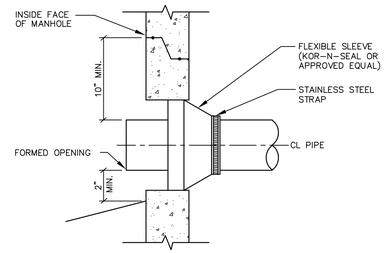


NOTES:

1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.
5. WIRE STAPLES TO BE MIN OF #11 WIRE 6" LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET

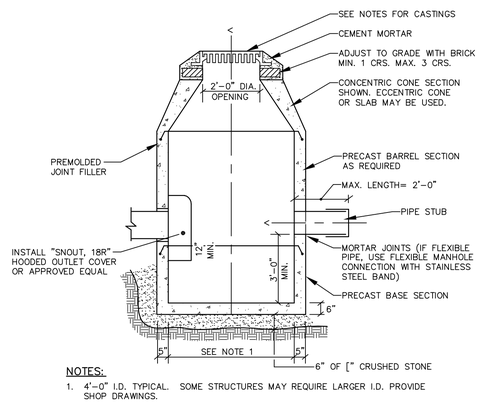
NOT TO SCALE



NOTE:
ALL NEW PENETRATIONS INTO EXISTING MANHOLES SHALL BE PERFORMED BY PORTLAND WATER DISTRICT CREWS. TO SCHEDULE WORK, CONTACT THE DISTRICT'S WASTEWATER OPERATIONS DIVISION AT LEAST TWO WORKING DAYS PRIOR TO THE DATE THE WORK IS TO BE PERFORMED.

NEW PIPE TO EXISTING MANHOLE CONNECTION – 4" TO 24"

NOT TO SCALE

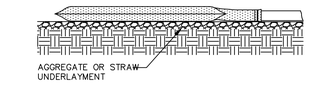


NOTES:

1. 4'–0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H–20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
5. DRAIN MANHOLE FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 1080, TYPE A OR APPROVED EQUAL, COVER SHALL BE MARKED "DRAIN".

TYPICAL DRAINAGE MANHOLE/CATCH BASIN

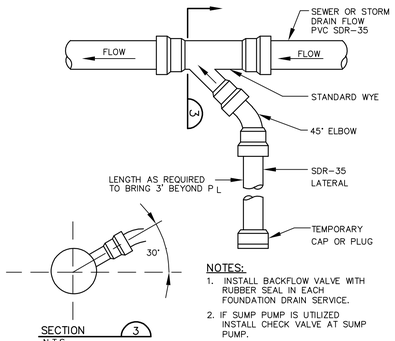
TOP VIEW



SIDE VIEW

DIRTBAG PUMPED SILT CONTROL SYSTEM

NOT TO SCALE

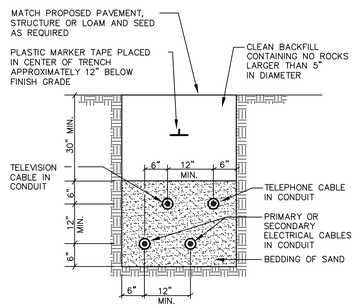


NOTES:

1. INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
2. IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.

SEWER / FOUNDATION DRAIN SERVICE CONNECTION

NOT TO SCALE



CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT.

TYPICAL UNDERGROUND CABLE INSTALLATION

NOT TO SCALE

KEITH D. GRAY, PE#13313

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. Suite 1A South Portland, ME 04106 Tel: 207-200-2100
250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-783-9826

DETAILS
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
139 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	AS SHOWN

06172D.dwg, TAB:D2

CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE PERMIT FROM THE TOWN OF BRUNSWICK.
17. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
18. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
19. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
20. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF SEBAGO TECHNICS, INC.
21. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
22. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
23. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
24. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
25. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
26. ALL SUBSURFACE UTILITY LINES SHOWN HEREON ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMH'S, CB'S, HYDRANTS, ETC.. IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO SEBAGO TECHNICS INC. BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING, ETC.. DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON AND ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA.

INSPECTIONS/MONITORING:

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, OR AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS AS NEEDED TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN.
2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 85%-90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSEKEEPING:

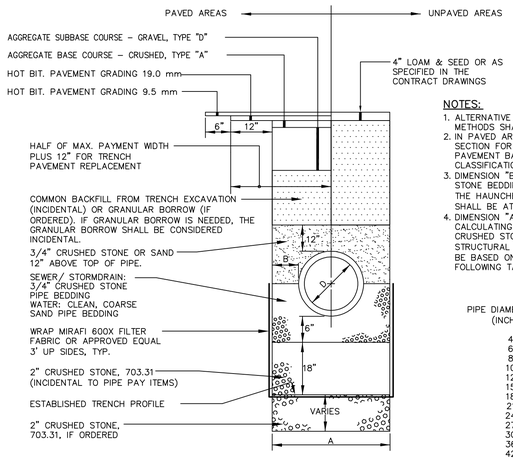
A. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

B. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

C. FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO INSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

D. DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

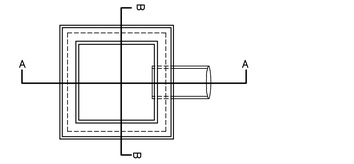
E. TRENCH DEWATERING: TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES, THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED.



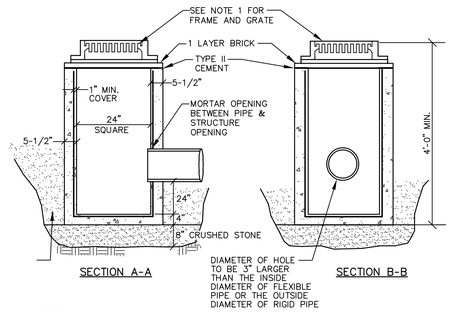
NOTES:
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS REFER TO BITUMINOUS PAVEMENT SECTION FOR DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT BASED ON THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION "B" SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES "B" SHALL BE AT LEAST 9".
4. DIMENSION "A" IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION "A" SHALL BE BASED ON PIPE DIAMETER "D", AS SET FORTH IN THE FOLLOWING TABLE.

PIPE DIAMETER, "D" (INCHES)	MAX. TRENCH WIDTH, "A" (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	4.0
15	4.0
18	5.0
21	5.0
24	5.5
27	6.0
30	6.0
36	7.0
42	8.0
48	8.0

TYPICAL PIPE INSTALLATION DETAIL
NOT TO SCALE

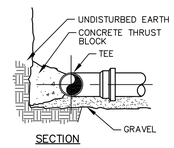


PLAN VIEW



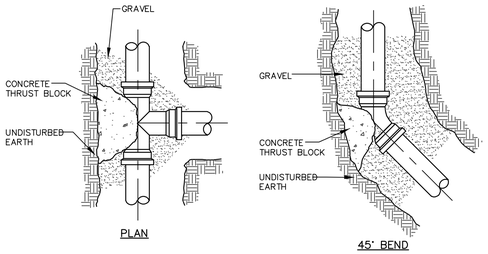
NOTES:
1. FRAME SHALL BE FOR 24" SQUARE GRATE, EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.
2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.
3. BASINS SHALL BE DESIGNED FOR H-20 WHEEL LOADING.

"TYPE F" CATCH BASIN
NOT TO SCALE



SECTION

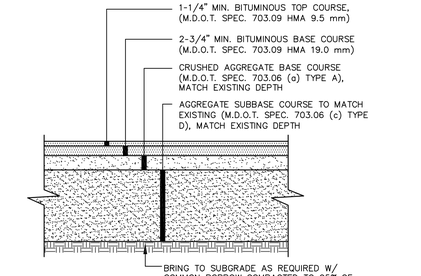
CONCRETE THRUST BLOCK SIZE REQUIREMENTS				
		SQ. FT. OF BEARING ON UNDISTURBED SOIL		
FITTINGS		90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0	3.0
	8"	8.0	4.0	6.0
	12"	15	10	10



PLAN

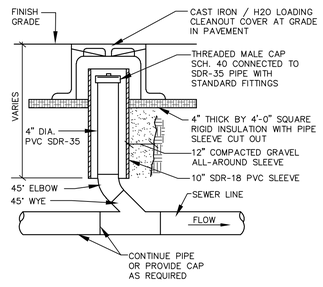
45° BEND

TEE & BEND DETAIL
NOT TO SCALE

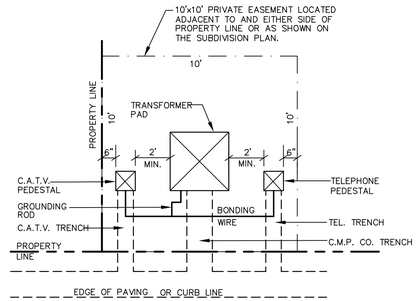


NOTES:
1. CONTRACTOR SHALL VERIFY DEPTHS WITH TOWN ENGINEER PRIOR TO PLACEMENT.
2. COMPACT GRAVEL SUBBASE AND BASE COURSES TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. HOT MIX ASPHALT SURFACE COARSE SHALL BE COMPACTED TO 95% OF ITS THEORETICAL MAXIMUM DENSITY (ASTM D-2041). BASE COARSE 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 AND ALL EXISTING PAVEMENT SURFACES WHICH ABUTS PLACEMENT OF NEW PAVEMENT.

TRENCH REPAIR IN PUBLIC R.O.W.
NOT TO SCALE

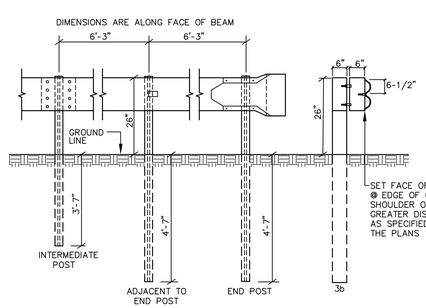


SEWER CLEANOUT IN PAVEMENT AREAS
NOT TO SCALE



NOTE:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL
NOT TO SCALE



NOTES:
1. INTERMEDIATE POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE SHOWN.
2. POSTS AND OFFSET BRACKETS FOR TYPE 3b GUARD RAIL SHALL BE W 6x9.
3. ALL HOLES IN BEAM TO BE SHOP-PUNCHED BEFORE GALVANIZING.
4. STATIONS 0+00 TO 26+00: INSTALL LOW VOLUME FLARED TERMINAL END PER MAINE DOT STANDARDS AT GUARDRAIL START. INSTALL TERMINAL END RWE03A PER MAINE DOT STANDARDS AT GUARDRAIL END. REFER TO PLAN AND PROFILE DRAWINGS FOR START/ END STATIONING ALONG MAIN ACCESS DRIVE.
5. STATIONS 26+00 TO 55+20: INSTALL SEQUENTIAL KINKING TANGENT TERMINAL END SKT-SP MANUFACTURED BY ROAD SYSTEMS, INC. OR APPROVED EQUAL AT GUARDRAIL START. INSTALL TERMINAL END RWE03A PER MAINE DOT STANDARDS AT GUARDRAIL END. REFER TO PLAN AND PROFILE DRAWINGS FOR START/ END STATIONING ALONG ACCESS DRIVE.
6. FOR ALL OTHER AREAS NOT ALONG MAIN AND SECONDARY ACCESS DRIVES, REFER TO SITE PLANS FOR TYPE OF TERMINAL ENDS.
7. PROVIDE MINIMUM 3' WIDE SHOULDER BEHIND FACE OF BEAM.

VEHICULAR GUARDRAIL (MDOT TYPE 3b)
NOT TO SCALE

KEITH D. GRAY, PE#13313

STATE OF MAINE * KEITH D GRAY 13313 * REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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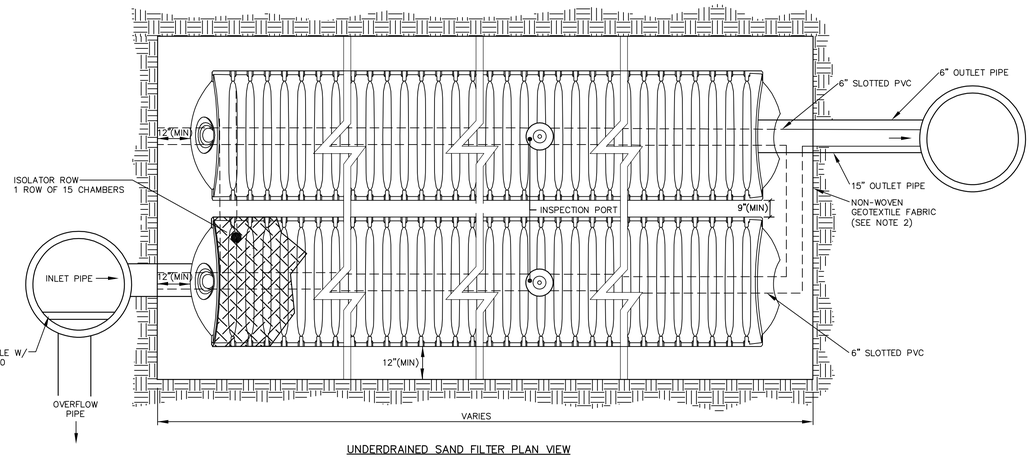
75 John Roberts Rd. Suite 1A South Portland, ME. 04106 Tel: 207-200-2100
250 Goddard Rd. Suite B Lewiston, ME. 04240 Tel: 207-755-5605

DETAILS
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

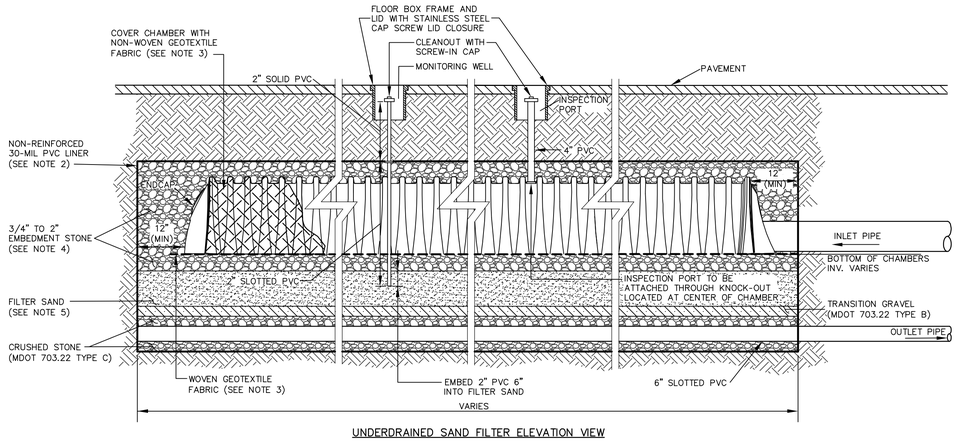
PROJECT NO.	SCALE
06172	AS SHOWN

SHEET 8C OF 23

06172D.dwg, TAB:D3



UNDERDRAINED SAND FILTER PLAN VIEW



UNDERDRAINED SAND FILTER ELEVATION VIEW

SUBSURFACE UNDERDRAINED SAND FILTER

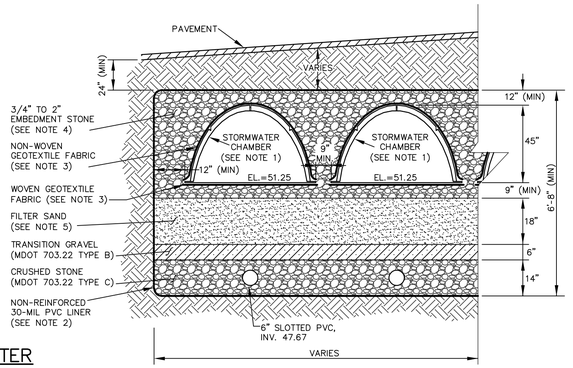
NOT TO SCALE

SUBSURFACE UNDERDRAINED SAND FILTER NOTES:

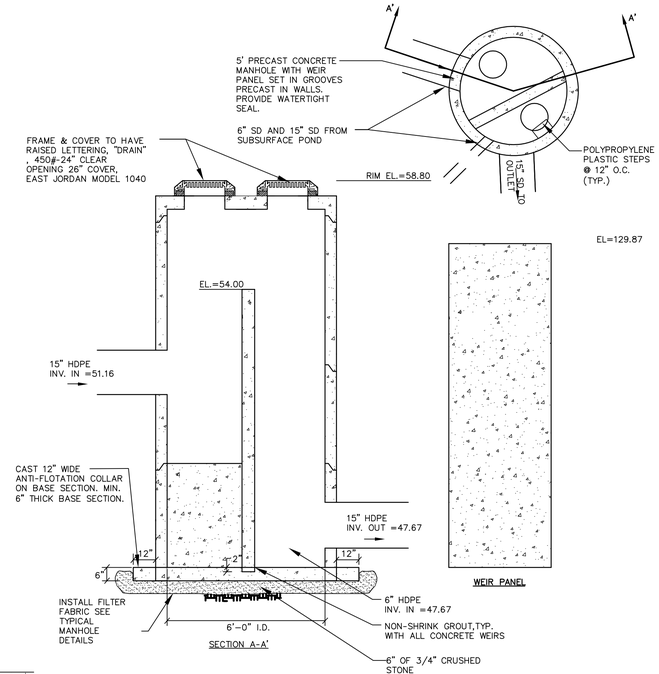
1. THE STORMWATER CHAMBER SHALL BE A STORMTECH MC-3500 OR EQUIVALENT SUBSURFACE STORAGE CHAMBER APPROVED BY THE ENGINEER.
2. THE ENTIRE SUBSURFACE SYSTEM, INCLUDING THE CRUSHED STONE STORAGE VOLUME, THE FILTER MEDIA, AND UNDERDRAIN MATERIALS, SHALL BE WRAPPED IN A NON-REINFORCED 30-MIL PVC LINER
3. A STRIP OF WOVEN GEOTEXTILE THAT MEETS AASHTO M288 CLASS ONE REQUIREMENTS (MIRAFI FW404 OR EQUIVALENT) MUST BE PLACED BETWEEN THE BOTTOM OF THE CHAMBER AND ITS STONE FOUNDATION. THIS FABRIC TRAPS SEDIMENTS AND PROTECTS THE UNDERLYING CRUSHED STONE. A SECOND STRIP OF NON-WOVEN AASHTO M288 CLASS 2 GEOTEXTILE (MIRAFI 160N OR EQUIVALENT) SHALL BE DRAPED OVER THE ENTIRE LENGTH OF THE CHAMBERS. THIS FABRIC WILL ALSO TRAP SEDIMENTS AND PROVIDE SEPARATION BETWEEN THE CHAMBERS AND SURROUNDING STONE.
4. THE EMBEDMENT STONE SURROUNDING THE CHAMBERS SHALL BE A WASHED, ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 3/4 INCH AND 2 INCH. THE BOTTOM 6 INCH LAYER OF STONE THAT ACTS AS THE FOUNDATION BELOW THE CHAMBERS SHALL BE COMPACTED TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.
5. THE SAND FILTER MATERIAL SHALL BE A UNIFORM MIX, FREE OF STONES LARGER THAN 2 INCHES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS. THE MATERIAL SHALL MEET THE SPECIFICATIONS FOR MDOT AGGREGATE SAND (MDOT #703.01). HOWEVER, THIS AGGREGATE SAND SHALL BE MIXED WITH LOAM TO ACHIEVE A MATERIAL WITH BETWEEN 8% AND 10% PASSING THE #200 SIEVE. THE LOAM USED IN THIS MIXTURE SHALL HAVE A MINIMAL CLAY CONTENT. THIS 18 INCH LAYER OF SAND FILTRATION MEDIA SHALL BE PLACED TO ACHIEVE A LEVEL OF COMPACTION BETWEEN 92% AND 95% STANDARD PROCTOR DENSITY.

CONSTRUCTION OVERSIGHT NOTES FOR SUBSURFACE SAND FILER:

1. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE PROPOSED SUBSURFACE CHAMBERS AND ITS FILTER COURSE MATERIAL TO BE BUILT ON THE SITE. INSPECTIONS SHALL CONSIST OF AN APPROPRIATE NUMBER OF VISITS TO THE SITE TO INSPECT THE INSTALLATION OF THE SUBGRADE, FILTER BED MATERIAL PLACEMENT, INSTALLATION OF STONE, ISOLATOR ROW AND CHAMBER, SURROUNDING STONE, FABRIC LAYMENT AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL PAVER PLACEMENT.



UNDERDRAINED SAND FILTER SECTION



NOTE:
SUBMIT SHOP DRAWINGS AND STRUCTURE SPECIFICATIONS FOR OWNER/ENGINEER APPROVAL.

OUTLET CONTROL STRUCTURE (OCS-1)

NOT TO SCALE

HOUSEKEEPING:

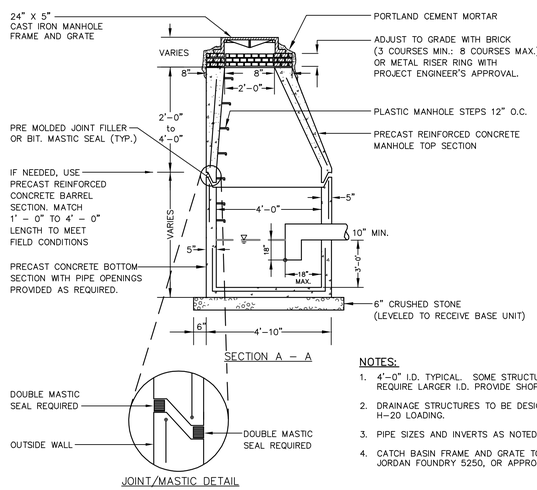
A. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

B. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

C. FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO INSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

D. DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

E. TRENCH DEWATERING: TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES, THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED.



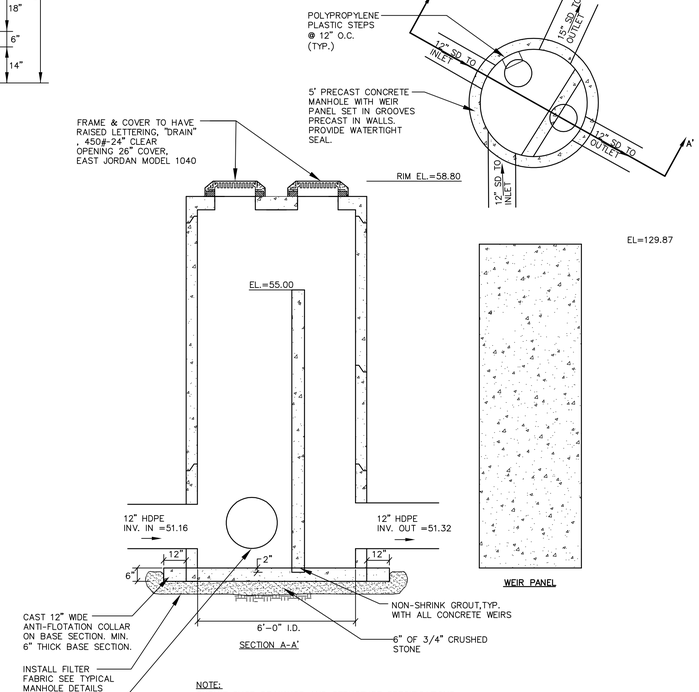
JOINT/MASTIC DETAIL

NOTES:

1. 4'–0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H–20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 5250, OR APPROVED EQUAL.

OIL / GRIT SEPARATOR

NOT TO SCALE



NOTE:
SUBMIT SHOP DRAWINGS AND STRUCTURE SPECIFICATIONS FOR OWNER/ENGINEER APPROVAL.

INLET CONTROL STRUCTURE (ICS-1)

NOT TO SCALE

KEITH D. GRAY, PE#13313

STATE OF MAINE
KEITH D. GRAY 13313
REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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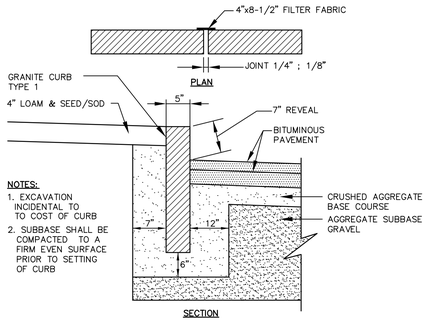
Tel. 207-753-9825

DETAILS
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	AS SHOWN

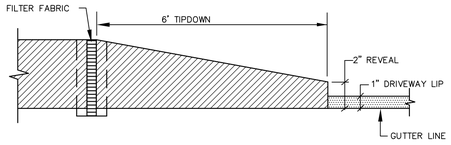
SHEET 8D OF 23

06172D.dwg, TAB:D4



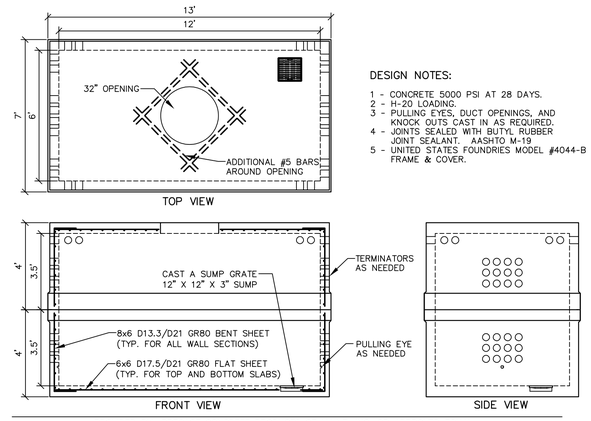
VERTICAL GRANITE CURB

NOT TO SCALE



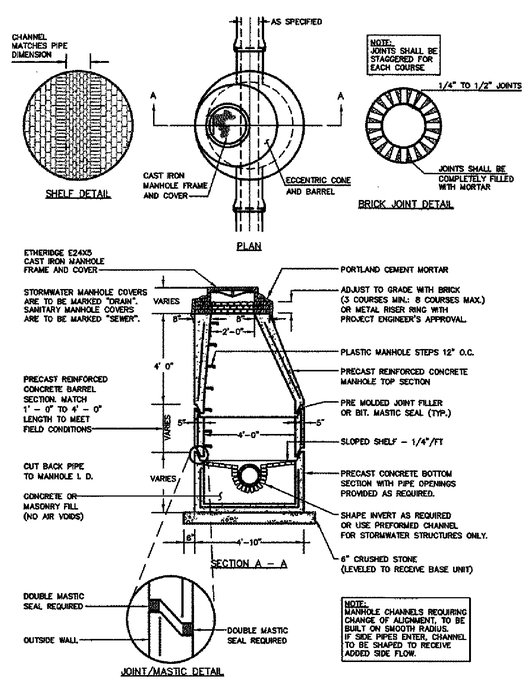
TYPICAL TIPDOWN CURB INSTALLATION

NOT TO SCALE



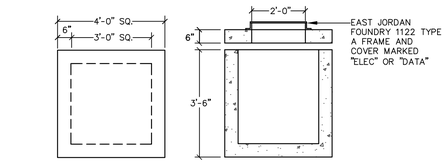
ELECTRICAL UTILITY VAULT DETAIL

NOT TO SCALE



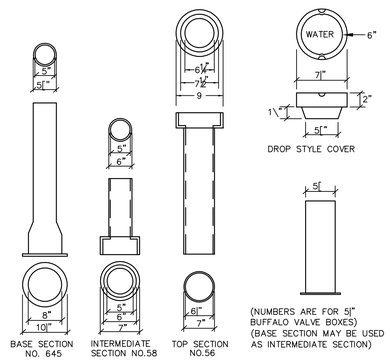
PRECAST CONCRETE SEWER MANHOLE

NOT TO SCALE



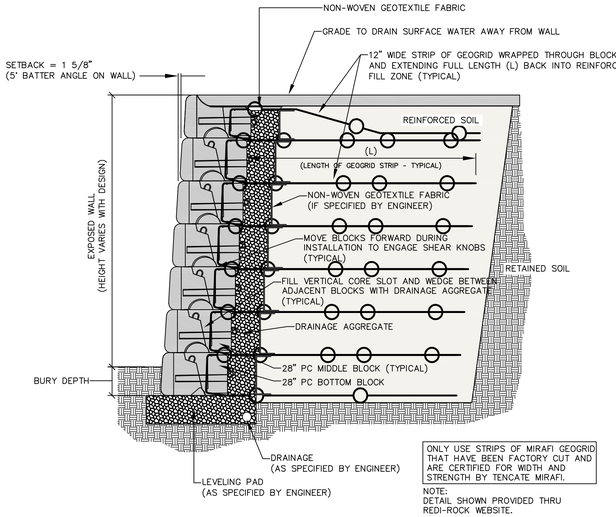
UTILITY PULL BOX

NOT TO SCALE



VALVE BOX & COVER

NOT TO SCALE



TYPICAL REINFORCED WALL SECTION

NOT TO SCALE

KEITH D. GRAY, PE#13313

STATE OF MAINE * KEITH D. GRAY 13313 * REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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DETAILS
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	AS SHOWN

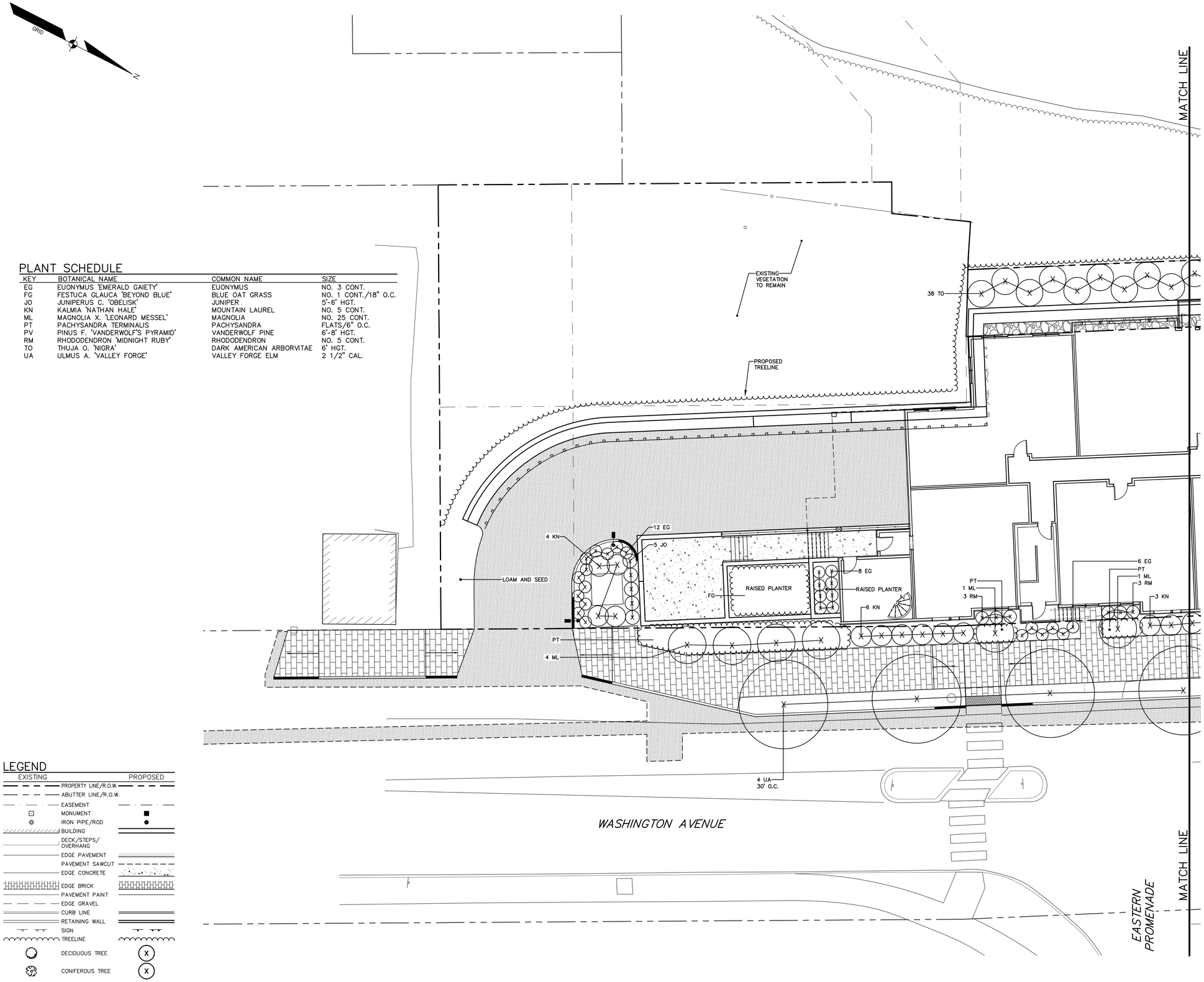
SHEET 8E OF 23

06172D.dwg, TAB:D5

Plan 9

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE
EG	EUONYMUS 'EMERALD GAIETY'	EUONYMUS	NO. 3 CONT.
FG	FESTUCA GLAUCA 'BEYOND BLUE'	BLUE OAT GRASS	NO. 1 CONT./18" O.C.
JO	JUNIPERUS C. 'OBELISK'	JUNIPER	5'-6' HGT.
KN	KALMIA 'NATHAN HALE'	MOUNTAIN LAUREL	NO. 5 CONT.
ML	MAGNOLIA X. 'LEONARD MESSEL'	MAGNOLIA	NO. 25 CONT.
PT	PACHYSANDRA TERMINALIS	PACHYSANDRA	FLATS/6" O.C.
PV	PINUS F. 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	6'-8' HGT.
RM	RHODODENDRON 'MIDNIGHT RUBY'	RHODODENDRON	NO. 5 CONT.
TO	THUJA O. 'NIGRA'	DARK AMERICAN ARBORVITAE	6' HGT.
UA	ULMUS A. 'VALLEY FORGE'	VALLEY FORGE ELM	2 1/2" CAL.



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	SIGN	
	TREELINE	
	DECIDUOUS TREE	X
	CONIFEROUS TREE	X

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

REGISTERED LANDSCAPE ARCHITECT
WILLIAM T. CONWAY
NO. 205
STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY OF SUBMITTAL NO. 1

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250 Goddard Rd. Suite B Lewiston, ME 04240 Tel: 207-783-9826

LANDSCAPE PLAN
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 9A OF 23

06172L.dwg, TAB: 06172L-1

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE
EG	EUONYMUS 'EMERALD GAIETY'	EUONYMUS	NO. 3 CONT.
FG	FESTUCA GLAUCA 'BEYOND BLUE'	BLUE OAT GRASS	NO. 1 CONT./18" O.C.
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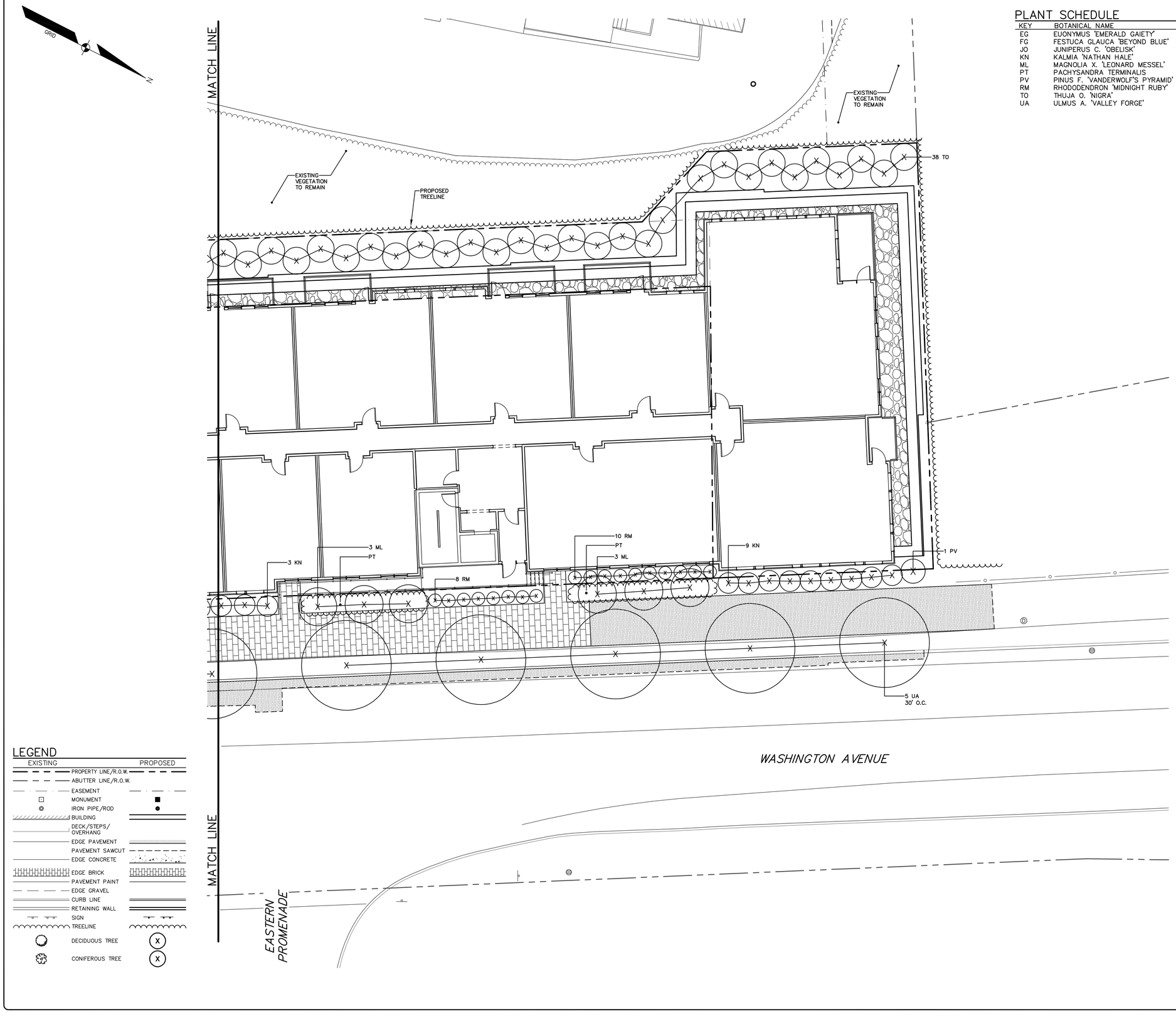
KN	KALMIA 'NATHAN HALE'	MOUNTAIN LAUREL	NO. 5 CONT.
ML	MAGNOLIA X. 'LEONARD MESSEL'	MAGNOLIA	NO. 25 CONT.
PT	PACHYSANDRA TERMINALIS	PACHYSANDRA	FLATS/6" O.C.
PV	PINUS F. 'VANDERWOLF'S PYRAMID'	VANDERWOLF PINE	6'-8' HGT.
RM	RHODODENDRON 'MIDNIGHT RUBY'	RHODODENDRON	NO. 5 CONT.
TO	THUJA O. 'NIGRA'	DARK AMERICAN ARBORVITAE	6' HGT.
UA	ULMUS A. 'VALLEY FORGE'	VALLEY FORGE ELM	2 1/2" CAL.



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	EDGE BRICK	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	SIGN	
	TREELINE	
	DECIDUOUS TREE	X
	CONIFEROUS TREE	X

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FT.

WILLIAM T. CONWAY No. 208 REGISTERED LANDSCAPE ARCHITECT STATE OF MAINE

DESIGNED	CHECKED
WTC	WTC

REV.	BY:	DATE:	STATUS:
B	WTC	04/11/17	CITY SUBMITTAL NO. 3
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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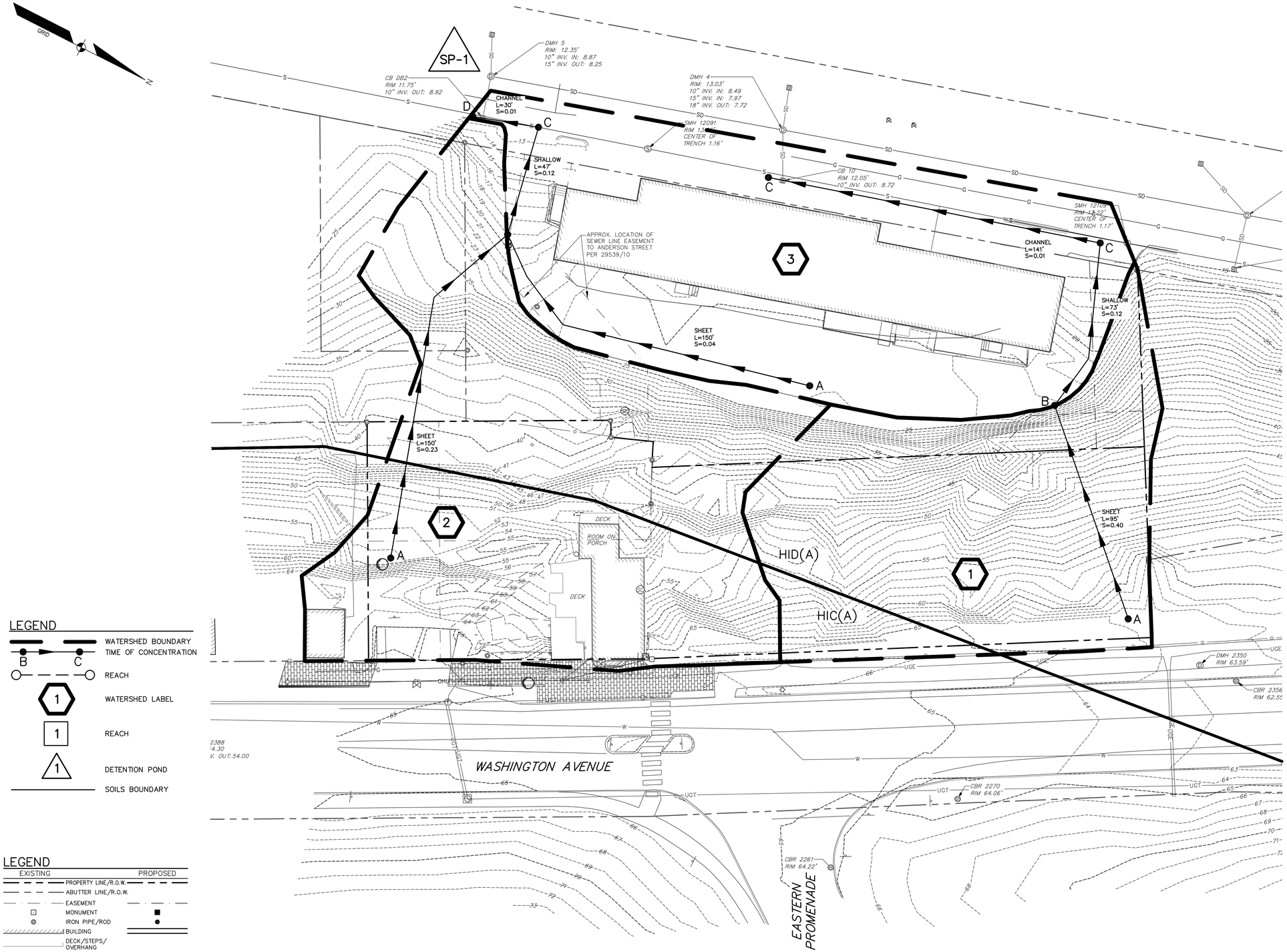
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. Suite 1A South Portland, ME. 04106 Tel: 207-200-2100
250 Goddard Rd. Suite B Lewiston, ME. 04240 Tel: 207-783-9826

LANDSCAPE PLAN
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 10'

SHEET 9B OF 23

06172L.dwg, IAB: 06172L-2



LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION (B – C)
- REACH
- WATERSHED LABEL (1)
- REACH (1)
- DETENTION POND (1)
- SOILS BOUNDARY

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	EASEMENT	
	MONUMENT	
	IRON PIPE/ROD	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	RETAINING WALL	
	DECIDUOUS TREE	
	SIGN	

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

Plan 10

KEITH D. GRAY, PE#13313

STATE OF MAINE · KEITH D. GRAY · 13313 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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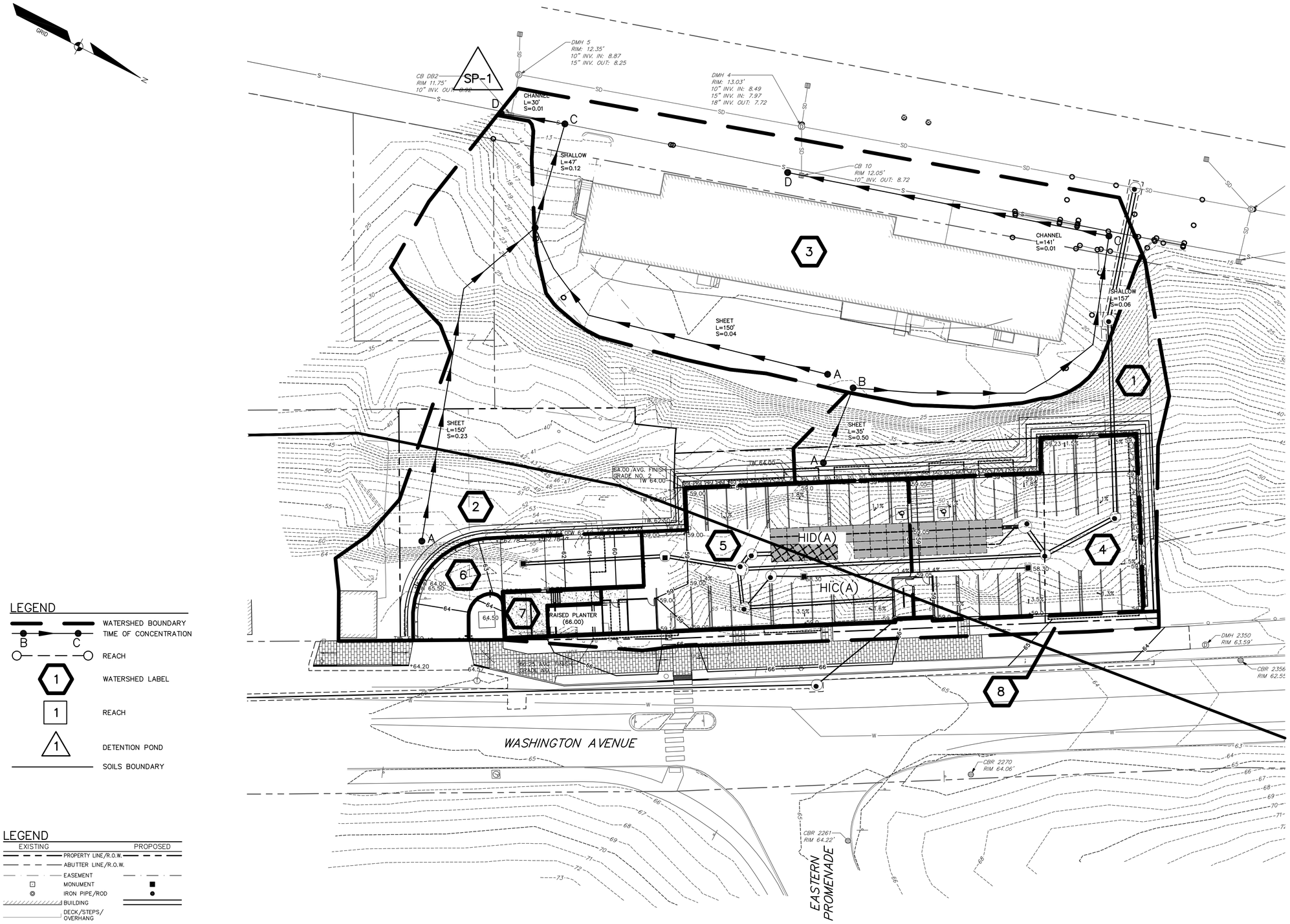
PRE DEVELOPMENT WATERSHED PLAN
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 7E OF 23

06172SWP-dwg, TAB:06172SWP-PRE



LEGEND

- WATERSHED BOUNDARY
- TIME OF CONCENTRATION (B – C)
- REACH
- WATERSHED LABEL (1)
- REACH (1)
- DETENTION POND (1)
- SOILS BOUNDARY

LEGEND

EXISTING		PROPOSED
PROPERTY LINE/R.O.W.		
ABUTTER LINE/R.O.W.		
EASEMENT		
MONUMENT		
IRON PIPE/ROD		
BUILDING		
DECK/STEPS/ OVERHANG		
EDGE PAVEMENT		
PAVEMENT SAWCUT		
EDGE CONCRETE		
PAVEMENT PAINT		
EDGE GRAVEL		
CURB LINE		
RETAINING WALL		
DECIDUOUS TREE		
SIGN		

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

KEITH D. GRAY, PE#13313

STATE OF MAINE · KEITH D. GRAY 13313 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED	CHECKED
KDG	KDG

REV.	BY:	DATE:	STATUS:
A	WTC	12/15/16	CITY SUBMITTAL NO. 1

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POST-DEVELOPMENT WATERSHED PLAN
OF:
218-220 WASHINGTON AVENUE
218-220 WASHINGTON AVENUE
PORTLAND, MAINE
FOR:
218-220 WASHINGTON AVENUE LLC
199 ELDERBERRY ROAD
SOUTH PORTLAND, MAINE 04106

PROJECT NO.	SCALE
06172	1" = 20'

SHEET 7F OF 23

06172SWF.dwg, TAB:06172SWF-POST

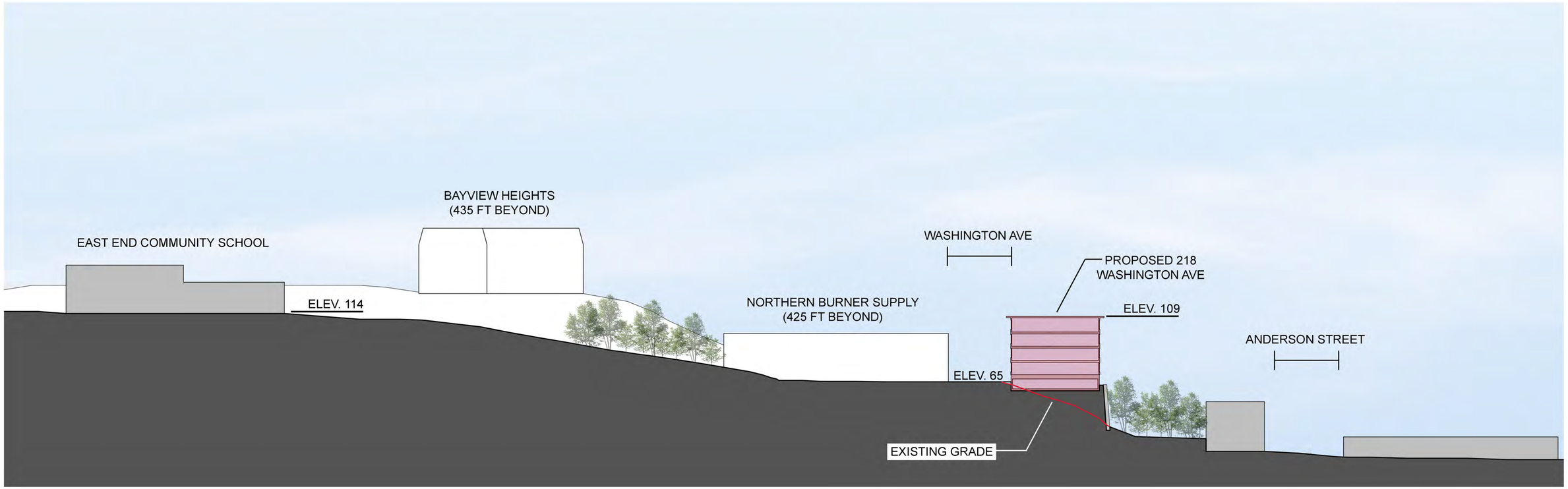
218 WASHINGTON AVE

SITE CONTEXT

Portland, Maine

November 2016

ARCHETYPE architects



218 WASHINGTON AVE SITE SECTION

Portland, Maine

November 2016

ARCHETYPE architects

POSITIVE CONNECTION SYSTEM WALLS AASHTO LOAD RESISTANCE FACTOR DESIGN

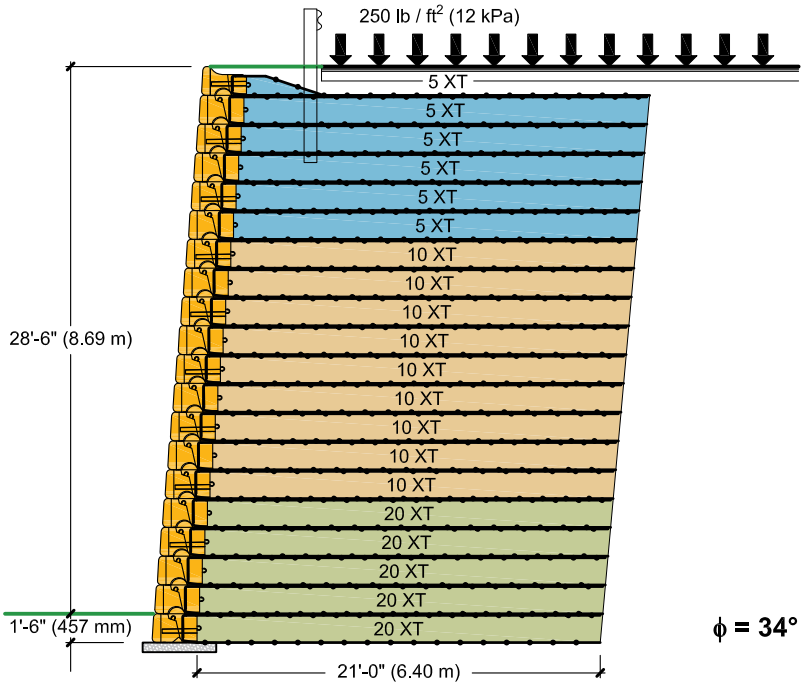
Preliminary Reinforcement Schedule

ϕ = 34° | DENSE WELL-GRADED SAND or SAND AND GRAVEL

LOAD CONDITION B | 250 lb/ft^2 (12 kPa) LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

20 BLOCK SECTION *
(20) 28" (710 mm) Blocks

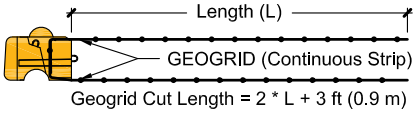
Geogrid Rolls Required per Wall Length		
Type	*Rolls / linear ft*	*Rolls / linear m*
5XT	± 0.39	± 1.28
10XT	± 0.59	± 1.92
20XT	± 0.33	± 1.07



Legend:

= 28" (710mm) BLOCK

= 41" (1030 mm) BLOCK



Geogrid shall be 12" (305 mm) wide strips of Mirafi geogrid, type as noted. Geogrid shall be **factory cut** and **certified** for width and strength by TenCate Mirafi.

*** Not tall enough? You can build significantly taller walls with the Redi-Rock PC System...we just had to stop the preliminary sections somewhere. Talk to your Engineer or give us a call for more info.**

SEE NOTES AND RECOMMENDED DETAILS AT START OF PRELIM. REINFORCEMENT SCHEDULE.

© 2016 Redi-Rock International, LLC

EAST ELEVATION - WASHINGTON AVE

WEST ELEVATION - ANDERSON STREET

NORTH ELEVATION

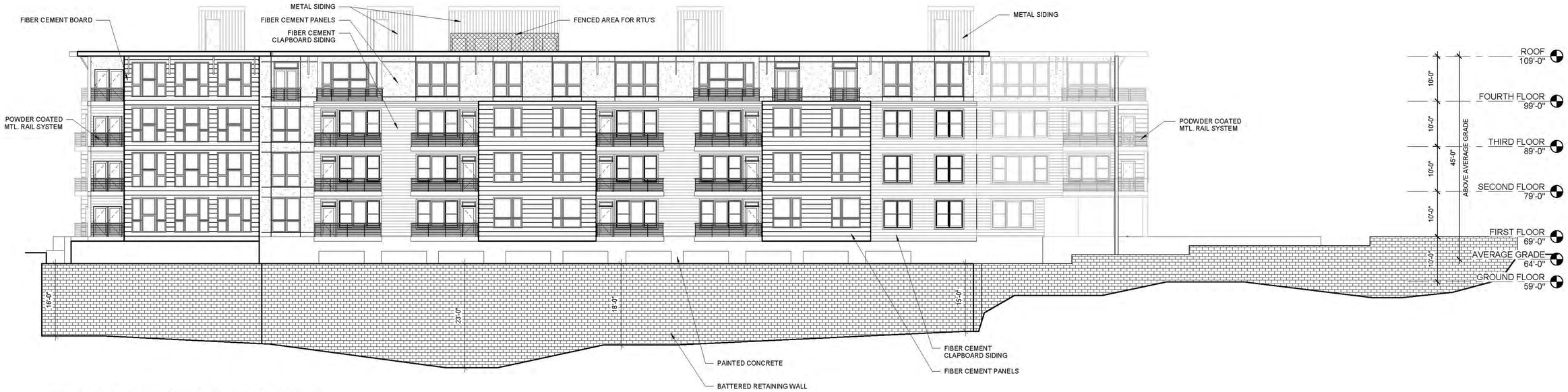
SOUTH ELEVATION

218 WASHINGTON AVE

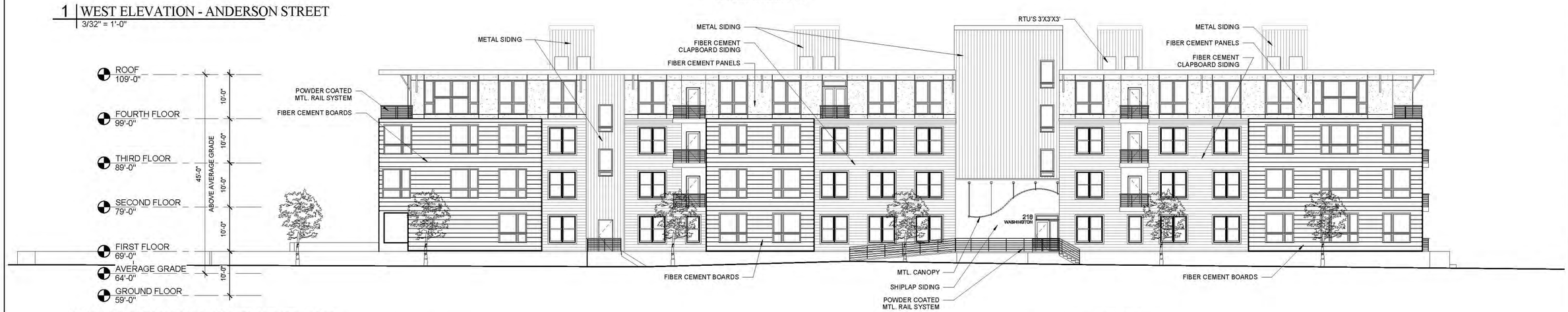
Portland, Maine

November 2016

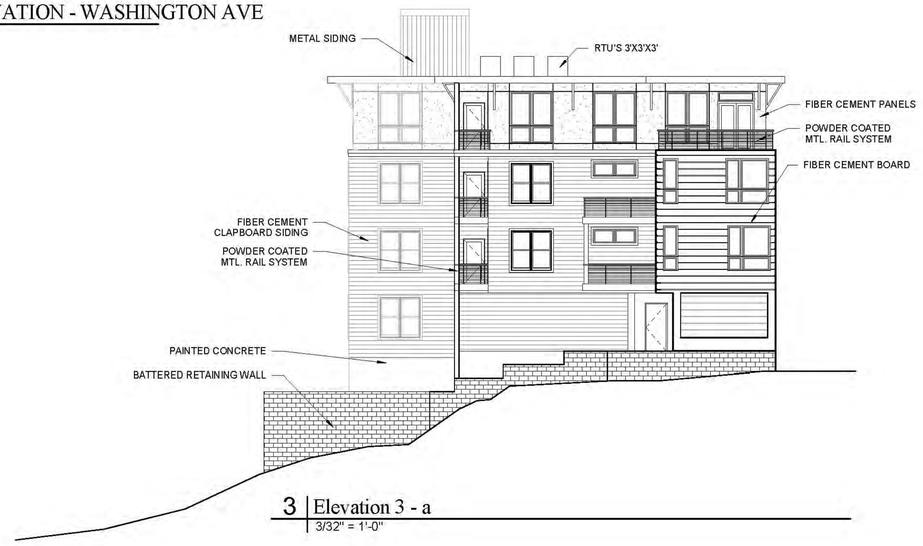
ARCHETYPE architects



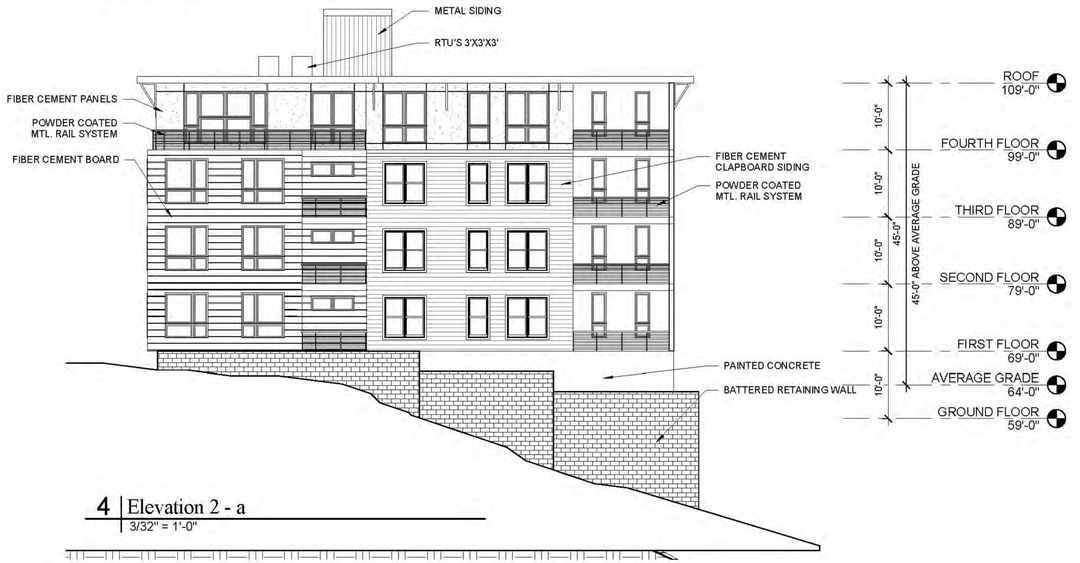
1 | WEST ELEVATION - ANDERSON STREET
3/32" = 1'-0"



2 | EAST ELEVATION - WASHINGTON AVE
3/32" = 1'-0"



3 | Elevation 3 - a
3/32" = 1'-0"



4 | Elevation 2 - a
3/32" = 1'-0"

Prepared For:
218 Washington Avenue LLC
199 Elderberry Rd.
South Portland, Maine

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-0021 ARCHETYPE@ARCHETYPEPA.COM

Project:
218 WASHINGTON AVE
218 WASHINGTON AVE
PORTLAND MAINE

Revisions:

Scale: 3/32" = 1'-0"

Date: Nov. 2016

Building Elevations

A2.01

218 WASHINGTON AVE

SITE CONTEXT ELEVATION

Portland, Maine

November 2016

ARCHETYPE architects

218 WASHINGTON AVE

SITE CONTEXT ELEVATION

Portland, Maine

November 2016

ARCHETYPE architects

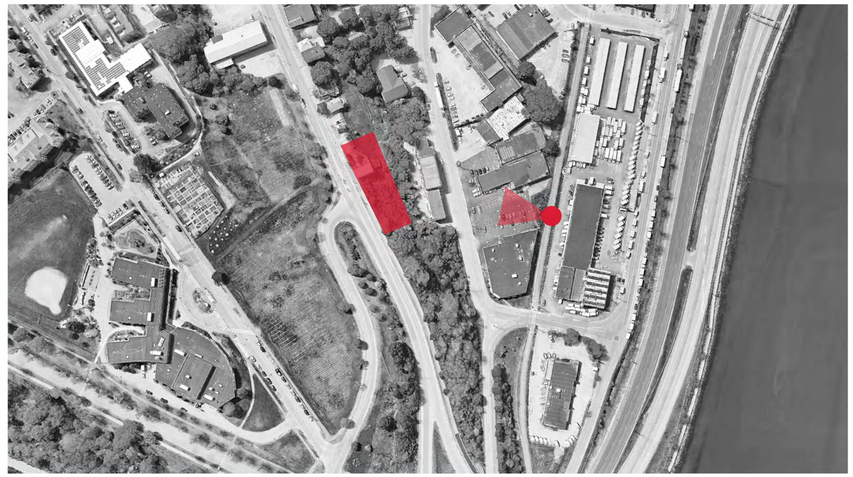
218 WASHINGTON AVE

SITE CONTEXT ELEVATION

Portland, Maine

November 2016

ARCHETYPE architects



218 WASHINGTON AVE

ANDERSON STREET PERSPECTIVE

Portland, Maine

November 2016

ARCHETYPE architects

218 WASHINGTON AVE

NORTH STREET PERSPECTIVE (TOP OF HILL)

Portland, Maine

November 2016

ARCHETYPE architects

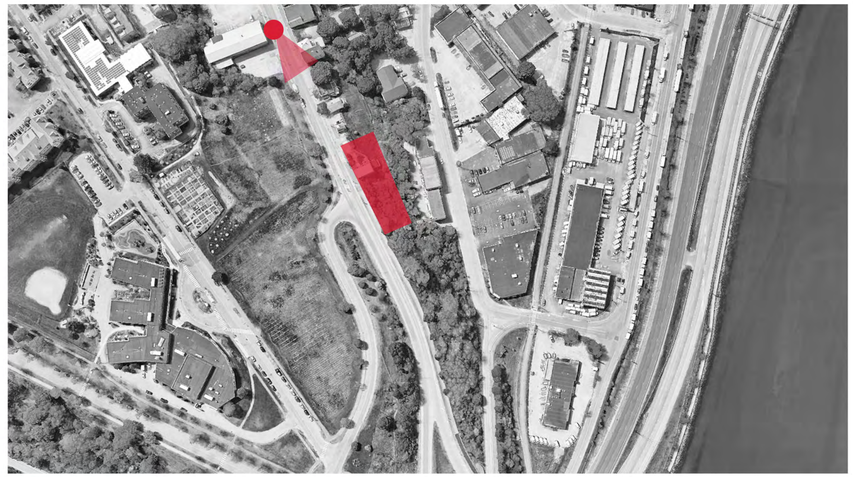
218 WASHINGTON AVE

TUKEY BRIDGE PERSPECTIVE

Portland, Maine

November 2016

ARCHETYPE architects



218 WASHINGTON AVE

WASHINGTON AVE PERSPECTIVE

Portland, Maine

November 2016

ARCHETYPE architects

Memorandum
Planning and Urban Development Department
Planning Division

To: Elizabeth Boepple, Chair and Members of the Portland Planning Board

From: Barbara Barhydt, Development Review Services Manager

Date: May 3, 2017

Re: Division 30. Affordable Housing – Proposed Text Amendments

Meeting Date: May 9, 2017

I. INTRODUCTION

The Housing Committee has been evaluating regulatory tools to encourage and support the creation of affordable housing in Portland. The Housing Committee reviewed proposed amendments to Division 30. Affordable Housing and voted at their March 30th meeting to forward the proposed amendments to the Planning Board for review and a recommendation to City Council.

Notice of the workshop appeared in the Portland Press Herald on May 1 and May 2 and notices were distributed electronically to the interested citizen list. At the time of writing this memo, there are not public comments beyond those received at the Housing Committee. Staff has committed to the Housing Committee that there will be robust public outreach as these proposed amendments are discussed by the Planning Board. The May 9th workshop will focus on getting the Board oriented on the amendments and hearing members' initial questions and comments. After this initial workshop, staff will implement an outreach plan before a Planning Board hearing.

II. BACKGROUND

The current density, parking and dimensional bonuses for affordable housing that are contained in Division 30, Section 14-488 (Attachment 4) provide more limited incentives, which are applicable in all zones. For example, the maximum density bonus allowed is a 25% increase for projects with 25% or more of the units as affordable units. There is a cross reference to the parking regulations, which states:

> *…no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.*

Height bonuses are available for projects in the B-2 or B-b zone that contain more than 5 affordable housing units and where 20% or more of the units are affordable, but the heights cannot exceed recommended heights from an applicable height study in the comprehensive plan. Please refer to Attachment 4 for Section 14-488 from the Land Use Code.

The Housing Committee has been evaluating ways to increase the amount of affordable housing for households earning low and moderate incomes. Consistent with the policies of the pending Comprehensive Plan, the Committee was interested in further developing housing along Portland's transportation corridors and at significant nodes. The March 30, 2017 memo from Jeff Levine, Director

of Planning and Urban Development, and from Mary David, Division Director of Housing and Community Development is included as Attachment 1.

As noted in the March 30 memo:

> *[T]hese amendments would incentivize the creation of significant new affordable housing options for a wide range of households in need. … [They] would also allow for developers of affordable housing to be more competitive with other developers for site acquisition and more competitive for public funding subsidies. The amendments would be designed to sensitively balance site context with modest height bonuses and small building setback reductions. These small forms of flexibility and zoning relief would provide developers of affordable housing greater project feasibility while also proactively providing clear rules for supporting more affordable housing in a consistent manner.*

The proposed text amendments also provide incentives for increased density and more flexible dimensional standards for Planned Residential Unit Developments, which are permitted uses in the R-3, R-5, and R-5A zones.

III. PROPOSED AMENDMENTS

A. Summary

The proposed text amendments forwarded by the Housing Committee to the Planning Board are presented below. The proposed text amendments increase the residential density bonuses for affordable housing and provide greater flexibility for building heights and setback reductions within specific zones. The zones that generally are found along the City's corridors and at nodes that are identified for this proposal include B-1, B-1b, B-2, B-2b, B-3, B-3b, B-3c, B-4, B-5, R-7, and Residence Professional RP. Attachment 2 is a map showing the zoning districts that would be eligible for these incentives.

All of the incentives are tied to the percentage of affordable housing proposed and the incentives differentiate between low income and workforce housing units. The density bonuses range from 1.1 to 2.5 depending upon the percentage of affordable units within a project and the incentives are more substantial for low income units. Thus, a higher percentage of workforce housing units is required to obtain the same density bonuses as offered to units eligible for low income households.

The draft also proposes revisions to Planned Residential Unit Developments (PRUD), which are allowed in R-, R-5 and R-5a zones. For those PRUD's in which 50% of the units are low-income or workforce housing, a series of dimensional bonuses or modifications are proposed. Those incentives include the following: 1) minimum lot area per unit is reduced by 50%; 2) maximum number of units or building length shall not apply; 3) minimum setbacks may be reduced to 10 feet; 4) The land area for a PRUD may extend on both sides of a street; and 5) the minimum open space area per units is set at 200 sf.

B. Text Amendments Forwarded by the Housing Committee

Sec. 14-488. Low Income & Workforce Housing Dimensional Bonuses

Notwithstanding any other provision of this chapter to the contrary, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

1. **Eligible projects in all B-1, B-1b, B-2, B-2b, B-3, B-3b, B-3c, B-4, B-5, R-7 and R-P Zones**

Percentage Low Income Units for Sale/Rent	Percentage Workforce Units for Sale/Rent	Density Permitted*	Additional Height Permitted	Setback Reductions**
10%	20%	1.1 x base	N/A	N/A
20%	40%	1.2 x base	10 feet	N/A
30%	60%	1.3 x base	10 feet	5’
50%	100%	2.0 x base	15 feet	5’
75%	N/A	2.5 x base	25 feet	10’

**: “Base” is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, the “base” is no less than 1 unit per 1,500 sf. of land area*
***: Setback reductions are absolute reductions in front, side and/or rear yard setback requirements.*

2. **Planned Residential Unit Developments.** In order to promote orderly development of low- and moderate-income development as PRUDs, any project in which more than 50% of the units are low-income or workforce units for rent or for sale may utilize the following dimensional bonuses and changes:
    a. Minimum lot area per dwelling unit is reduced by 50%;
    b. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review; and
    c. Minimum building setbacks may be reduced to 10’
    d. The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements
    e. Minimum Recreation Open Space Area is reduced to 200 sf per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.

3. **Term of Affordability.** In order to be eligible for this section, the low income and workforce housing units must be affordable for the longest term permitted under federal, state and local laws and ordinances. Projects that contain both Low Income and Workforce units are eligible for both bonuses.

4. **Required Public Process.** The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less than 60 days prior to application for site plan review, any project that wishes to take advantage of this section must (1) hold a public meeting noticed to all properties within 500 feet of their site and (2) post a sign on the property in question describing the proposed project; any known dates for public meetings, workshops and hearings; and contact information for the developer and the Planning Authority.

5. **Projects under 14-487.** Projects that are subject to 14-487 *that choose to provide the required workforce housing units on site* are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14-487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.

IV. ZONING COMPARISON AND POLICY DISCUSSION

A. **Comparison of Existing Zoning and Proposed Incentives**

Density: A chart of the current density requirements for the zones is presented below (Table 1). In some of the zones, the density is dependent upon whether the zone is off or on-peninsula. For example, the B-1 and Residence Professional zones state the allowable density for a residential project is the same as the adjoining or nearest residential zone. Thus, many of these zones are near R-3 and R-5 zones which require 6,500 sf and 5,000 for 2 units, respectively. The B-1 zone does allow a higher density for multi-family units (1,000 sf/unit) above first floor commercial. The B-2 zone establishes a minimum of 1,500 sf per unit in off-peninsula locations, unless the building has active street frontage and then the minimum required is 435 sf.

The B-1, B-2 and R-7 zones require a minimum of 435 square feet per residential unit on the peninsula. The B-3 zones and B-5 zone do not set any density limitations. Currently, the B-4 zone does not allow residential uses, so please see discussion below.

Table 1 Density Comparison

EXISTIING								Proposed		
Zones	Current Density		Minimum Required Lot Size	Example Lot Size	Current Density calculated upon example lot size			Range of Units with Density Bonus calculated upon example lot size		
	Off Peninsula	On Peninsula			Off-Adjoining Residential	Off-Penn. Above Comm.	on	Off Peninsula All Resid.	Off Peninsula - above comm.	On Peninsula
B-1	adjoining residential or 1000 sf above 1st floor retail	435	0 or nearest Resid.	5,000	2	5.0	11.5	2.2 to 5.0	5.5 to 12.5	12.65 to 28.75
B-1b	adjoining residential or 1000 sf above 1st floor retail	435	0 or nearest resid.	5,000	2	5.0	11.5	2.2 to 5.0	5.5 to 12.5	12.65 to 28.75
B-2	1500 *	435	0	5,000	3.34	3.34	11.5		3.68 -8.35	12.65 to 28.75
B-2b	1500 *	435	0	5,000	3.34	3.34	11.5		3.68 -8.35	12.65 to 28.75
B-2c	1500 *	435	0	5,000	3.34	3.34	11.5		3.68 -8.35	12.65 to 28.75
B-3	no density requirements									Unlimited Density
B-3b	no density requirements									Unlimited Density
B-3c	no density requirements									Unlimited Density
B-4	Residential uses not allowed									
B-5	no density requirements							Unlimited Density		
R-7	435		0	5,000						12.65 to 28.75
R-P	adjoining residential		6,000	6,000	2			4.4 to 10		

* Exception for active street frontage, then 435

Dimensional Requirements: The dimensional modifications include allowing for increased building heights and reduced setbacks. The height increases range from 10 feet to 25 feet depending upon the percentage of low or moderate income housing proposed within a project. Similarly, setback reductions are absolute reductions in front, side and/or rear yard setback requirements that are set at 5 and 10 feet.

Table 2 presents the current dimensional standards in the selected zones. Many of the zones have no or minimal setback requirements, but relief would be provided for those residential projects (100% residential) in the business zones that must apply the adjoining residential zone standards for housing projects, such as in the B-1 and RP zones. The height bonuses would be an incentive applicable in all zones.

Table 2 Existing Dimensional Requirements

	Existing Dimensional Requirements								
	Minimum Setbacks				**Maximum Setback**	**Maximum Height**		**Structure Stepbacks**	
	front	**side**	**side on side street**	**rear**	**Front**	**On Peninsula**	**Off Peninsula**	**Side**	**Rear**
B-1	0	0 unless abutting a residential zone -5'	10, applies to one street	0 unless abutting a residential zone, 10'	10	45" , 50' along Congress if 1st fl comm	35" except where abutting R-6, then R-6	10" at 35' when abut resid zone	15' at 35' when abut resid zone
B-1b	0	0 unless abutting a residential zone -5'	10, applies to one street	0 unless abutting a residential zone, 10'	10	45" , 50' along Congress if 1st fl comm	35" except where abutting R-6, then R-6	10" at 35' when abut resid zone	15' at 35' when abut resid zone
B-2	0	0	0	10	10	45', 50' if 1st fl commerical, 65 ft in B-2 and B-2 with 5 Acre lot, and 65 ' along Franklin		5" at 35' when abut resid zone	15' at 35' when abut resid zone
B-2b	0	0	0	10	10	45', 50' if 1st fl commercial, 65 ft in B-2 and B-2 with 5 Acre lot, and 65 ' along Franklin		5" at 35' when abut resid zone	15' at 35' when abut resid zone
B-2c	0	0	0	10	10	45', 50' if 1st fl commercial, 65 ft in B-2 and B-2 with 5 Acre lot, and 65 ' along Franklin		5" at 35' when abut resid zone	15' at 35' when abut resid zone
B-3	0	0	0	0	5	Height Overlay Map		Height Overlay Map	
B-3b	0	0	0	0	5	Height Overlay Map		Height Overlay Map	
B-3c	0	0	0	0	5	Height Overlay Map		Height Overlay Map	
B-4	20	10-12', based on stories	10-12', based on stories	20			65' or 90' with lots of 5A and increased setbacks		
B-5	0	0	0	0	10' between Franklin and Forest	65', except Thompson's Point with MDP -120'			
R-7	0	5	5	5		50			
R-P	20 (or average depth)	10-14' up to 3 stories	10-14' up to 3 stories	20		45 ft or R-6, if abut R-6	45 ft or R-6, if abut R-6		

B. **Discussion Points for the Planning Board Consideration:**

1. Height Incentive of up to 25 Feet: The building height incentives are calibrated to the amount of affordable housing that is being proposed. It is offered as the same incentive for all of the proposed zones. The staff is seeking the guidance of the Board on offering this incentive for all of the zones, particularly those that are generally more sensitive to the surrounding neighborhood context, such as the B-1 zones and the Residence Professional zones. These zones are generally smaller transitional zones located between neighborhoods and more intensive commercial uses. The B-2 zone is found along the corridors and adjacent to neighborhoods. It is also the zone which encompasses larger areas and shopping centers. It is the B-2 zone that is frequently located at nodes, which are identified for evaluation and transformation in the pending comprehensive plan.

   The proposed additional height of 25 feet could allow building heights up to the following:

B-1 - existing	**With 25'**	**R-P- existing**	**With 25'**	**B-2 existing**	**With 25'**
35 – off peninsula	60'	45	70	45'	70'
45- on peninsula	70'			50' with 1st fl commercial	75'
50' along Congress	75'			65' with 5 Acre lot	90'
				65' along Franklin	90'

   - Should the height bonus be capped at 15 feet for certain zones, such as the B-1 and R-P zones?

2. B-2: The recent updates to the B-2 zone have minimized the distinctions between B-2, B-2b and B-2c zones. The front and side setbacks are now 0 with only a rear yard setback required of 10 feet. The additional height would be an incentive. The draft from the Housing Committee did not include the B-2c zone, which is located along a portion of Forest Avenue and Bishop Street.

   - The staff recommend that the B-2c be included in the proposed amendments.

3. Downtown Business B-3 Zone: The B-3 zone does not set any density limits nor setback requirements. The B-3 zone does have a building height overlay zone that sets a variety of heights and building stepbacks throughout the zone. In addition, there are historic districts within the B-3 zone, including Congress Street, Old Port, and portions of Deering and West End districts.

   - Should the amendments address height modifications within historic districts.

4. B-4 Commercial Corridor: While, the B-4 Commercial Corridor encompasses Warren Avenue and a portion of Riverside Street, neither of these corridors are identified as priority corridors in the pending comprehensive plan. Morrill's Corner is identified as a node to transform and the B-4 zone along Warren Avenue is near that node. In addition, the B-4 zone does not list residential uses as a permitted or conditional use. The Board will want to consider the following:

- Should the B-4 Zone be included as one of the zones eligible for the affordable housing incentives or excluded until such time as further study of the area through either the zoning rewrite or the node analysis of Morrill' Corner?
- If it should be considered, then other text amendments should be drafted to list residential uses.

5. B-5 Urban Commercial Mixed Use: Similar to the B-3 Zone, B-5 does not have any density requirements nor any setback requirements. There is a 65-foot height limit, except for Thompson's Point that has a maximum of 120 feet, as is consistent with their MDP. The additional height would be an incentive in this zone. The staff does want to point out that any development with additional height on Thompson's Point will need to be reviewed by FAA for compliance with airport safety requirements. Also, please note the incentives are proposed for B-5 and not the B-5b zone, as this zone regulates a smaller geographic area along the waterfront.

6. Residential R-7 Urban Compact Zone: The R-7 has been applied through map amendments and contracts on the peninsula with a density of 435 sf per unit. There is a requirement for a minimum unit size of 400 sf.

    - Should the affordable housing incentives include a provision that removes this requirement entirely or removes it at a certain level of incentives?

7. Residence Professional R-P Zone: This zone does benefit from the proposed incentives and encourages housing. The staff recommends the Board consider the following additional incentives:

    - Amend the R-P zone to be clear that multi-family housing is permitted and at the density of 1,500 sf per unit.
    - There is an FAR ratio for development in the R-P zone. Should an incentive for affordable housing allow for an increased FAR?

8. Planned Residential Development: Planned Residential Developments are permitted uses in the R-3, R-5 and R-5A zone. To determine the allowable density for such a project, the net land area must be calculated as defined in the zoning code:

    Net land area: Net land area, as set forth in sections 14-90, 14-120 and 14-130 of this article, shall be calculated by subtracting from gross area the square footage of the following:

    (a) Reserved.

    (b) Existing watercourses, as defined in this section, measured by the area between the top of the banks at the normal high water mark, as defined in this section.

    (c) Reserved.

    (d) Wetlands, as defined in this section;

    (e) Reserved.

    (f) Slopes of twenty-five (25) percent or greater. Where a slope of twenty-five (25) percent or greater was altered to less than twenty-five (25) percent within the two (2) years immediately preceding the submission of the application for development, such slope shall also be subtracted from the gross area.

    In the R-3 zone, a minimum land area of 3 acres is required with a minimum of 6,500 sf of net land area per unit. Similarly, the R-5 and R-5A zones require a minimum lot area of 2 acres. The minimum net land area per unit in R-5 is 3,000 sf and in R-5A it is 1,600 sf. Under the proposed amendments, the above land area required for each unit would be half of the current requirements. This would be 3,250 sf in R-3, 1,500 sf in R-5 and 800 sf in R-5A.

Relief is also proposed from dimensional standards that set a maximum number of units or maximum length of building, but can be established through site plan review. The setbacks are reduced from 25 feet to 10 feet and the minimum recreation open space is reduced to 200 sf per unit. Lastly, the amendments clarify that the overall development can cross a right-of-way, but the land area of the street is not counted in the calculations.

9. Terms of Affordability: The terms of affordability state the following:
   In order to be eligible for this section, the low income and workforce housing units must be affordable for the longest term permitted under federal, state and local laws and ordinances. Projects that contain both Low Income and Workforce units are eligible for both bonuses.

   - Should eligibility compound for a project that includes both Low Income and Workforce units? For example, should a project with 20% Low Income and 20% Workforce units be eligible for a 1.32 (1.1 x 1.2) density bonus? Would height bonuses similarly be cumulative?

10. Required Public Process: The proposal from the Housing Committee calls for an enhanced public process in order to be eligible for the incentives. A neighborhood meeting is required to be held at least 60 days before an application is submitted to the city for review and that a sign be posted on the property announcing the proposed project. The language developed by the Housing Committee calls for the sign to announce any known public meetings, workshops, and hearings, along with contact information. The proposed content of the sign is challenging, particularly without a pending application.

    - The Planning staff recommend that the wording in this section be revised to state that the Planning Board will adopt regulations to clarify the content and processes for these signs. At this point, staff would recommend that the signs include the developers name, contact information and their intent to submit an application for review in 60 days (cite anticipated submission date and general City Website link).

11. Parking Requirements: The current regulations regarding parking for affordable housing projects was not presented in the draft. Current parking requirements for affordable housing developments allow the Planning Board to set a parking requirement for the development, provided it does not exceed one space per unit.

    - The staff recommends that this provision be retained and is seeking the Board's input on this suggestion.

V. NEXT STEPS

- Incorporate Planning Board comments and guidance into the next draft
- Conduct Public Outreach
- Schedule a workshop or public hearing on the proposed amendments

Attachments:

1. Memo, Jeff Levine and Mary Davis, dated March 30, 2017
2. Map of Zones Eligible for Affordable Housing Incentives
3. Proposed text amendments
4. Current Section 14-488 of Land Use Code

Portland, Maine Yes. Life's good here.

Mary Davis
Division Director, Housing & Community Development Division

TO: Councilor Duson, Chair
Members of the Housing Committee

FROM: Jeff Levine, Planning & Urban Development Director
Mary Davis, Division Director
Housing and Community Development Division

DATE: March 30, 2017

SUBJECT: An outline of proposed amendments to Division 30 to support the creation of affordable housing in Portland.

Over the past year the City has actively engaged in a number of discussions involving a wide range of stakeholders in an attempt to address concerns related to Portland's housing market. One of the themes that evolved from these discussions was the need for greater housing supply particularly for households earning low and moderate incomes. In conjunction with this discussion and work being done for the new Comprehensive Plan, there appeared to be growing interest in further developing housing along Portland's transportation corridors and business nodes. Staff has developed a proposed framework for amending Division 30 of the City's Land Use code to bridge these two concepts with the aim of creating more affordable housing in areas appropriate for additional development.

The goal of these amendments would incentivize the creation of significant new affordable housing options for a wide range of households in need. It would also allow for developers of affordable housing to be more competitive with other developers for site acquisition and more competitive for public funding subsidies. The amendments would be designed to sensitively balance site context with modest height bonuses and small building setback reductions. These small forms of flexibility and zoning relief would provide developers of affordable housing greater project feasibility while also proactively providing clear rules for supporting more affordable housing in a consistent manner. The following bullet points express some ways in which the Committee could achieve these goals and structure amendments to Division 30 that would provide real opportunity for creating more affordable housing in Portland:

- Amendments would impact certain zones along and within transportation corridors, and business nodes;
  - For example, B-1, B-1b, B-2, B-2b, B-3, B-3b, B-3c, B-4, B-5, R-7, and R-P zones may be areas worthy of consideration;
- Escalating density bonuses, height, and setback reductions based on the percentage of low income and moderate income units in an overall project;

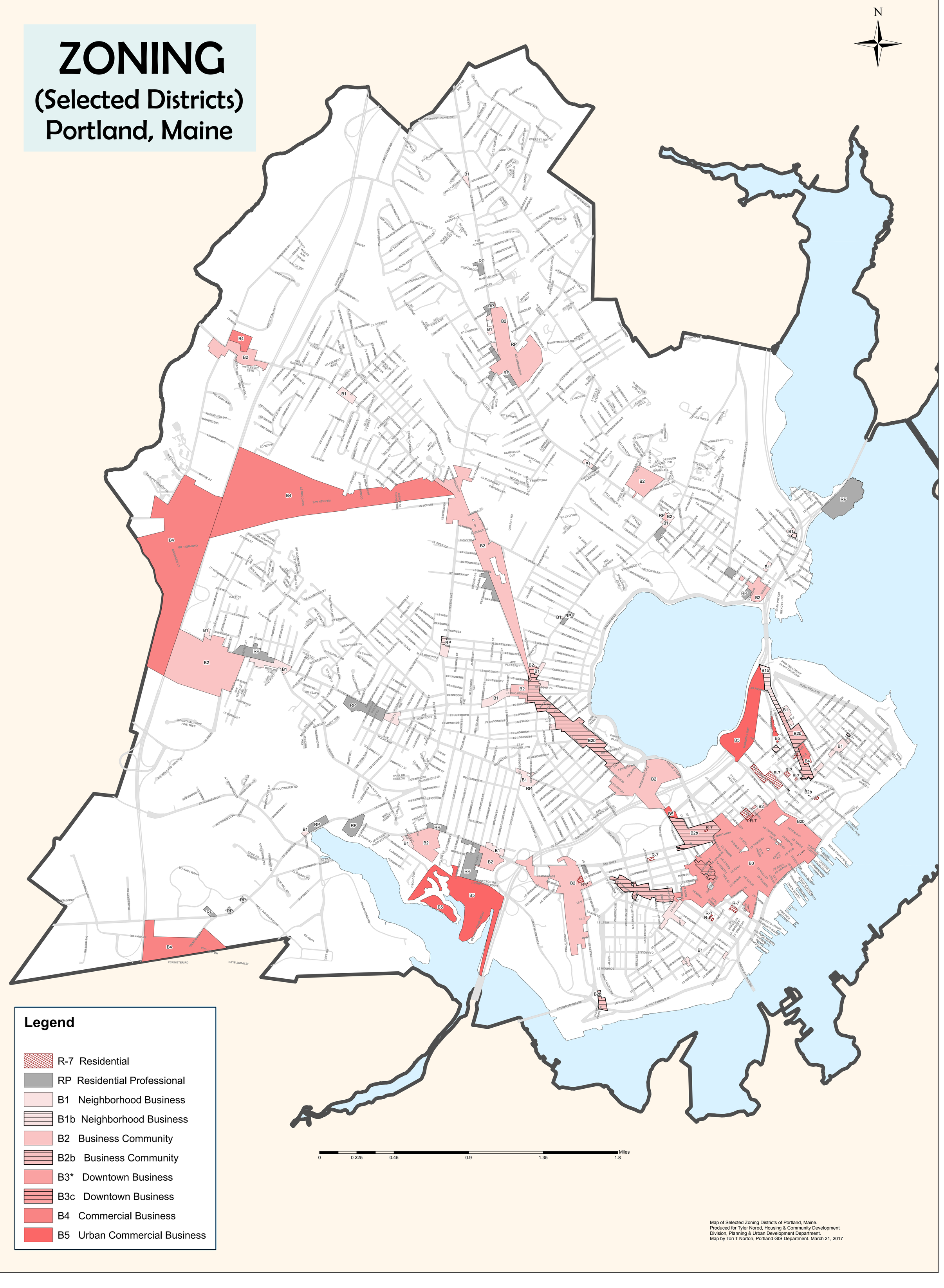
Mary Davis
Division Director, Housing & Community Development Division

- Planned Residential Unit Developments should be amended to allow for reductions in minimum lot areas per dwelling unit, setbacks, and building dimensions.

Attached to this memo is draft language that spells out in detail the proposed changes to Division 30 of Chapter 14 of the City Code that would allow for the outlined incentives to go into effect in the proposed zones. In addition, there is a zoning map highlighting the location of the zones to be impacted by these amendments. Large maps will be provided at the meeting and interested parties will be able to zoom in on electronic copies of the map made available as part of the Housing Committee packet on the City's website.

Following the Committee's deliberation and any related revisions, staff is requesting that the Committee take action on this item to send it to the Planning Board for their review. The City will conduct a robust public outreach for the Planning Board review of these amendments, including use of social media and on-line publicity. The item will ultimately require approval by the full Council who will have the additional benefit of feedback provided by the Committee, Planning Board, and general public to aid in any future decisions.

ZONING
(Selected Districts)
Portland, Maine



Legend

- R-7 Residential
- RP Residential Professional
- B1 Neighborhood Business
- B1b Neighborhood Business
- B2 Business Community
- B2b Business Community
- B3* Downtown Business
- B3c Downtown Business
- B4 Commercial Business
- B5 Urban Commercial Business

Map of Selected Zoning Districts of Portland, Maine.
Produced for Tyler Norod, Housing & Community Development Division, Planning & Urban Development Department.
Map by Tori T Norton, Portland GIS Department. March 21, 2017

Sec. 14-488.
Low Income & Workforce Housing Dimensional Bonuses

Notwithstanding any other provision of this chapter to the contrary, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

1. **Eligible projects in all B-1, B-1b, B-2, B-2b, B-3, B-3b, B-3c, B-4, B-5, R-7 and R-P Zones**

Percentage Low Income Units for Sale/Rent	Percentage Workforce Units for Sale/Rent	Density Permitted*	Additional Height Permitted	Setback Reductions **
10%	20%	1.1 x base	N/A	N/A
20%	40%	1.2 x base	10 feet	N/A
30%	60%	1.3 x base	10 feet	5′
50%	100%	2.0 x base	15 feet	5′
75%	N/A	2.5 x base	25 feet	10′

**: "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, the "base" is no less than 1 unit per 1,500 sf. of land area*
***: Setback reductions are absolute reductions in front, side and/or rear yard setback requirements.*

2. **Planned Residential Unit Developments.** In order to promote orderly development of low- and moderate-income development as PRUDs, any project in which more than 50% of the units are low-income or workforce units for rent or for sale may utilize the following dimensional bonuses and changes:
    a. Minimum lot area per dwelling unit is reduced by 50%;
    b. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review; and
    c. Minimum building setbacks may be reduced to 10′
    d. The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements
    e. Minimum Recreation Open Space Area is reduced to 200 sf per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through

site plan review.

3. **Term of Affordability.** In order to be eligible for this section, the low income and workforce housing units must be affordable for the longest term permitted under federal, state and local laws and ordinances Projects that contain both Low Income and Workforce units are eligible for both bonuses.

4. **Required Public Process.** The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less than 60 days prior to application for site plan review, any project that wishes to take advantage of this section must (1) hold a public meeting noticed to all properties within 500 feet of their site and (2) post a sign on the property in question describing the proposed project; any known dates for public meetings, workshops and hearings; and contact information for the developer and the Planning Authority.

5. **Projects under 14-487.** Projects that are subject to 14-487 *that choose to provide the required workforce housing units on site* are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14-487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.

Sec. 14-488. Density, parking and dimensional bonuses and reductions.

Notwithstanding any other provision of this chapter to the contrary:

(a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table:

Percentage of new units that are low-income or workforce units	**Percentage increase in maximum number of units allowed**
5% up to but not including 10%	5% increase
10% up to but not including 15%	10% increase
15% up to but not including 20%	15% increase
20% up to but not including 25%	20% increase
25% or more	25% increase
Projects Under Section 14-487	25% increase

(b) Off-street p*arking.* Off-street parking is required as provided in Division 20 (off-street parking) of this article.

(c) *Building height bonus.* The maximum structure height for an eligible project building:

1. That is located in a B-2 or B-2b community business zone;

2. That contains five (5) or more dwelling units; and

3. Of which 20% or more of new dwelling units created are affordable units for rent or sale, is an additional ten feet above the maximum structure height that would otherwise apply to the building pursuant to this chapter.

The total height of the eligible project, including any bonus received pursuant to this subsection, may not exceed the maximum height recommended for the location of the project pursuant to a height study that has been adopted as part of the city's comprehensive plan.

PLANNING BOARD REPORT
PORTLAND, MAINE

9-Unit Rooming House to 7-Unit Condominium Conversion
197 Spring Street
Level III Site Plan
2017-061
WAIT, LLC

Submitted to: Portland Planning Board Date: May 5, 2017 Public Hearing Date: May 9, 2017	Prepared by: Matthew Grooms, Planner CBL: 045-E-021 Project #: 2017-061

I. INTRODUCTION

WAIT, LLC appears before the Planning Board for the final site plan review of a proposed building renovation and building expansion project to convert a nine-unit rooming house into a seven-unit residential building at 197 Spring Street, located within the West End Historic District. The proposed development includes the renovation of the original structure and demolition of the existing addition, which will be replaced by a new and more efficient three-story addition. Additional improvements include new site landscaping, the installation of a new stormwater management system, and replacement of the existing gravel driveway with bituminous pavement, establishing five striped parking spaces. Vehicular access to this site is provided via the existing curb-cut located on Spring Street. This property is located within the West End Historic District and has been reviewed and approved by the Historic Preservation Board.

Figures 1 and 2: Existing Conditions (From Spring Street)

This development is being referred to the Planning Board for compliance with the site plan standards. A total of 166 notices were sent to property owners within 500 feet of the site and a legal ad for the Planning Board hearing ran on May 1st and 2nd, 2017 in the Portland Press Herald.

Applicant: Steve Morrison, WAIT, LLC
Consultants: Will Savage, P.E., Acorn Engineering, INC

II. REQUIRED REVIEWS

Waiver Requests	***Applicable Standards***
Driveway width – To allow a 9' driveway *This waiver request is supported by the City's Traffic Engineer.*	Technical Manual, *Section 1.71,* requiring that the minimum driveway width for residential developments with nine or fewer parking spaces be at least ten feet in width.

Parking dimensions – To allow all parking spaces at 8' x 15' *This waiver is supported by the consulting traffic engineer and planning staff to provide additional buffering between adjacent property* .	Technical Manual, *Section 1.14*, requiring that standard parking space be 9' x 18'.
Review	***Applicable Standards***
Site Plan	*Article V*

III. PROJECT DATA

Existing Zoning	R-6		
Existing Use	9-unit rooming house		
Proposed Use	Residential (7 residential units, 2 one-bedroom and 5 two-bedroom)		
Parcel Size	5,640 SF		
	Existing	*Proposed*	*Net Change*
Building Footprint	1,392 SF	1,663 SF	271 SF
Building Floor Area	3,825 SF	5,950 SF	2,125 SF
Impervious Surface Area	4,450 SF	4,520 SF	70 SF
Parking Spaces	4	5	1
Bicycle Parking Spaces	3	3	0
Estimated Cost of Project	$600,000		

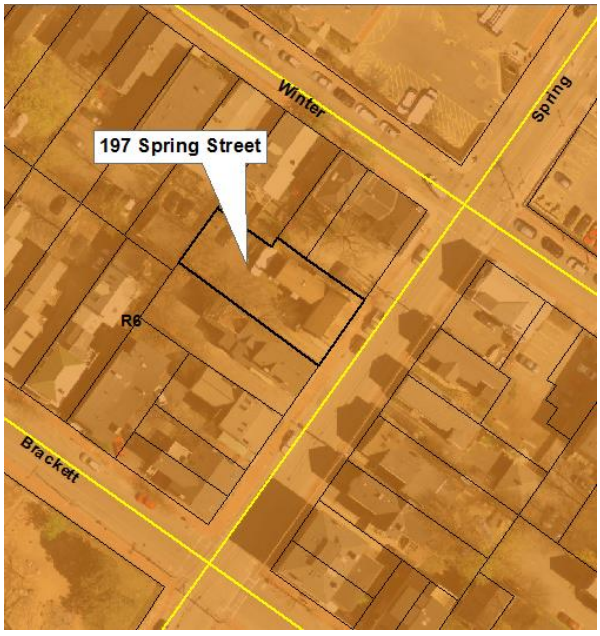


Figure 3 (Above): Zoning Context Map

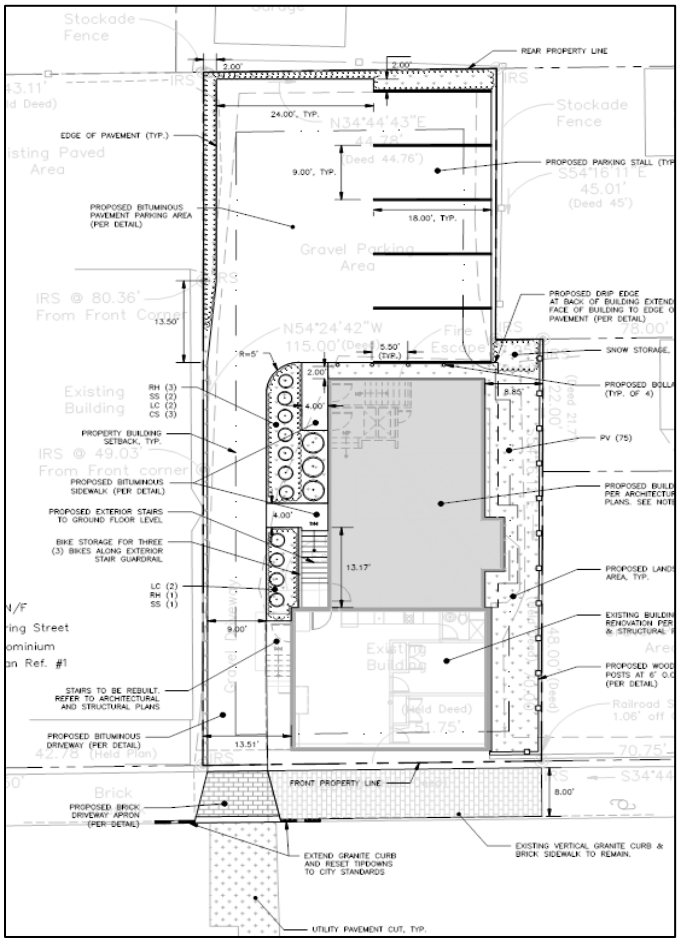


Figure 4 (At Right): Proposed Site Plan

IV. BACKGROUND

197 Spring Street lies midblock between Brackett Street and Winter Street and is highly proximate to Mercy Hospital's West End Campus located to the northeast and the Reiche School located to the southwest. The site is currently occupied by a nine-unit rooming house, which would be partially demolished under the plans proposed here. The site lies in an R-6 zone and is surrounded by a mixture of uses, including both single and multi-family homes, institutional uses and a number of commercial establishments.

V. PROPOSED DEVELOPMENT

The applicant is proposing to renovate and partially demolish the existing nine-unit rooming house at this location and convert the structure into a seven-unit residential building, consisting of 2 one-bedroom units and 5 two-bedroom units. The original structure, which fronts Spring Street would remain intact and would receive only cosmetic upgrades to its exterior with a full renovation being completed on the building's interior. The existing addition, would be demolished and replaced with a new, more efficicent three-story structure that would tie into the rear of the original building. Other site improvements include the installation of a catch basin and storm drain that would connect with the combined sewer/storm system located in Spring Street, resurfacing of the gravel driveway and parking area with bituminous pavement and minor landscaping along the building's west elevation. Vehicular access is provided via an existing curb cut located on Spring Street and the site layout would remain unchanged with a nine foot wide driveway and off-street parking for five vehicles.

VI. PUBLIC COMMENT/NEIGHBORHOOD MEETING

The Planning Division has received no public comments. The applicant held a neighborhood meeting on April 18, 2017 and has provided neighborhood meeting minutes (*Attachment P*). Three individuals from the public attended and raised questions regarding landscaping, stormwater features, building design and features, site circulation with no opposition to the project being raised.

VII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed recorded on August 19, 2013 as evidence of right, title, and interest. *(Attachment C)*. No easements are required.

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a letter from Gorham Savings Bank attesting to their financial capacity *(Attachment G)*.

IX. ZONING ANALYSIS

Staff conducted a zoning analysis which found that the new addition meets the use and dimensional requirements of the R-6 zone, including the maximum density of one unit/725 SF, minimum side yard setbacks of 5', and minimum landscaped open space of 20%. Additional information has been requested regarding building height and this has been drafted as a condition for approval. Per Section 14-483, Housing Preservation and Replacement, a loss of residential units amounting to fewer than three dwelling units is exempt from the housing replacement requirements so long as the loss of units is not replaced with surface parking. Given that the applicant is only consolidating the existing rooming house and losing just two units, they are not required to meet the housing replacement standards.

X. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527)

XI. DEVELOPMENT REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

1. Transportation Standards

a. Impact on Surrounding Street Systems

Tom Errico, the city's consulting traffic engineer, has reviewed the applicant's submittals and has identified the following concerns regarding impacts to surrounding street systems which should be clarified in the

construction management plan *(Attachment 1)*.

- *The sidewalk on Spring Street shall remain open at all times. Any changes to this condition shall be coordinated with SPW and Planning Staff.*
- *The project will require utility connections and thus will likely impact traffic and sidewalk conditions. The applicant shall provide a Construction Management Plan for this activity for review and approval by DPW and Planning Staff.*
- *The plans note that construction vehicle access will be via the existing 9-foot narrow driveway. This width would seem to constrain large vehicles. Accordingly, the applicant shall provide details on truck activity for the project.*
- *The applicant should note if there will be any proposed impacts to on-street parking in conjunction with construction activities.*
- *The applicant should confirm if there are any other construction/utility projects occurring during the project construction period that would cause potential conflicts.*

b. Access and Circulation

The final plans include a 9' foot wide driveway, 24' foot wide drive aisle within the rear parking area and five standard sized 9' by 18' parking spaces immediately adjacent to the easterly property line. Additionally, the applicant is proposing a new brick driveway apron that will tie in with the existing vertical granite curb and brick sidewalk. Mr. Errico has reviewed the applicant's submittals and has asked for confirmation that the new driveway apron meets the required cross-slope for pedestrian access of no greater than two percent. Further, planning staff have asked the applicant to consider reducing the five standard sized parking spaces to compact spaces which would allow for further buffering between this development and the adjacent property (*Attachment 1*).

c. Public Transit Access

The proposed development is not located along a public transit route. As such, no provisions for transit access are required.

d. Parking

Division 20 of the land use ordinance provides an exception for the off-street parking requirement for the first three units in the R-6 zone and a 1:1 requirement thereafter. Per the ordinance, only four off-street spaces are technically required. The applicant has elected to provide five off-street spaces. In order to provide additional buffering between this development and the adjacent property to the east, city staff have requested that the applicant consider striping compact parking spaces as opposed to standard sized parking spaces. Mr. Errico has verbally stated that he would support a waiver to allow compact parking spaces.

Two bicycle spaces per five dwelling units are required under the site plan ordinance. As such, three bicycle parking spaces are required. The final plans denote a space along the guard rail along the exterior stairs leading to the ground level units sufficient for three bicycles. The applicant has stated that the units themselves possess sufficient space for bicycle storage.

e. Transportation Demand Management

A transportation demand management plan is not required.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation

The landscaping plan shows assorted ornamental grasses, perennials and shrubs, including switch grass, black eyed susan, sage, cardinal flowers and red twig dogwood. These plantings would be located along the

westerly building elevation with open space along the property's exterior being reserved for snow storage. These plantings meet the city's landscaping standards, and Jeff Tarling, the city's arborist, has verbally indicated his satisfaction with the plans.

c. Water Quality/Storm Water Management/Erosion Control

In its current state, the site is comprised of compacted gravel in the driveway and parking area and generally slopes down towards Spring Street, with a slope of approximately 10% in the front half of the property and 1% in the rear half. Stormwater flows west to east where it then enters the combined sewer/storm system at the intersection of Winter and Spring Street.

The applicant is proposing a number of improvements to facilitate improved stormwater management on site, although given the limited increase in impervious surface less than the 1,000 square-foot threshold, such improvements are not technically required. Proposed improvements include the installation of a catch basin within the driveway and new associated storm drain that will connect to the combined sewer/storm system. Additionally, a roof drain, foundation drain and building drip edge have also been incorporated into the design. With this proposal, vegetated areas around the property are being rehabilitated so as to provide more permeable soils with greater hydraulic conductivity. These plantings are also intended to help retain stormwater on site.

To affect site stabilization and erosion control, is proposing the use of crushed stone at construction entrances, siltation fence or erosion control berms down gradient of any disturbed areas, and hay mulch including hydro seeding to provide cover for denuded or seeded areas. For permanent control, all disturbed areas will receive 4" of loam, lime and mulch with erosion control blankets being installed for additional stabilization.

Lauren Swett, the City's consulting civil engineer, has reviewed the applicant's submittals and finds the proposed plans satisfactory (*Attachment 1*).

3. Public Infrastructure and Community Safety Standards

a. Consistency with Related Master Plans

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

b. Public Safety and Fire Prevention

Keith Gautreau, of the Fire Prevention Bureau, has reviewed the plans and finds them satisfactory as site layout is not changing.

c. Availability and Capacity of Public Utilities

The property is currently serviced by an underground electric line which ties into the overhead power line that runs along the opposite side of Spring Street. Existing water service is derived from a ¾" line located at the northeast corner of the property. At present, there is a 4" sewer line that connects with the sewer main in Spring Street. Additional site utilities include gas and four overhead telephone/cable lines which run through the rear and front of the property.

It has been determined that the current water service is insufficient to serve this site and as such will be retired and replaced with a new 2" line that will tap into the existing main and serve as the fire sprinkler line. A 1" domestic line will branch off of the sprinkler line and service the redevelopment. The applicant has provided evidence of water capacity (*Attachment L*).

Similarly, the underground electric service may need to be upgraded once the required loads are determined. This has been added as a condition of approval item.

Other alterations to existing service include the installation of a new storm drain and removal of the overhead telephone/cable lines located in the property's rear. The existing sewer and gas lines remains sufficient to service this site.

Ms. Swett has reviewed the utility plan and details and found them adequate with respect to the city's technical standards (*Attachment 1*).

4. Site Design Standards

a. Massing, Ventilation, and Wind Impact

The bulk, location, and height of the proposed building are not anticipated to result in health or safety problems from a reduction in ventilation or changes to the wind climate. Likewise, these elements of the plan are not anticipated to result in substantial diminution in the value or utility of neighboring structures.

HVAC systems are depicted away from the public view at the rear of the building.

b. Shadows

No shadow impacts to publicly accessible open spaces are anticipated.

c. Snow and Ice Loading

The applicant has been requested to provide information regarding ice and snow load controls along the building's perimeter.

d. View Corridors

Cumberland Avenue is not a protected view corridor.

e. Historic Resources

The site is located within the West End Historic District. This item was reviewed and approved by the Historic Preservation Board 6-0 (Harmon recused) on August 3, 2016, and was deemed compliant with city standards for a Certificate of Appropriateness (*Attachment 2*)

f. Exterior Lighting

City staff have asked that the applicant provide a photometric plan demonstrating compliance with city standards as found in the Technical Manual. This requirement has been added as a condition for approval.

g. Noise and Vibration

All proposed mechanical equipment is in accordance with applicable zoning requirements. It is not anticipated that high levels of noise or vibration will result.

Figure 5: North and West Building Elevations

Figure 6: East and South Building Elevations

h. Signage and Wayfinding
No signage or wayfinding is proposed.

i. Zoning-Related Design Standards
Design of the structure has been reviewed and approved by the Historic Preservation Board and thus does not require a separate design review by the City's Urban Designer. The applicant has provided a set of elevations, renderings, and a design narrative which speak to the architectural approach for the project *(Attachment N)*. The narrative states that the rear addition will be built to the R-6 dimensional standards, and will provide opportunities for handicap accessibility. The original structure will be renovated to return the building to its original appearance and will incorporate wood clapboard siding, clad wood windows, articulated corner boards, window surrounds, cornice trim and a rebuilt entry porch. The ell (addition) will complement the original structure but will possess simpler detail.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed seven-unit condominium development at 197 Spring Street.

XIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on October 12, 2016 for application 2016-172 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **finds/does not find**, based upon the consulting transportation engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.71)* which requires that driveway width for

residential developments with nine (9) or fewer parking spaces be a minimum of ten (10) feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the *Technical Manual* standard *(Section 1.71)* to allow the driveway as depicted in the proposed site plan;

2. The Planning Board **finds/does not find**, based upon the consulting transportation engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.14)* which requires that a standard parking space be 9' x 18', that substantial justice and the public interest are secured with the proposed variation in this standard, and that the variation is consistent with the intent of the ordinance. The Planning Board **waives/does not waive** the *Technical Manual* standard *(Section 1.14)* to allow five 8' x 15' spaces;

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on May 9, 2017 for application 2017-061 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **is/is not** in conformance with the site plan standards of the land use code, subject to the following conditions of approval that must be met prior to the issuance of a building permit, unless otherwise stated:

1. The applicant shall submit a revised construction management plan to be reviewed and approved by the Department of Public Works and the Planning Division which demonstrates:
   a. that the sidewalk on Spring Street will remain open at all times and that any change to this condition be coordinated with the Department of Public Works and Planning; and
   b. how work related to proposed utility connections will be managed; and
   c. how construction vehicle activity will be managed on-site; and
   d. if and how on-street parking would be impacted by construction activities; and
   e. if and how other construction/utility projects occurring during the project construction period might impact surrounding properties and the public right-of-way.

2. The applicant shall submit a final driveway apron detail meeting *Technical Manual* standards for review and approval by the Department of Public Works; and

3. The applicant shall provide a photometric plan and associated detail sheets which demonstrate acceptable light trespass; and

4. The applicant shall provide revised elevation sheets with spot grades and building dimensions that illustrate building height.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. City Staff review comments (5/5/2017)
2. Historic Preservation Board Approval Letter (8/3/2016)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Level III Site Plan Application
C. Right, Title and Interest
D. Conformity with Applicable Zoning Standards
E. Summary of Easements
F. Request for Waivers

G. Technical & Financial Capacity
H. Stormwater Report
I. Erosion & Sedimentation Control Report
J. Fire Department Letter
K. Solid Waste
L. Utility Cover
M. Construction Management Plan
N. Architectural Design Narrative
O. Tree Survey
P. Neighborhood Meeting Materials

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Existing Conditions
Plan 4. Demolition & Construction Management Plan
Plan 5. Site & Landscape Plan
Plan 6. Utility Plan
Plan 7. Grading & Drainage Plan
Plan 8. Site Details I
Plan 9. Site Details II
Plan 10. Utility Details
Plan 11. Drainage Details
Plan 12. Erosion Control Details
Plan 13. Floor Plans
Plan 14. Elevations I
Plan 15. Elevations II
Plan 16. Structural Cover
Plan 17. Structural Framing I
Plan 18. Structural Framing II
Plan 19. Structural Framing III
Plan 20. Subplat

Planning and Urban Development Department
Planning Division

May 5, 2017

Steve Morrison
WAIT, LLC
158 Danforth Street
Portland, ME 04102

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

RE: Staff Review Comments for 197 Spring Street (2017-061) – Planning Board Review

Project Name:	197 Spring Street	Project ID:	(2017-061)
Project Address:	197 Spring Street	CBL:	045-E-021
Applicant:	Steve Morrison		
Planner:	Matthew Grooms		

Dear Mr. Morrison,

Thank you for submitting a Level III Final Plan application for a three-story residential development with 7 residential units at 197 Spring Street. This proposal is being reviewed as a final plan for Planning Board review subject to the following applicable Land Use Code provisions:

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

Final Plan for Planning Board Review: Staff Review Comments

I. Traffic Engineering and Site Circulation (Tom Errico)

1. I have reviewed the application materials and generally find the project to be acceptable. Please note the following.
   A. The applicant is requesting a waiver for driveway width. Given that the driveway currently exists and low expected traffic volumes, I support a waiver from the City's Technical Standards (the minimum width standard is 10 feet – the project is proposing 9 feet)
   B. I find the parking layout and circulation to be acceptable.
   C. The reconstructed driveway apron shall provide an pedestrian accessible route with a cross-slope of no greater than 2 percent.

D. The applicant has provided a construction management plan and I have the following comments:
    a. The sidewalk on Spring Street shall remain open at all times. Any changes to this condition shall be coordinated with DPW and Planning staff (see next bullet).
    b. The project will require utility connections and thus will likely impact traffic and sidewalk conditions. The applicant shall provide a Construction Management Plan for this activity for review and approval by DPW and Planning staff.
    c. The plans note that construction vehicle access will be via the existing 9-foot narrow driveway. This width would seem to constrain large vehicles. According, the applicant shall provide details on truck activity for the project.
    d. The applicant should note if there will be any proposed impacts to on-street parking in conjunction with construction activities.
    e. The applicant should confirm if there are any other construction/utility projects occurring during the project construction period that would cause potential conflicts.

II. Environmental Quality Standards

E. Stormwater/Engineering Comments (Lauren Swett)

1. The City of Portland requires that all Level III site plan applications submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards (Technical Manual, Section 5. II. Applicability in Portland. C. a. and City of Portland Code of Ordinances Sec. 14-526 site plan standards. (b). 3. b.). The proposed project will result in an increase in impervious surface of less than 1,000 square feet, and the non-roof redevelopment area is less than 5,000 square feet. We offer the following comments:
    A. Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
    B. General Standard: The proposed project does not meet the City of Portland or Maine DEP thresholds requiring conformance with the General Standard. The project will not result in any significant changes to stormwater quality, and will be providing a catch basin with a hood that will provide for some improvements. We do recommend that the applicant consider utilizing additional stormwater quality treatment where possible. Stormwater treatment will help to reduce the Stormwater Impact Fee assessed for the site..
    C. Flooding Standard: The proposed project does not meet the City of Portland or Maine DEP thresholds requiring conformance with the Flooding Standard. It is not anticipated that the proposed work will result in any significant changes to stormwater flow.
2. The project will result in a new direct connection to the combined sewer. The City will review the proposed connection. (Note, I will forward to Public Works to bring to their attention for review.)
3. Two details have been provided for the drip edge on sheets C-41 and C-43. Please clarify.

III. Site Design Standards

A. Site Plan Review Comments (Matthew Grooms)

1. Would the applicant consider the installation of compact parking spaces as opposed to standard sized parking spaces to provide additional buffering against the adjacent property? The City's Traffic Engineering Consultant has verbally indicated that he would support a waiver of this requirement.
2. Is the applicant proposing any new exterior lighting? If so, a photometric plan and associated lighting details sheets will be required demonstrating acceptable light trespass.
3. What will the height of this building be? Please provide a revised building elevation that includes spot grades at building corners and building dimensions.

Additional Submittals Required:

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made and only *one set of revised plans* may be submitted for review. This item is scheduled to go before the Planning Board as a public hearing item on May 9, 207 at 7:00 pm.

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

Sincerely,

Matthew Grooms
Planner

Electronic Distribution:

Tuck O'Brien, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Victoria Morales, Associate Corporation Counsel
Anne Machado, Zoning Administrator
Captain Keith Gautreau, Fire
Jeff Tarling, City Arborist
Tom Errico, P.E., TY Lin Associates
Lauren Swett, P.E., Woodard & Curran

CITY OF PORTLAND, MAINE
HISTORIC PRESERVATION BOARD

Scott Benson, Chair
Bruce Wood, Vice Chair
Ted Oldham
Penny Pollard
Julia Sheridan
John Turk

August 11, 2016

Steve Morrison
Wait, LLC
P.O. Box 25A
Cumberland, Maine 04021

RE: 197 Spring Street – exterior rehab and ell replacement
CBL: 045 E021

Dear Mr. Morrison,

On August 3, 2016, the City of Portland's Historic Preservation Board voted 6-0 (Harmon recused) to approve your application, submitted on your behalf by Architect Glenn Harmon, for a Certificate of Appropriateness for exterior alterations and replacement of the rear ell at 197 Spring Street. Approval was made on the basis of plans and specifications submitted for the 8/3/16 public hearing, and is subject to the following conditions:

1. The base of the new east bay is to be faced with brick, with the design and particularly the basement window layout to be reviewed and approved by staff.
2. The following detail drawings and specifications are to be submitted to staff for review and approval prior to construction:
    - All trim, particularly at eaves and windows and doors
    - Porch and front stair details

Construction is to be carried out as shown on the plans and specifications submitted for the 8/3/16 public hearing and/or as described above. Note that the approved work will require all necessary building permits. Changes to the approved plans and specifications and any additional work that may be undertaken must be reviewed and approved by this office prior to construction, alteration, or demolition. If, during the course of completing the approved work, conditions are encountered which prevent completing the approved work, or which require additional or alternative work, you must apply for and receive a Certificate of Appropriateness or Non-Applicability PRIOR to undertaking additional or alternative work.

This Certificate is granted upon condition that the work authorized herein is commenced within twelve (12) months after the date of issuance. If the work authorized by this Certificate is not commenced within twelve (12) months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such Certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding ninety (90) days each may be allowed in writing by the Department.

Sincerely,

Robert Wiener

Robert Wiener
Historic Preservation Compliance Coordinator

Cc: Glenn Harmon
Deb Andrews, Historic Preservation Program Manager

ACORN ENGINEERING, INC.

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

March 16, 2017

Subject: Level III Site Plan Application
Building Renovation and Expansion at 197 Spring Street – Portland, Maine

To Whom It May Concern,

WAIT, LLC. is pleased to submit the accompanying package of submission materials related to the proposed renovation and building expansion at 197 Spring Street.

This submission package is intended to meet the City's Submission Requirements as outlined in the Level III Application procedures. The proposed project site is located at 197 Spring Street near the intersection of Winter Street. The proposed project will convert the existing nine-unit Rooming House into a seven-unit residential building. This will include the renovation and alteration of the original building along Spring Street. It will also include the demolition of the existing addition, which will be replaced by a more efficient and aesthetically pleasing structure.

Currently, 197 Spring Street has a gravel parking lot which drains stormwater directly onto Spring Street. In addition, it also receives stormwater from its southern and western abutters. A stormwater management upgrade is proposed in the form of a catch basin and storm drain as seen on the civil plan set. This infrastructure will help direct surface runoff into the combined sewer/storm system before it has the chance to flow into the street.

Furthermore, the project proposes to replace the gravel driveway and parking lot with bituminous pavement which will enhance the property while adding minimal impervious surface area to the lot coverage. This proposal has been reviewed and accepted by the Historic District as 197 Spring Street is situated in the West End Historic District.

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

<u>Documents:</u>

- A. Cover Letter
- B. Level III Site Plan Application
- C. Evidence of Right, Title, and Interest
- D. Conformity with Applicable Zoning Standards
- E. Summary of Easements
- F. Written Request for Waivers

- G. Evidence of Financial Capacity
- H. Stormwater Report
- I. Erosion and Sedimentation Control Report
- J. Fire Department Letter
- K. Solid Waste
- L. Utility Cover
- M. Construction Management Plan
- N. Architectural Design Narrative

Drawings:

- Civil Site Plan Set, Dated 3/15/2017
- Architectural Plan Set, Dated 3/4/2017
- Structural Plan Set, Dated 12/19/2016

WAIT, LLC. and the design team look forward to your review of this project and are requesting to be placed on the next available workshop meeting with the Planning Board. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

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

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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

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

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
p.m. (207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30

PROJECT NAME:

197 Spring Street Renovation and Alteration

PROPOSED DEVELOPMENT ADDRESS:

197 Spring Street Portland, Maine 04102

PROJECT DESCRIPTION:

The existing building will remain and receive cosmetic upgrades. The existing addition to the rear will be demolished and replaced with a more efficient addition.

CHART/BLOCK/LOT: 045-E-021

PRELIMINARY PLAN 3/16/2017 (date)
FINAL PLAN _____ (date)

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Steve Morrison Business Name, if applicable: WAIT LLC Address: 158 Danforth Street City/State : Portland, ME Zip Code: 04102	**Applicant Contact Information** Work #: 207-879-0303 Home #: Cell #: 207-671-2523 Fax#: e-mail: steve@morrisonrealtors.com
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work #: Home #: Cell #: Fax#: e-mail:
Agent/ Representative Name: Acorn Engineering, Inc. Will Savage, P.E. Address: 158 Danforth Street City/State : Portland, ME Zip Code: 04102	**Agent/Representative Contact information** Work #: 207-775-2655 Home #: Cell #: 207-317-1884 Fax#: e-mail: wsavage@acorn-engineering.com
Billing Information Name: Address: See applicant information City/State : Zip Code:	**Billing Contact Information** Work #: Home #: Cell #: Fax#: e-mail:

Engineer	**Engineer Contact Information**
Name: See agent information Address: City/State : Zip Code:	Work #: Home #: Cell #: Fax#: e-mail:
Surveyor	**Surveyor Contact Information**
Name: BH2M Robert Libby, Jr., P.L.S. Address: 28 State Street City/State : Gorham, ME Zip Code: 04038	Home #: Work #: 207-839-2771 Cell #: 207-839-8250 Fax#: e-mail: rlibby@bh2m.com
Architect	**Architect Contact Information**
Name: Glenn Harmon, RA, NCARB Address: 35 Mabel St City/State : Portland, ME Zip Code: 04103	Work #: Home #: Cell #: 207-838-4035 Fax#: e-mail: glennlharmon@gmail.com
Attorney	**Attorney Contact Information**
Name: No attorney at this time Address: City/State : Zip Code:	Work #: Home #: Cell #: Fax#: e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: Sam Lebel, E.I. (Acorn Engineering, Inc.)
e-mail: slebel@acorn-engineering.com

Name: Matt Begley, E.I. (Acorn Engineering, Inc.)
e-mail: mbegley@acorn-engineering.com

Name: Olivia Dawson, E.I. (Acorn Engineering, Inc.)
e-mail: odawson@acorn-engineering.com

APPLICATION FEES:

Level III Development (check applicable reviews)	**Other Reviews (check applicable reviews)**
x Less than 50,000 sq. ft. ($750.00) ___50,000 - 100,000 sq. ft. ($1,000) ___100,000 – 200,000 sq. ft. ($2,000) ___200,000 – 300,000 sq. ft. ($3,000) ___over 300,00 sq. ft. ($5,000) ___Parking lots over 11 spaces ($1,000) ___After-the-fact Review ($1,000.00 plus applicable application fee) **Plan Amendments (check applicable reviews)** ___Planning Staff Review ($250) ___Planning Board Review ($500) _____ The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.	___Traffic Movement ($1,500) ___Stormwater Quality ($250) ___Subdivisions ($500 + $25/lot) # of Lots___x $25/lot = _____ ___Site Location ($3,500, except for residential projects which shall be $200/lot) # of Lots___x $200/lot = _____ ___Other _____ ___Change of Use ___Flood Plain ___Shoreland ___Design Review ___Housing Replacement ___Historic Preservation

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

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

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

   Applying Online Instructions

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

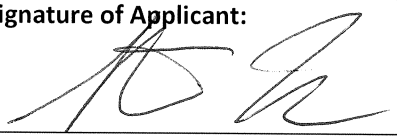
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

APPLICANT SIGNATURE:

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

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

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

Signature of Applicant:	**Date:**
	3-16-17

PROJECT DATA

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

Total Area of Site	5,640 sq. ft.
Proposed Total Disturbed Area of the Site	1,050 sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.	
Impervious Surface Area	
Impervious Area (Total Existing)	4,450 sq. ft.
Impervious Area (Total Proposed)	4,520 sq. ft.
Building Ground Floor Area and Total Floor Area	
Building Footprint (Total Existing)	1,392 sq. ft.
Building Footprint (Total Proposed)	1,663 sq. ft.
Building Floor Area (Total Existing)	3,825 sq. ft.
Building Floor Area (Total Proposed)	5,950 sq. ft.
Zoning	
Existing	R-6
Proposed, if applicable	
Land Use	
Existing	Residential
Proposed	Residential
Residential, If applicable	
# of Residential Units (Total Existing)	9
# of Residential Units (Total Proposed)	7
# of Lots (Total Proposed)	1
# of Affordable Housing Units (Total Proposed)	0
Proposed Bedroom Mix	
# of Efficiency Units (Total Proposed)	0
# of One-Bedroom Units (Total Proposed)	2
# of Two-Bedroom Units (Total Proposed)	5
# of Three-Bedroom Units (Total Proposed)	0
Parking Spaces	
# of Parking Spaces (Total Existing)	4
# of Parking Spaces (Total Proposed)	5
# of Handicapped Spaces (Total Proposed)	0
Bicycle Parking Spaces	
# of Bicycle Spaces (Total Existing)	3
# of Bicycle Spaces (Total Proposed)	3
Estimated Cost of Project	$600,000

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

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

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

- Continued on next page -

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

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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

Bradley Roland, P.E.
Water Resources Division

Date: March 16, 2017

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

Site Address: 197 Spring Street Portland, ME 04102

Chart Block Lot Number: 45-E-021

Proposed Use: Multifamily

Previous Use: Rooming House

Existing Sanitary Flows: 450 GPD

Existing Process Flows: 0 GPD

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

The sewer lateral is not proposed to change. A storm drain is proposed to connect to the sewer main in Spring St.

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

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

2. Please, Submit Contact Information.

City Planner's Name: TBD Phone:

Owner/Developer Name: WAIT LLC - Steve Morrison

Owner/Developer Address: 158 Danforth Street, Portland, ME 04102

Phone: 207-879-0303 E-mail: steve@morrisonrealtors.com

Engineering Consultant Name: Acorn Engineering, Inc.

Engineering Consultant Address: 158 Danforth Street, Portland, ME 04102

Phone: 207-775-2655 Fax: E-mail: wsavage@acorn-engineering.com

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1,260 GPD

Peaking Factor/ Peak Times: Diurnal 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

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.

Existing:

9 rooms
Equation: 180 + 30 GPD/room
Existing flow = 450 GPD

Proposed:

7-Units (Five 1-bedroom & Two 2-bedroom)
Equation: 180 GPD/1-br + 180 GPD/2-br
Proposed flow = 1,260 GPD

Att. C

Doc#: 50477 Bk:30942 Pg: 285

WARRANTY DEED

SPRING MAN PROPERTIES, LLC, a Maine limited liability company with a place of business in Scarborough, Maine, for one dollar and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, grants to **WAIT, LLC**, a Maine limited liability company with a mailing address of P.O. Box 25A, Cumberland, ME 04021, with warranty covenants, a certain lot or parcel of land, with any buildings thereon, situated in the City of Portland, County of Cumberland and State of Maine, being bounded and described as follows:

MAINE REAL ESTATE TAX PAID

A certain lot or parcel of land together with the buildings thereon situated in said Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Beginning at a point in the westerly side of Spring Street distant in a southerly direction along said line of spring Street, one hundred twenty-two and five tenths (122.5) feet from the southwesterly corner of Spring and Winter Streets, said point being the easterly terminus of the division line between lands now or formerly of the Estate of A. W. Dresser and the land of F. H. Palmer; thence in a westerly direction along said division line parallel with the northerly side line of Brackett Street, one hundred fifteen (115) feet, more or less, to a point in the easterly line of lands now or formerly of A. H. Davis; thence in a northerly direction along said Davis' easterly line forty-four and seventy-six hundredths (44.76) feet to a point in the southerly side line of lands of the Estate of Daniel Evans; thence in an easterly direction along said southerly boundary line of Daniel Evans Estate (said southerly boundary line being parallel with the southerly side line of Winter Street) forty-five (45) feet to a point in the westerly boundary line between said Evans' land and lands of F. H. Palmer; thence in a northerly direction along the division line between the Estate of Daniel Evans and lands of F. H. Palmer seven and twenty-five hundredths (7.25) feet to a point in said boundary line; thence in an easterly direction by a line parallel with the southerly side line of Winter Street, seventy (70) feet to a point in the westerly side line of Spring Street, said line passing three (3) feet northerly from the foundation of the bay window of the house as it now stands on the premises herein described; thence in a southerly direction along the westerly side line of Spring Street fifty-one and seventy-five hundredths (51.75) feet to the point of beginning.

Meaning and intending to convey all of the property conveyed to the Grantor by the Larry B. Gaudet, et al, by deed dated June 18, 2004 and recorded at the Cumberland County Registry of Deeds in Book 21444, Page 18.

In Witness Whereof, John M. Murphy, Manager of Spring Man Properties LLC, has set forth his hand this 16 day of August, 2013.

Spring Man Properties, LLC

John M. Murphy, Manager

STATE OF MAINE
Cumberland, ss.

August 16, 2013

Then personally appeared the above-named John M. Murphy, duly authorized Manager of Spring Man Properties, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

Thomas F. Jewell, Attorney at Law

Received
Recorded Register of Deeds
Aug 19,2013 02:11:33P
Cumberland County
Pamela E. Lovley

D. Conformity with Applicable Zoning Standards

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

OVERVIEW

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

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The site is located on 197 Spring Street which is a minor arterial road. The average daily traffic volume is 5,600 vehicles. Adding one additional parking spot will have no impact on current traffic patterns along Spring Street.

2. Access and Circulation:

   a. Site Access and Circulation.

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

      (i) The development will provide safe access and internal circulation for both pedestrians and vehicles.

      (ii) No changes are proposed to the access and egress.

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

   b. Loading and Servicing:

      (i) Not required.

   c. Sidewalks:

      (i) The existing sidewalk along Spring Street is comprised of brick with granite curb. During utility trenching, some parts of the Spring Street sidewalk will be disturbed as seen on the plans. They will be reconstructed to City standards. Any unforeseen disturbance will be reconstructed to City standards as part of the project. Granite curb that is disturbed will be reset to City standards.

      (ii) The sidewalks are currently in adequate condition and will not need repair.

      (iii) The current internal sidewalk providing public access to the property will remain. A new sidewalk will be installed, providing pedestrian access from the rear of the building to the parking lot.

3. Public Transit Access:

   a. Not applicable.

   b. A new transit stop is not proposed as part of the project.

   c. A new transit stop is not proposed as part of the project.

4. Parking:

   a. Location and Required Number of Vehicle Parking Spaces:

      (i) The proposed renovation will provide 5 parking stalls, exceeding the city's requirement for the property.

      (ii) A parking study is not required.

      (iii) The amount of parking exceeds the requirements by more than 10% to accommodate the additional parking for the 7 unit conversion. This is to accommodate off-street parking. An analysis using an industry standard computer program, AutoTurn, confirms that this proposal will provide sufficient circulation.

      (iv) The parking spaces and drive aisle are such that the plans are in conformance with the City of Portland Technical Manual. The driveway width will remain as it currently exists due to the location of the building.

      (v) The parking lot will be reconstructed and resurfaced with bituminous pavement, which is not subject to ponding or erosion.

   b. Location and Required Number of Bicycle Parking Spaces:

      (i) Space for securely parking for the required three (3) bicycle will be provided along the guard rail along the exterior stairs leading to the ground level units. Tenants will be able to lock the bicycles to the permanent guardrail. Units have also been appropriately sized to store bicycles in the units as well.

   c. Motorcycles and Scooter Parking:

      (i) The project does not provide designated motorcycle/scooter parking but there is ample parking within the site for motorcycle and scooter motorists. There is also available on-street parking.

   d. Snow Storage:

      (i) The snow storage and removal will continue as it currently does. During minor snow events, snow will be stored on landscape areas as seen on the site plan. After large snow events, snow will be hauled off site to an approved storage area.

      (ii) Snow storage shall not be located where it will adversely impact the functionality of the stormwater management system.

5. Transportation Demand Management (TDM):

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

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

   a. The existing site contains no prominent significant natural features, therefore no issues related to the preservation of these features applies.

   b. Not applicable.

2. Landscaping and Landscaping Preservation:

   a. Landscape Preservation.

      (i) There are no existing trees on the property.

      (ii) There are no trees within the setbacks that will be removed.

      (iii) There are no existing trees on the property.

      (iv) A waiver is not requested.

      (v) Not applicable.

   b. Site Landscaping.

      (i) Landscaped Buffers:

         (a) The solid waste will be stored within each unit and then distributed to the street side for the City's weekly curbside pickup.

         (b) The project has 51.75 linear feet of frontage along Spring Street; per requirement, it is required that a minimum of six shrubs or shrub alternatives per 45 feet of frontage are planted. This ratio equates to 7 shrubs. The requirement is surpassed through a combination of landscaping within the property. Refer to Sheet C-10 for more information.

         (c) Not applicable.

         (d) Not applicable.

      (ii) Parking Lot Landscaping:

         a) The two tree or one tree & three shrubs per five parking space requirement is met within the site.

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

c) Not applicable.

d) Not applicable.

e) Not applicable.

f) Not applicable.

(iii) Street Trees:

(a) The existing structure along the street frontage is to remain. There are currently no trees existing along the street. The current street tree condition is to remain. As there is not room to provide any.

(b) A contribution to the tree fund will be made in lieu of planting the required trees along the street frontage.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site currently receives stormwater from its southern abutter. The site is proposed to be graded in such a way to direct the site's and abutter's stormwater into a catch basin equipped with a hood and sump which is considered a Best Management Practice (BMP). The catch basin hood will prevent large objects from entering the city's stormwater system. The sump will allow heavy solids to separate out of stormwater, which provides cleaner water than is currently entering the City's sewer system from the site. There is no anticipated ponding or flooding during a small or large rain event. Stormwater will not be redirected to adjacent lots.

(ii) No increase in runoff is proposed.

(iii) No increase in runoff is proposed.

(iv) No increase in runoff is proposed.

b. A site specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic, general, and flooding standards of MEDEP Chapter 500. Please refer to Sheet C-30 and the Stormwater Report 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 is 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. No changes to emergency access conditions within the surrounding streets are proposed.

   c. A fire hydrant is located at the corner of Spring Street and Winter Street. The proposed renovation and improvements will provide a 2" fire suppression line running along the South side of the building.

3. Availability and Adequate Capacity of Public Utilities:

   a. Public utilities in the vicinity of the site have the capacity to serve the proposed project. Please refer to document L. and the accompanying letters.

   b. The current underground electric line that serves the building will remain. If the current service is deemed insufficient by the MEP or Central Maine Power (CMP), then it will be upgraded per CMP standards.

   c. The existing sewer infrastructure will remain and service the renovation. The new stormwater and water infrastructure will meet the provisions of the Technical Manual.

   d. The project will maintain the existing sewer system which is connected to the public sewer system within Spring Street.

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

   f. Not applicable.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

   a. Not applicable.

   b. Not applicable.

   c. Not applicable.

2. Shadows:

   a. Not applicable.

3. Snow and Ice Loading:

   a. The existing and proposed building features a gabled roof. The proposed renovations will mimic the existing snow and ice loading which does not distribute snow and ice onto adjacent properties.

4. View Corridors:

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

5. Historic Resources:

   a. The development is located in the "West End" section of the Historic District.

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

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

6. Exterior Lighting:

   a. Site Lighting.

      (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. Cut sheets may be provided for the lighting typical of residential lights. Please let us know if a photometric plan is required for a project of this scale.

      (ii) Not applicable.

   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. Any mechanical equipment shall be accordance with the applicable zoning requirements.

8. Signage and Wayfinding:

   a. No street signage is proposed for this development.

      (i) Not applicable.

      (ii) Not applicable.

(iii) Not applicable.

9. Zoning Related Design Standards:

   a. The project will be designed to meet the design standards within the R-6 Zone.

E. Summary of Written Easements

- **Existing Easements** – The Existing Conditions Plan developed by BH2M identified no existing easements on the 197 Spring Street property.

- **Proposed Easements** – There are no proposed easements at this time.

F. Written Request for Waivers

1. Driveway Width

   Due to the existing building along the Spring Street frontage, the driveway width is proposed to be 9 feet wide which is 1 foot smaller than the standard. The existing condition features a driveway that is smaller than 9 feet at certain points. The driveway will transition to the standard 24 feet wide for the parking area. A vehicle circulation accessory, AutoTurn, has confirmed that this layout is maneuverable.

Att. G

Gorham
SAVINGS BANK

March 9, 2017

City of Portland
389 Congress Street
Portland, ME 04101

RE: Wait, LLC - project at 197 Spring Street, Portland

To Whom It May Concern:

I'm writing to inform you that Gorham Savings Bank has been providing financing to Stephen Morrison for over 10 years and he is a valued client of the Bank.

Mr. Morrison forwarded me information for Wait, LLC's proposed renovations for the 197 Spring Street property, which they are now presenting to you. Given Gorham Savings Bank's history with Mr. Morrison, the bank would consider financing the renovation project, provided the property meets our underwriting standards.

If you should need further information or clarification, please contact me at (207) 222-1494.

Sincerely,

Todd Abbotoni
Vice President
Commercial Services Group

ACORN ENGINEERING, INC.

STORMWATER MANAGEMENT REPORT

Prepared For:

WAIT, LLC
P.O. Box 25A
Cumberland, Maine 04021

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104

March 2017

INTRODUCTION

Acorn Engineering, Inc. has been retained by WAIT, LLC to provide civil engineering services for the proposed redevelopment of seven residential units. The project is at 197 Spring Street in Portland, Maine.

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

- City of Portland Land Use Ordinance Chapter 14, Article V. Site Plan Section 14-523. Required Approvals and Applicability (E) Level III Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management Amended January 11, 2015.

The proposed project will increase the site's impervious area marginally – less than 2% of the lot size and well under the 1,000 square-foot threshold. Stormwater management features for quality and quantity control have not been designed due to the insignificant increase in impervious area. However, drainage infrastructure in the form of a catch basin, a storm drain, a roof drain, a foundation drain, and a building drip edge have been implemented into the design. The catch basin will feature a hood and sump which is Best Management Practice. Furthermore, the vegetated areas that do exist on site are currently in poor condition and are not able to receive much stormwater. The proposed site work includes the rehabilitation of the landscaped areas, providing more permeable soils with greater hydraulic conductivities than the existing condition. The proposed plantings will also help retain stormwater on site. These measures will help reduce the overall runoff of stormwater into the street and thus reduce the demand on the City's combined sewer/storm system.

EXISTING CONDITIONS

The proposed redevelopment project is located in between the Reiche Community School and Mercy Hospital. A boundary plan has been prepared by BH2M of Gorham, Maine dated July, 2013.

The property is in the R–6 Zone. Abutting Uses include:

➢	North	R-6 Zone	Multi-Family – Residential
➢	West	R-6 Zone	Condominium – Residential
➢	South	R-6 Zone	Condominium – Residential
➢	East	R-6 Zone	Multi-Family – Residential

The property is comprised of compacted gravel in the driveway and parking area. The site slopes down towards Spring Street with an average grade of approximately 10% in the front half of the property and 1% in the rear half of the property. Stormwater flows west to east where it then enters the combined sewer/storm system at the intersection of Winter and Spring Street.

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 also not located within a watershed classified

as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

GENERAL STANDARDS - WATER QUALITY

Water quality will be improved upon the implementation of the catch basin and its pretreatment devices. The hood within the structure will prevent floatable solids such as trash to enter the City's combined system. Furthermore, the structure's sump will allow heavy solids such as sediment to settle out instead of being transported into the municipal system. The design of water quality treatment is not warranted due to the marginal increase in impervious area.

FLOODING STANDARD – WATER QUANTITY

HydroCAD analysis was not undertaken given the project scope. Peak runoff as well as overall runoff of stormwater is expected to decrease for the numerous reasons listed in the Introduction section.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County.

The majority of the site is comprised of Hinckley loamy sand. The Hinckley soil series consists of very deep, excessively drained soils formed in glaciofluvial materials. The permeability of the Hinckley soil is rapid in the surface layer and subsoil and very rapid in the substratum, typically with a low groundwater table. Given the soils information as listed above, no onsite wastewater is proposed and the applicant does not intend to perform a more intense hydric soil boundary delineation or permeability test due to the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 have been met.

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

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

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

considerable importance.

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is anticipated to improve upon the existing stormwater management by providing numerous measures to retain stormwater on site as well as directing it into drainage infrastructure. Although the impervious surface area will be marginally increased, the peak flowrates and overall flow of stormwater exiting the site is expected to be reduced.

Attachments

Attachment A: Soils Map

ACORN ENGINEERING, INC.

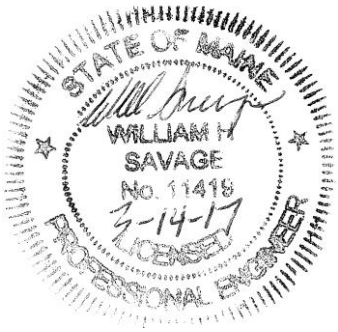
EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

WAIT, LLC
P.O. Box 25A
Cumberland, Maine 04021

Prepared By:

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



March 2017

INTRODUCTION

Acorn Engineering, Inc. has been retained by WAIT, LLC to provide civil engineering services for the proposed redevelopment of 197 Spring Street. The project includes the renovation and alteration of a three-story building that currently has nine rooms. The redevelopment will include the demolition and replacement of the existing addition and the renovation of the original building, resulting in a three-story, seven-unit building with a livable subsurface level. Five off-street parking spaces will be provided for the tenants.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended January 11, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The proposed project site is located on Spring Street in proximity to Reiche Community School and Mercy Hospital. A boundary plan has been prepared by BH2M of Gorham, Maine dated July 2013.

Abutting Uses:

- North R-6 Zone Multi-Family – Residential
- West R-6 Zone Condominium – Residential
- South R-6 Zone Condominium – Residential
- East R-6 Zone Multi-Family – Residential

The property consists primarily of the existing structures and compacted gravel in the driveway and parking area. The site slopes down towards Spring Street with an average grade of approximately 10% in the front half of the property and 1% in the rear half of the property. Stormwater flows west to east where it then enters the combined sewer/storm system at the intersection of Winter and Spring Street.

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

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

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

1.2 Existing Erosion Problems

There is evidence of limited erosion on the western section of the parking area on the property in the form of rutting. This is most likely due to vehicular traffic in the gravel parking lot over time. This issue will be corrected with the proposed paving and revegetation of the property.

1.3 Critical Areas

There are no areas on site that are critical.

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

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes

and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

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

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

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

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 to receiving stormwater.

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

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

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

4.0 DETAILS AND SPECIFICATIONS

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

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

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

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

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

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

5.2 Mulching

All areas shall be 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, especially 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 connection within Spring Street.
5. Prioritize the downhill foundation walls to contain runoff within the site while providing an engineered outlet with siltation barrier to the municipal stormwater system within Spring Street.
6. Commence earthwork operations, wall and foundation installation.
7. Commence installation of utilities.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of drainage infrastructure, as well as other utility work.
10. Complete remaining earthwork operations.
11. Install sub-base and base gravels in paved areas.
12. Install paving, curbing and brickwork.
13. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
14. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete remove all temporary erosion control measures.
15. Touch up areas without a vigorous catch of grass with loam and seed.
16. Complete site signage and striping.
17. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

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

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

8.0 CONCLUSION

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

9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Conclusion

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

PERMANENT SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Recommendations

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

Conclusion

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

ACORN ENGINEERING, INC.

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

March 16, 2017

Subject: 197 Spring Street – Fire Department Checklist
Section J of Application

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

1. Name, address, telephone number of applicant

   WAIT, LLC
   158 Danforth Street
   Portland, Maine 04102
   (207) 879-0303

2. Name address, telephone number of architect

   Glenn Harmon
   35 Mabel Street
   Portland, Maine 04103
   (207) 838-4035

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

   The Code Analysis was prepared by Glenn Harmon and is attached.

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

Ground Level	1,540	sf
1st Floor	1,540	sf
2nd Floor	1,490	sf
3rd Floor	1,380	sf
Total	5,950	**sf**

5. Elevation of all structures

   The average building height is less than 45 feet at four stories tall. See the attached elevations provide by the Architect for additional information.

6. Proposed fire protection of all structures

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

7. Hydrant locations

   An existing hydrant is located 126 feet north of the property on Spring Street. The hydrant is located approximately 134 feet from the nearest proposed building edge. 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 development will be serviced by the existing water main within Spring Street. A 2" fire service line will extend from the existing water main to the building fire suppression system. A 1" domestic line will branch off the 2" fire line to service the building.

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

   Access to the structure is provided from Spring Street and the paved driveway.

10. Attached is a code summary referencing NFPA 1. Please see below for more information regarding the technical standards.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

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

- Spring Street: 30 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 Spring Street directly and one internally from the rear parking

lot.

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

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

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

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

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

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

Response: The proposed site maintains the required clearance height of nine feet.

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

Response: No elevators are proposed for this project.

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 Services Division to assign street addresses and numbering to meet City Standards.

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

Sincerely,

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

197 Spring Street
Code Review
By Glenn Harmon, RA, NCARB – License # 2057

NFPA 101 2009, ICC IBC 2009

- Chapter 30 New Apartment Buildings, Sprinklered
- Exit enclosures 1 hr 30.2.2.1.2
- Winder stairs within units allowed 30.2.2.3.4
- Single exit from each unit allowed 30.2.4.2
- Common path of travel 50’ max 30.2.5.3.2
- Dead end corridor 50’ max 30.2.5.4.2
- Travel distance to exit 250’ max 30.2.6.4
- Interior finishes: Class A at exits, Class A, B, or C elsewhere 30.3.3.3.2
- Corridor wall rating 30 Min 30.3.7.2
- Occupancy Group R2, Apartment House
- Construction type V, Table 601
- Height and area limits 2 stories 7,000 SF increase to 3 stories with sprinkler 504.2, Table 503
- Occupant load limit 200SF/PP Table 604.11
- Single exit at each unit 1021.1 exception 4

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 21, 2017

Sam Lebel
Acorn Engineering
PO BOX 3372
Portland, ME 04104

Re: 197 Spring Street, PO
Ability to Serve with PWD Water

Dear Mr. Lebel:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 10, 2017. Based on the information provided per revised plans dated 3/15/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter does not constitute approval of this project from the District. Review and approval of final plans is required.**

Conditions of Service

The following conditions of service apply:

- A new 2-inch fire service with a 1-inch domestic service tapped off from it may be installed from the water main in Spring Street. The service should enter through the properties frontage on Spring Street at least 10-feet from any side property lines, however an exception will be granted to allow installation a minimum of 7-feet from the side property line.

- The existing building is currently served with a ¾-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main in Spring Street and a public fire hydrant located 160 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 58 psi on February 4, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Gordon S. Johnson, P.E.
Engineering Services Manager

K. Solid Waste Disposal

The tenants will be responsible for their solid waste disposal. Municipal curbside pickup will be utilized.

L. Utilities

The proposed project includes the following alterations and new services to 197 Spring Street:

Water:

The site has an existing 3/4" water service line that exists on site at the northeast corner of the property. The service is too small for the proposed redevelopment and is to be retired in accordance with the Portland Water District. The proposed service features a parent-child connection on the south side of the proposed building as seen on the Utility Plan. A 2" line will tap into the main and serve as the fire sprinkler line. A 1" domestic line is proposed to branch off of the sprinkler line and service the redevelopment.

Storm:

Currently, there is no stormwater collection system on the property. Stormwater ponds on site and runs off into Spring Street and Winter Street. Stormwater is also received from abutting properties.

The project proposes to pave the driveway and parking area. The paving of the driveway and parking area will also include the construction of a catch basin and storm drain that will feed into the City of Portland combined sewer/storm system. The catch basin hood will prevent floatable debris such as trash from entering the city's system. Along with the catch basin hood, the sump will allow heavy solids such as sand to settle out of the stormwater prior to entering the city's system. In addition to the to the catch basin and storm drain, an underdrain will be installed around the perimeter of the new addition, collecting all stormwater from the roof and transporting it to the new storm drain. The flowrate of stormwater into the City's combined system from the site is expected to decrease with the implementation of the stormwater system.

Sewer:

The existing sewer service is a 4" line that connects to the sewer main within Spring Street. The proposed alterations will tie into the current sewer service. There are no anticipated changes to the sewer infrastructure.

UGE/T/C:

The existing underground electric lines will remain. The project may require an upgrade once the loads are known. This upgrade is subject to Central Maine Power's design.

Currently there are four overhead telephone/cable lines running through the rear and front of the property. The lines in the rear are proposed to be disconnected. Upgrades to the system may be needed pending the utility companies full review. The contractor will coordinate this

work with the appropriate companies.

Gas:

No changes to the existing underground gas service is proposed.

Ability to Serve letters have been sent to the respective utility companies. The anticipated water and wastewater flows have decreased from 1,350 GPD to 1,260 GPD since sending out the letters. The letters and responses are attached. Pending responses will be uploaded upon receipt.

ACORN ENGINEERING, INC.

Portland Water District
Attn: MEANS Department
225 Douglass Street
Portland, Maine 04104

March 10, 2017

Subject: 197 Spring Street Renovation and Alteration
Re: Ability to Serve

To Whom It May Concern:

On behalf of WAIT, LLC, we are pleased to submit the following request for Portland Water District's (PWD) ability to serve the proposed development. The project is a 7-unit renovation and alteration of an existing building located at 197 Spring Street (CBL 45-E-21), within the R-6 residential zoning district, in Portland, Maine. The existing addition at the rear of the property is to be demolished and replaced with a new addition. The original building will be renovated in conjunction with the new addition, creating a 7-unit apartment building.

We believe that there is an existing 1" domestic water service line as identified on the existing conditions survey. It is proposed that the existing line remain in service for the redevelopment. In addition to the domestic service, a 2" fire service line is proposed along the southern side of the building, entering the building at the rear. The sprinkler designer has requested a 2" line to serve the proposed addition and redevelopment. Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following design flows:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Rooming House Units	9 Room	9	180 + 30 per room	450
			Total	*450*
Proposed flow				
Multiunit Building Units	2 Bedroom	6	180	1,080
	3 Bedroom	1	270	270
	-		Total	*1,350*
			Net Change	**+ 900 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, effective 8/3/15				

The proposed project is anticipated to add a net water usage from the development of approximately 900 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules and, considering the compact nature of the units (1200 square feet total per unit), the actual flows are anticipated to be lower.

As seen on the preliminary utility plan, we are requesting a waiver for the required 10-foot property separation. The proposed separation between the fire line and the property line is 8 feet.

On behalf of the client we are requesting the following information:

1. Any additional information, such as additional utility mapping within Spring Street.
2. Alternative connection locations from the development to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. Flow data for adjacent hydrants.
5. PWD's ability to serve the project.

I have attached an existing conditions plan by BH2M, the proposed preliminary utility plan by our office, and the fixture count to facilitate your review. Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Sam Lebel

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

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

March 21, 2017

Sam Lebel
Acorn Engineering
PO BOX 3372
Portland, ME 04104

Re: 197 Spring Street, PO
Ability to Serve with PWD Water

Dear Mr. Lebel:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 10, 2017. Based on the information provided per revised plans dated 3/15/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter does not constitute approval of this project from the District. Review and approval of final plans is required.**

Conditions of Service

The following conditions of service apply:

- A new 2-inch fire service with a 1-inch domestic service tapped off from it may be installed from the water main in Spring Street. The service should enter through the properties frontage on Spring Street at least 10-feet from any side property lines, however an exception will be granted to allow installation a minimum of 7-feet from the side property line.

- The existing building is currently served with a ¾-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.

Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main in Spring Street and a public fire hydrant located 160 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 58 psi on February 4, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Gordon S. Johnson, P.E.
Engineering Services Manager

Sam Lebel

From: Daniel Scala <dscala@pwd.org> on behalf of AMaP MEANS <means@pwd.org>
Sent: Tuesday, March 14, 2017 12:27 PM
To: Sam Lebel
Subject: RE: 197 Spring St Ability to Serve

Hi Sam,

Sorry I misinterpreted the request letter. In doing a little research on the property our records indicate the building is actually fed with a ¾" service line, not a 1" service and the existing ¾" service will not be sufficient to serve this building and will need to be retired. With permission/confirmation from the sprinkler designer, a parent/child configuration could be allowed or a new domestic line can be tapped next to the fire service. I will send plan markups this week to note these requirements.

Thanks,
Dan Scala

Daniel Scala
Associate Engineer
Portland Water District
Phone:
E-mail: dscala@pwd.org
http://www.pwd.org

From: Sam Lebel [mailto:slebel@acorn-engineering.com]
Sent: Monday, March 13, 2017 4:20 PM
To: AMaP MEANS
Subject: RE: 197 Spring St Ability to Serve

Dan,

The existing building and the addition together will compose the 7 units. Therefore, there will be a total of 7 units on site which has been accounted for in the fixture count. It is our hope that the 1" domestic line will be able to supply the demand. Let me know if you have any other questions. Thanks.

Sam

From: Daniel Scala [mailto:dscala@pwd.org] **On Behalf Of** AMaP MEANS
Sent: Monday, March 13, 2017 3:46 PM
To: Sam Lebel <slebel@acorn-engineering.com>
Subject: RE: 197 Spring St Ability to Serve

Hi Sam,

I had a question regarding the domestic water service line for this project, is the existing 1" service planned to supply the existing building as well as the 7 unit addition? If so, does the fixture count submitted only account for the new 7 unit addition? A 1" service to serve the entire property may not be adequate and it would be recommended to either upsize the service to 1.5" or at least upsize the piping on private and internal plumbing to 1.5' or 2".

Thanks,

Dan Scala

Daniel Scala
Associate Engineer
Portland Water District
Phone:
E-mail: dscala@pwd.org
http://www.pwd.org

From: Sam Lebel [mailto:slebel@acorn-engineering.com]
Sent: Friday, March 10, 2017 2:45 PM
To: AMaP MEANS
Cc: William Savage
Subject: 197 Spring St Ability to Serve

To Whom It May Concern,

Acorn Engineering, Inc., on behalf of WAIT LLC, is sending a formal Ability to Serve letter to your office for the proposed redevelopment of 197 Spring Street in Portland.

Attached is the ability to serve letter, the existing conditions plan, the preliminary utility plan, and the project's fixture count.

Please do not hesitate to contact myself or our office with any questions or clarifications. Thank you.

Sam Lebel, EI
Design Engineer

Licensed in Maine

Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
www.acorn-engineering.com

B. 207.775.2655
C. 207.478.4327

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ACORN ENGINEERING, INC.

Portland Department of Public Works
Water Resources Division
Attn: Bradley Roland, P.E.
55 Portland Street
Portland, Maine 04103

March 10, 2017

Subject: 197 Spring Street Redevelopment
Re: Ability to Serve

Bradley Roland:

On behalf of WAIT, LLC, we are pleased to submit the following request for the Department of Public Work's (DPW) ability to serve the proposed development. The project is a 7-unit renovation and alteration of an existing building located at 197 Spring Street (CBL 45-E-21), within the R-6 residential zoning district, in Portland, Maine. The existing addition on the rear of the building is to be demolished and replaced with a new addition. The original building will be renovated in conjunction with the new addition, creating a 7-unit apartment building.

We believe that there is an existing 6" domestic sewer lateral that transfers to a 4" service outside the building foundation. This service was measured in the field and is not located on the existing conditions plan. Please reference the attached preliminary utility plan for more information. No changes to the sewer lateral are proposed at this time.

Furthermore, it is proposed that a 12" PVC storm drain be connected from a proposed catch basin on site into the existing 18" combined sewer/storm main as seen on the preliminary utility plan. Currently, the surface runoff drains to the street where it eventually enters the catch basin at the intersection of Spring St. and Winter St. The catch basin then drains to the combined sewer system. The project will maintain the existing pervious area. Thus, no changes in runoff flows are expected.

Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following design flows:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Rooming House Units	9 Room	9	180 + 30 per room	450
				450
Proposed flow				
	2 Bedroom	6	180	1,080
	3 Bedroom	1	270	270
				1,350
			Net Change	**+ 900 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, effective 8/3/15				

The proposed project is anticipated to add a net water usage from the development of approximately 900 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules and, considering the compact nature of the units (1200 square feet total per unit), the actual flows are anticipated to be lower.

On behalf of the client we are requesting the following information:

1. Any additional information, such as additional utility mapping within Spring Street including inverts.
2. DPW's proposed infrastructure improvements within the project vicinity.
3. DPW's ability to serve the project.

I have attached an existing conditions plan by BH2M as well as the proposed preliminary utility plan. Please let me know if you have any questions or clarifications.

Sincerely,

Sam Lebel

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

ACORN ENGINEERING, INC.

Central Maine Power Company
Attn: Paul DuPerre
162 Canco Road
Portland, Maine 04103

March 10, 2017

Subject: 197 Spring Street Redevelopment
Re: Ability to Serve

Paul DuPerre,

On behalf of WAIT, LLC, we are pleased to submit the following request for Central Maine Power's (CMP) ability to serve the proposed development. The project is a multiunit 7-unit renovation and alteration of an existing building located at 197 Spring Street (CBL 45-E-21), within the R-6 residential zoning district, in Portland, Maine. The existing addition on the rear of the building is to be demolished and replaced with a new addition.

We believe that there is an existing underground electrical line servicing the existing dwelling from the underground electrical main that runs along the sidewalk. It is proposed that the existing service remain and that new meters be installed in conjunction with the proposed 7-unit apartment building. Heat pumps and cooling equipment is expected to be part of the electric demand. Single-phase power is anticipated for this redevelopment.

On behalf of the client we are requesting the following information:

1. CMP's proposed infrastructure improvements within the project vicinity.
2. CMP's ability to serve the project.
3. Access requirements to the CMP meters.

I have attached an existing conditions plan by BH2M and the proposed preliminary utility plan by our office to facilitate your review.

Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Sam Lebel

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

3/13/2017

Sam Lebel, EI
Acorn Engineering
PO Box 3372
Portland, ME 04104
Sent via email to slebel@acorn-engineering.com

RE: Ability to Serve Letter for 197 Spring Street in Portland, ME

Dear Mr. Lebel:

CMP has the ability to serve your proposed project located at 197 Spring Street in Portland, Maine, in accordance with our CMP Handbook (web link below). We can provide you the desired pole or pad mounted transformers per your request and city approval, in accordance with our CMP Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please feel free to contact me. Should this project be single phase with all self-contained metering, then you will be dealing directly with the Portland Service Center. Should it be three phase, or single phase with CTs, please contact me directly.

New Service Milestones

- Call 1-800-565-3181 to establish a new account and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete this CMP spreadsheet using load information and send to me to help size the transformers required.
- Submit the easement information worksheet. Please complete this CMP form and either email or fax back to us.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment to cost out job and develop CMP Invoice.
- Submit invoice for payment.
- Easements signed and payment received.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer delivery, potential substation upgrades, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be

162 Canco Road Portland, ME 04103
Tel (800) 750-4000
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

www.cmpco.com

An equal opportunity employer

commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

Please complete the attached forms (specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements:

CMP Handbook of Standard Requirements
(http://www.cmpco.com/MediaLibrary/3/6/Content%20Management/YourAccount/PDFs%20and%20Docs/handbook.pdf)

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to http://www.cmpco.com/YourAccount/puc324.html and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Chapter 313 (Customer Net Energy Billing) can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing .
If you have any questions, please contact me.

If you have any questions, please contact me.

Attachments:

Excel Load Sheet
Easement Worksheet

Regards,

Jamie Cough
Energy Services Advisor
Central Maine Power Company

162 Canco Road Portland, ME 04103
Tel (800) 750-4000
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

www.cmpco.com

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ACORN ENGINEERING, INC.

Fairpoint Communications
Attn: Mr. Brian Bouchard
5 Davis Farm Road
Portland, Maine 04103

March 10 2017

Subject: 197 Spring Street Redevelopment
Re: Ability to Serve

Brian Bouchard:

On behalf of WAIT, LLC, we are pleased to submit the following request for the Fairpoint's ability to serve the proposed development. The project is a 7-unit renovation and alteration of an existing building located at 197 Spring Street (CBL 45-E-21), within the R-6 residential zoning district, in Portland, Maine. The existing addition on the rear of the building is to be demolished and replaced with a new addition. The original building will be renovated in conjunction with the new addition, creating a 7-unit apartment building.

We believe that there are three overhead services to the existing building, two connected to a utility pole at the rear of the building and one at the front of the building connected to a utility pole across the street on Spring Street. It is proposed the overhead lines at the rear of the building are removed. The existing overhead service tying into the front of the building along Spring Street is proposed to remain and may be upgraded to service telephone to the proposed 7-unit apartment building.

On behalf of the client we are requesting the following information:

1. Any additional information, such as additional utility mapping within Spring Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Fairpoint's proposed infrastructure improvements within the project vicinity.
5. Fairpoint's ability to serve the project.

I have attached an existing conditions plan by BH2M and the proposed preliminary utility plan by our office to facilitate your review. Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Sam Lebel

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

5 Davis Farm Rd
Portland, ME 04103
207- 712-1063 Cell
207- 797-1098 Fax

March 13, 2017

To Whom It May Concern:

This letter is to inform that FairPoint Communications has the capacity and willingness to serve the proposed 7-unit apartment complex to be located at 197 Spring St in Portland. FairPoint currently has aerial facilities to this location via service wires along Spring St and from a service pole located on the backside of the property; both of which could be used to serve the apartment complex. Please do not hesitate to contact me with any questions.

Sincerely,

Brian M. Bouchard

FairPoint Outside Plant Engineer

Email: bbouchard1@fairpoint.com

Phone: 207-712-1063

ACORN ENGINEERING, INC.

Charter Communications
Attn: Mr. Mark Pelletier
118 Johnson Road
Portland, Maine 04102

March 10, 2017

Subject: 197 Spring Street Redevelopment
Re: Ability to Serve

Mr. Pelletier:

On behalf of WAIT, LLC, we are pleased to submit the following request for Charter's ability to serve the proposed development. The project is a 7-unit renovation and alteration of an existing building located at 197 Spring Street (CBL 45-E-21), within the R-6 residential zoning district, in Portland, Maine. The existing addition on the rear of the building is to be demolished and replaced with a new addition.

We believe that there is an existing overhead service to the front of the existing dwelling that runs from a utility pole on the opposite side of Spring Street. It is proposed that the overhead line remain and be upgraded if necessary.

On behalf of the client we are requesting the following information:

1. Any additional information, such as additional utility mapping within Spring Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Charter's proposed infrastructure improvements within the project vicinity.
5. Charter's ability to serve the project.

I have attached an existing conditions plan by BH2M and the proposed preliminary utility plan by our office to facilitate your review.

Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Sam Lebel

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

Sam Lebel

From: Pelletier, Mark <Mark.Pelletier@charter.com>
Sent: Monday, March 13, 2017 9:23 AM
To: Sam Lebel
Subject: RE: 197 Spring St. Ability to Serve

Sam,

Hoping this email will be acceptable as the ”Ability to Serve” letter.

Charter/Spectrum cable has an existing drop and lockbox on right front corner of bldg. Our records show that this was/is a 9 unit MDU apartment bldg. There are no plans at this time to change our cable system as it was designed to service 9 units. Electrician should plan on running 1 homerun from each unit and to our existing lockbox with enough tail length. All cable outlets in each unit will need to be brought to 1 location for the splitter configuration. Please have electrician provide a “mud ring” only so that we have the whole wall cavity to put the splitter in.

I can have our lockbox float temporary is there is siding work to be done. Just will need a few days’ notice to schedule that scope of work.

Let me know if you need anything else..

Mark

From: Sam Lebel [mailto:slebel@acorn-engineering.com]
Sent: Friday, March 10, 2017 2:55 PM
To: Pelletier, Mark <Mark.Pelletier@charter.com>
Cc: William Savage <wsavage@acorn-engineering.com>
Subject: 197 Spring St. Ability to Serve

Good afternoon Mark,

Acorn Engineering, Inc., on behalf of WAIT LLC, is sending a formal Ability to Serve letter to your office for the proposed redevelopment of 197 Spring Street in Portland.

Attached is the ability to serve letter, the existing conditions plan, and the preliminary utility plan.

Please do not hesitate to contact myself or our office with any questions or clarifications. Thank you.

Sam Lebel, EI
Design Engineer

Licensed in Maine

Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
www.acorn-engineering.com

B. 207.775.2655
C. 207.478.4327

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M. Construction Management Plan

Project Address: 197 Spring Street

Project Description:

The proposed project is a residential 7-unit redevelopment of existing multifamily dwellings. The rear of the building has recently been demolished to facilitate the renovation and alteration of the property. The proposed site is to be accessed via Spring Street.

Project Team Summary:

Owner:	WAIT, LLC.
General Contractor:	To Be Determined
Civil Engineer:	Acorn Engineering, Inc.
Architect:	Glenn Harmon
Structural Engineer:	EDP Consulting Engineers

Timeline and Schedule:

Projected Start Date:	Summer 2017
Project Duration:	Approximately 8 months
Projected Completion:	Spring 2018
Street Interruption:	During the installation of utilities within Spring Street.
Sidewalk Interruption:	During the installation of utilities, paving the driveway and building façade installation.

Emergency Contact:

- Steve Morrison
- (207) 879-0303

Estimated Work Hours:	7:00 am to 5:00 pm
Delivery Truck Access:	Contact Steve Morrison to coordinate.
Worker Parking:	On the street.

WAIT, LLC. and their contractor will work with the City of Portland, and adjacent landowners to minimize any project impacts. The Spring St. sidewalk should remain open to the public.

The General Contractor will remain solely and completely responsible for enforcement of and compliance with 1) all contract plans and specifications and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case both by the contractor and its subcontractors. These include all OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. The General Contractor will remain responsible for safeguarding the general public.

It is the sole responsibility of the General Contractor to demolish the site in full compliance with City and State regulations. Refer to the Civil/Site Plan Set, Sheet C-03 for location of the proposed sedimentation barrier. Refer to the Existing Conditions Plan for a visual representation of the existing site conditions.

197 Spring Street
Architectural Design Narrative
By Glenn Harmon, RA, NCARB – License # 2057

The scope of work entails converting the existing 8-unit boarding house into a 7-unit apartment building. The building is a mid-19th century 2-½ story wood framed gable structure which fronts Spring Street, and has an attached 2 story wood framed dilapidated ell to the rear. The ell will be removed and a new ell constructed in the same location. This will allow for egress deficiencies to be rectified, setbacks to be met, and unit configuration to be optimized.

The building will have two units at the basement level which will exit directly to the exterior via an open stairwell; two units at the first floor, the rear or ell unit being handicapped adaptable; and three townhouse units at the second floor, each with internal stairs to bedrooms at the internal 2nd floors.

As part of the conversion, the existing main house will be returned to its original appearance to the greatest extent possible, including wood clapboard siding, clad wood windows, articulated corner boards, window surrounds and cornice trim, and a rebuilt entry porch (phase 2). The ell will be of similar but simpler detail, to respect the main house, and is additionally set back from the main facade to allow a more recessive treatment. The roof of the ell will sit below the ridge of the main house to further acknowledge its secondary importance. The eaves will align, and dustpan dormers will provide adequate space for the townhouse bedrooms, while keeping the massing to a deferential proportion.

Proposed materials include painted wood clapboards, aluminum clad wood windows with simulated divided lites, asphalt roof shingles, and painted wood trim.

Mechanical equipment units (heat pumps) will be located on the north facade, out of sight from any public view. Electric and natural gas meters will be located on the east facade foundation wall, and will be consolidated to the greatest extent possible, as well as screened behind landscaping.

Att. O

Southern Maine Forestry Services
P.O. Box 910
Windham, Maine 04062
Tel. (207) 892-6562

April 26, 2017

Mr. Steve Morrison
158 Danforth St.
Portland, Maine 04102

Dear Mr. Morrison,

You asked that I look at trees behind a building you own at 197 Spring Street in Portland.

Visiting the property I found 8 trees around the parking area behind the building. All 8 are Norway maples, an invasive species which have well known problems in an urban setting. Evidence indicates these trees became established naturally from seeds that landed there and are not planted specimens. Nor did I see evidence these trees had ever received any care to improve their branching structure and their utility as shade trees.

The trees are in typical condition for mature Norway maple. There are wounds caused by vehicles, branch breakage and branches splitting off at forks in the crown. Decay has invaded these wounds. Rotted wood is seen on several stems. Cracks in the bark and fruiting bodies of wood rotting fungus are other evidence of internal decay. The trees are in only poor to fair condition.

Any excavation done to improve the parking area will damage roots. This damage would accelerate decay already present in the stems.

These trees have an increasing risk of failing. Any failure of the stem or branches of these trees will pose a risk of damage to adjacent buildings, vehicles and people should they be present when a failure should occur.

My recommendation is the trees be removed and replaced with landscaping more appropriate to this densely developed area.

Sincerely,

Rene D. Noel, Jr. ACF
Maine Licensed Forester # 325

Dear Neighbor: April 8, 2017

On behalf of WAIT, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed redevelopment at 197 Spring Street within the R-6 Zone in Portland. The project includes the renovation of the original building with a new addition. Seven units will occupy this redevelopment. This proposal has been reviewed and approved by the Historic Preservation Office. Additionally, drainage infrastructure will be installed on site to help mitigate any stormwater runoff into the street. The information on the meeting is as follows:

Meeting Location: Reiche Community School – 166 Brackett Street, Portland, ME 04102
Meeting Date: Tuesday, April 18, 2017
Meeting Time: 5:30 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions regarding the neighborhood meeting, please don't hesitate to call me or the office at 775 – 2655. We look forward to seeing you at the meeting.

Sincerely,

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

Dear Neighbor: April 8, 2017

Att. P

On behalf of WAIT, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed redevelopment at 197 Spring Street within the R-6 Zone in Portland. The project includes the renovation of the original building with a new addition. Seven units will occupy this redevelopment. This proposal has been reviewed and approved by the Historic Preservation Office. Additionally, drainage infrastructure will be installed on site to help mitigate any stormwater runoff into the street. The information on the meeting is as follows:

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If you have any questions regarding the neighborhood meeting, please don't hesitate to call me or the office at 775 – 2655. We look forward to seeing you at the meeting.

Sincerely,

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

Dear Neighbor: April 8, 2017

On behalf of WAIT, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed redevelopment at 197 Spring Street within the R-6 Zone in Portland. The project includes the renovation of the original building with a new addition. Seven units will occupy this redevelopment. This proposal has been reviewed and approved by the Historic Preservation Office. Additionally, drainage infrastructure will be installed on site to help mitigate any stormwater runoff into the street. The information on the meeting is as follows:

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Meeting Date: Tuesday, April 18, 2017
Meeting Time: 5:30 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions regarding the neighborhood meeting, please don't hesitate to call me or the office at 775 – 2655. We look forward to seeing you at the meeting.

Sincerely,

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

Dear Neighbor: April 8, 2017

On behalf of WAIT, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed redevelopment at 197 Spring Street within the R-6 Zone in Portland. The project includes the renovation of the original building with a new addition. Seven units will occupy this redevelopment. This proposal has been reviewed and approved by the Historic Preservation Office. Additionally, drainage infrastructure will be installed on site to help mitigate any stormwater runoff into the street. The information on the meeting is as follows:

Meeting Location: Reiche Community School – 166 Brackett Street, Portland, ME 04102
Meeting Date: Tuesday, April 18, 2017
Meeting Time: 5:30 p.m.

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197 Spring St. Neighborhood Meeting Minutes

April 18, 2017

Design Team Present:
Steve Morrison (SM) - Applicant, Will Savage (WS) - Acorn, Sam Lebel (SL) - Acorn,
Glenn Harmon (GH) - Architect

Public Present:
Amy & Michael Pulaski, Kyle Morrison, Maria Villarreal

Start: 5:35 p.m.

Presentations:

Will Savage, Acorn Engineering, Inc.

- Project vicinity with street names in area
- Existing Conditions
  - Gravel Drive
  - Main building with addition
- Proposing 5 parking spaces (1 over the minimum requirement)
- Stormwater to drain to catch basin and into Spring St system
- Existing utilities
  - Sewer
  - Water
  - Electric
  - Gas
- Upgrade water with fire line
- Project approved by Historic Board
- Small sized project - only requires this level of permitting because the units are treated as a subdivision which triggers the level 3 site plan/subdivision
- Elevations of building which Glenn will go over

Glenn Harmon

- Existing building is in poor condition and falling apart
- Project will restore main house
- The "L" will be rebuilt – bevel siding and clad wood
- Massing of "L" subservient to main house to align floors
- Phasing project with side entry porch to imitate what it used to look like
- 1-story bay reduced
- Pleased to bring this building back to life

Questions from the public

Q: Any color renderings?
WS: Not yet, keeping the project simple

Q: Size of units?
SM: 612 SF – 1,180 SF

Q: Any 2 BR?
SM: Yes, five of the units have 2-BR and two have 1-BR

Q: Basement Units?
SM: They're ground level units that will have plenty of daylight, windows, and access through the proposed stairs

Comment (WS): We're also increasing the effective green space. Currently, it's a mix of gravel and grass and will be upgraded as part of the project.

Q: Any zoning requirements for green space?
WS: Yes, a minimum of 20% which we are meeting

Q: Will these units be rental or ownership?
SM: I haven't fully decided yet. With the higher than anticipated cost of design and permitting, it will be an economic decision.

Comment (WS): The next steps for the project:

- Submit meeting minutes to the city
- Workshop or hearing – this project might take only 1 meeting with the planning board, but probably 2. The hearing is where the board will vote on approval of the project.

Q: Is there any alternate to the stormwater system like a bioswale?
WS: With the limited area to construct a rain garden or swale. There are also stairs in the vicinity in addition to the foundation. We've used rain gardens all across the City and look to use them whenever we can, but in this situation it doesn't make sense.

Q: Do you need all the turning radii?
WS: Yes, we need the 24-foot drive aisle to facilitate the turning of vehicles

Q: Will you have to back all the way out?
WS: No, we've added a little bump out to accommodate turning around. The City frowns upon backing out of driveways so we have not proposed this. We are asking for a waiver for the driveway width given the existing condition and the location of the existing building.

Q: Landscaping along eastern part of site?
SL: Currently it's switch grass will require minimal maintenance

Q: Swale or fence along eastern part of site?
SL: No swale but there is a cedar fence along the property line

Q: Does paving the gravel change the stormwater requirements?
WS: No it's just for aesthetic preference

Q: Have you thought about having pervious gravel?
WS: We would have to excavate deeper and maintain it

Q: How much would you have to excavate for pervious pavement or pavers?
WS: About the same as regular pavement, but the DEP requires certain offsets from foundations which would not be met in this specific urban infill. We would also have to spend more money to have studies done for infiltration rate and potential impacts to existing basements. We have design experience with porous pavement on the Riverside job and inspection experience at the IMT last year and we like porous pavement, but this stormwater BMP is used on site specific basis.

Comment (WS): By excavating, we'll have to remove all the trees within the property. Rene Noel identified them as Norway Maples are invasive. Trees that are 10 inches or greater within the setback have to be preserved to a certain point, but not in this situation where they're invasive. We will submit the report by Rene to the City once complete. The tree bisecting the property line is a Norway Maple in poor condition. It is not our intent to remove all the trees, but they're invasive.

Comment (Public): The trees help support the fence in the back

Comment (WS): You might want to talk to Rene directly. We could talk about a new fence or plantings along property line.

Comment (SM): I called him last week and we met on site today. I don't mind replanting with trees or shrubs.

Q: Will the fence posts be in concrete?
SM: Probably won't set the wood in concrete because it will rot quicker, but I would look to the fence contractor.

Comment (Public): I want to put up a hammock for my kids

Comment (SM): We will work to provide stable posts. The City will review the tree situation as well.

Comment (WS): City arborist will carry out separate review. What concerns me is the poor condition of the tree.

Comment (SM): The tree is leaning currently

Comment (WS): Let us know what species you want planted

Comment (Public): We have a garden in that area

Comment (SM): We will remove the trees, excavate roots, pave, and re-plant

Comment (Public): Someone took one of these trees down to the right on the abutter's property

Comment (SM): I went to talk to the Condo Association and they didn't tell me about it, they just took it down. Harry Sawyer also took down the other one on his property.

Comment (SM): We will separate the abutter's parking and this redevelopment with a fence

Comment (WS) Wooden posts similar to a guardrail without the horizontal element.

Q: How to handle snow? The fence is a wreck because they plow into it
WS: There is snow storage in designated areas on the Site Plan. During years with large storm events, offsite hauling of snow will be necessary.

Q: Will the units have fire protection?
GH: All new residential projects require fire protection. This project proposed a 1" domestic line and a 2" fire line.

Comment (WS): We estimate a workshop on May 23rd with public comment

Comment (SM): If I can't start by Labor Day, I will probably hold off until next Spring

End 6:25 p.m.

197 SPRING STREET REDEVELOPMENT

WAIT, LLC
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

- BRICK SIDEWALK
- GREEN SPACE
- PAVEMENT
- UTILITY PAVEMENT CUTS
- STRIPING
- SEDIMENTATION BARRIER
- EDGE OF PAVEMENT
- CURB
- SIGN
- LAMP OR LIGHT POLE
- UTILITY POLE
- GUY WIRE
- WATER VALVE
- FIRE HYDRANT
- SEWER MANHOLE
- CATCH BASIN
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- MINOR CONTOURS (1FT)
- MAJOR CONTOURS (5FT)
- GAS LINE
- UNDERGROUND TELEPHONE
- STORM DRAIN LINE
- SEWER LINE
- EXISTING/PROPOSED BUILDING
- FOUNDATION DRAIN
- OVERHEAD ELECTRICAL/TELEPHONE/CABLE
- PROPERTY LINE
- SETBACKS

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CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: BRAD ROLAND, P.E.
(207) 874-8846

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 458-0382

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVENUE
PORTLAND MAINE 04101
CONTACT: BRIAN BOUCHARD
(207) 712-1063

CABLE:

CHARTER COMMUNICATIONS
(FORMERLY TIME WARNER CABLE)
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: KELLY FOWLER
(207) 541-2536

PROJECT TEAM

DEVELOPER:

WAIT, LLC.
CUMBERLAND, MAINE
CONTACT: STEVE MORRISON
(207) 879-0303

ARCHITECT:

GLENN HARMON, RA, NCARB
PORTLAND, MAINE
(207) 283-0193

SURVEYOR:

BH2M
GORHAM, MAINE
CONTACT: R. LIBBY JR., P.L.S.
(207) 839-2771

STRUCTURAL ENGINEER:

EDP CONSULTING ENGINEERS
FREEPORT, MAINE
CONTACT: LARRY WICHROSKI, P.E.
(207) 865-9505

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TWC	TIME WARNER CABLE
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/15/17

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: 197 SPRING STREET - RENOVATION AND ALTERATION
CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102 (207) 775-2655

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

FILE:	1081_CIVIL
JN:	1081
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11416
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN AUTOCAD FORMAT AND PAPER, STAMPED "AS-BUILT". IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY AND TOPOGRAPHIC FROM THE PLAN TITLED EXISTING CONDITIONS SURVEY BY BH2M SURVEYING FOR 197 SPRING STREET, DATED JANUARY 26TH, 2017.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
9. CONSTRUCTION MANAGEMENT PLAN BY ACORN ENGINEERING INC. SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
11. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR 197 SPRING STREET. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER.
12. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN, IF ANY.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING 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.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY WAIT LLC. AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED FOUNDATION CORNERS.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. 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.
8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. AFTER PAVING OPERATIONS ARE COMPLETE, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
3. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
4. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.
5. 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.
6. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
8. 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.
9. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
10. 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.
11. 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.

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: GENERAL NOTES

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

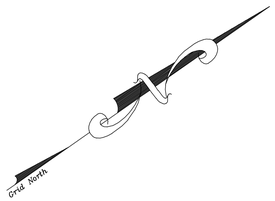
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE BY ANYONE OTHER THAN ACORN ENGINEERING, INC., SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

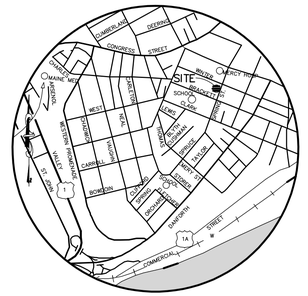
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND MAINE 04102
(207) 775-2855

FILE:	1081_CIVIL
JN:	1081
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H SAVAGE — No. 11415 — 3-14-17 — REGISTERED PROFESSIONAL ENGINEER

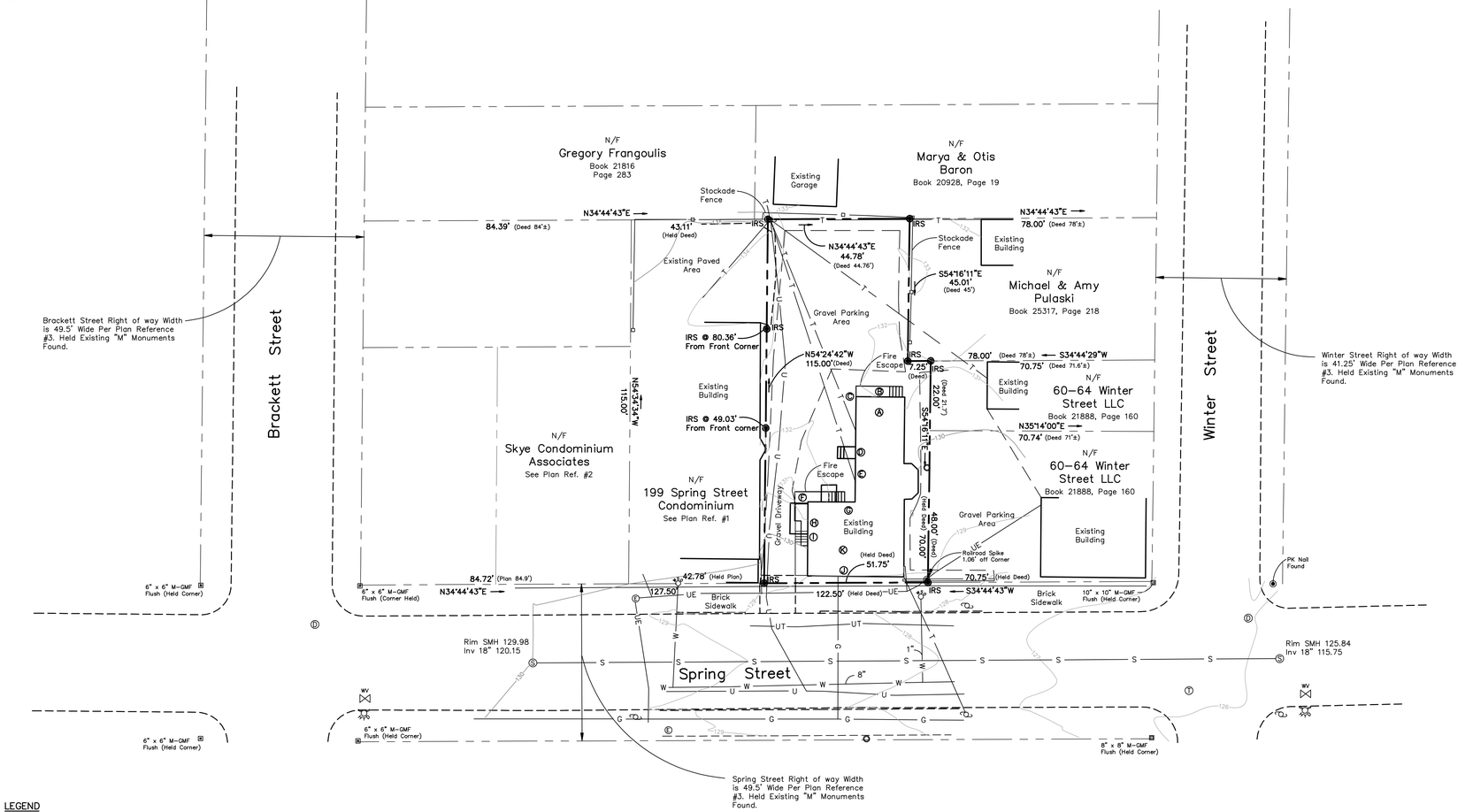
DRAWING NO.
C-02





LOCATION MAP

SCALE: NTS



Scale: 1" = 20'

20' 0 10' 20' 40'

LEGEND

SYMBOL	DESCRIPTION
⊞ M-GMF	M-GRANITE MONUMENT FOUND
O IPF/IRF	IRON PIPE/IRON ROD FOUND
◉ IRS	5/8" IRON ROD W/ CAP TO BE SET
	UTILITY POLE
S	SEWER MANHOLE
	WATER SHUTOFF
	DECIDUOUS TREE
	CONIFEROUS TREE
E	OVERHEAD ELECTRIC
T	OVERHEAD TELEPHONE LINES
UT	UNDERGROUND TELEPHONE LINES
U	UNDERGROUND UTILITY LINES
UE	UNDERGROUND ELECTRIC LINES
W	WATERLINES
	PROPERTY LINE
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
A.G.	ABOVE GROUND
N/F	NOW OR FORMERLY

Notes:

1. Owner: Spring Man Properties LLC
2. Deed Reference: Book 21444, Page 18
3. Parcel Area: 5641 s.f.

Plan References:

1. Condominium Plat, "199 Spring Street Condominium", 199 Spring Street, Portland, Maine, for Christopher & Kristi Sarchi, Dated 1/25/2006, by Owen Haskell, Inc. and Recorded in the Cumberland County Registry of Deeds in Plan Book 206, Page 59.
2. Skye Condominium Associates, 205-207-209-211 Spring Street, Portland, Maine, Dated 6/19/86, by Wells Engineering, Inc. and Recorded in the Cumberland County Registry of Deeds in Plan Book 156, Page 7.
3. City of Portland "Blue Sheets" and Various Plans for Spring Street, Winter Street & Brackett Street and Available from the City of Portland Engineering Department.

Bench Mark:

Top of Granite Monument found at the Northeast Corner of Spring Street & State Street, Provided by the City of Portland. Elevation 116.206 (NGVD 1929).

Coordinates/Bearings:

Bearings And North Orientation Shown Hereon are Based upon The Maine State Coordinate System, West Zone (NAD 83), Using City of Portland Coordinate Points T104-148-128 (#2708) & T124-25-1214.

BUILDING ELEVATION CHART

POINT	DESCRIPTION	ELEVATION
A	FIN. FL. 2nd FLOOR	142.31'
B	TOP ROOF	153.37'
C	EDGE ROOF	149.60'
D	FIN. FL. 1st FLOOR	134.26'
E	FIN. FL. 2nd FLOOR	142.62'
F	ROOF EDGE	154.31'
G	FIN. FL. 2nd FLOOR	144.02'
H	FIN. FL. 1st FLOOR	134.17'
I	TOP ROOF	163.17
J	TOP SILL	129.87'
K	FIN. FL. BASEMENT FLOOR (IRREGULAR FLOOR)	126.2'±

I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS TECHNICAL STANDARDS OF PRACTICE FOR A STANDARD BOUNDARY SURVEY WITH THE FOLLOWING EXCEPTIONS:

1. NO SURVEYORS REPORT

STATE OF MAINE
ROBERT C. LIBBY JR.
PROFESSIONAL LAND SURVEYOR

ROBERT C. LIBBY JR. PLS #2190

NO.	DATE	REVISION DESCRIPTION
*	9/10/13	Added IRS on Property Line
*	1/26/17	Added Topography & Building Elevations

BH2M
Berry, Huff, McDonald, Milligan Inc.
Engineers, Surveyors
28 Saint Street
Gorham, Maine 04038
Tel. (207) 839-2771
Fax (207) 839-8250

FOR
Steve Morrison
158 Danforth Street
Portland, Maine 04102

STANDARD BOUNDARY SURVEY PLAN

LAND OF
SPRING MAN PROPERTIES LLC
197 SPRING STREET
PORTLAND, MAINE

DESIGNED	DATE
R. Libby, Jr.	July 2013
DRAWN	SCALE
R. Libby, Jr.	1" = 20'
CHECKED	JOB. NO.
W. Thompson	13076

SHEET
1

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GENERAL NOTES:

1. ANY EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED TO CITY STANDARDS AT THE CONTRACTOR'S EXPENSE.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE SITE DEMOLITION WITH THE OWNER, WAIT, LLC.
7. NOTE THAT ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION.
8. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL.
9. CONSTRUCTION FENCE AND SEDIMENT BARRIER ARE OFFSET THE PROPERTY LINE AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DOES NOT NECESSARILY REPRESENT THE PHYSICAL LOCATION.
10. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
11. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
12. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.

N/F
Gregory Frangoulis
Book 21816
Page 283

N/F
Marya & Otis
Baron
Book 20928, Page 19

N/F
Michael & Amy
Pulaski
Book 25317, Page 218

N/F
60-64 Winter
Street LLC
Book 21888, Page 160

N/F
60-64 Winter
Street LLC
Book 21888, Page 160

N/F
Skye Condominium
Associates
See Plan Ref. #2

N/F
199 Spring Street
Condominium
See Plan Ref. #1

BRACKETT STREET

WINTER STREET

SPRING STREET

Existing Garage
Existing Building
Existing Paved Area
Gravel Parking Area
Brick Sidewalk
Fire Escape
Stockade Fence

N34°44'43"E 43.11' (Held Deed)
N34°44'43"E 44.78' (Deed 44.76')
N34°44'43"E 78.00' (Deed 78'±)
S54°16'11"E 45.01' (Deed 45')
N54°24'42"W 115.00'(Deed)
N54°34'34"W 115.00
S34°44'29"W 70.75' (Deed 71.6'±)
78.00' (Deed 78'±)
N35°14'00"E 70.74' (Deed 71'±)
S34°44'43"W 70.75' (Held Deed)
127.50' (Held Deed)
IRS @ 80.36' From Front corner
IRS @ 49.03' From Front corner
Railroad Spike 1.06' off Corner
6" x 6" M-GMF Flush (Held Corner)
10" x 10" M-GMF Flush (Held Corner)
8" x 8" M-GMF Flush (Held Corner)
Rim SMH 125.84
Inv 18" 115.75

EXISTING OVERHEAD TEL. TO BE REMOVED

TEMPORARY CONSTRUCTION FENCE WITH GATED ACCESS.

DEMO EXISTING ADDITION. REBUILD PER ARCHITECTURAL AND STRUCTURAL PLANS

DEMO EXISTING STEPS AND CONCRETE WALKWAY

15.00'

APPROX. LOCATION OF SEDIMENT BARRIER, TYP. SEE NOTES 8 & 9

TEMPORARY CONSTRUCTION ENTRANCE PER DETAIL

EXISTING BUILDING TO REMAIN. RENOVATION PER ARCHITECTURAL AND STRUCTURAL PLANS

EXISTING WOOD BOLLARDS ON ABUTTERS PROPERTY TO REMAIN

EXISTING STEEL BOLLARDS TO REMAIN

16.00'

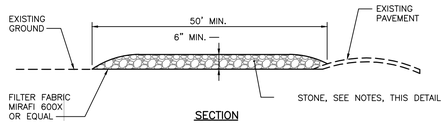
MAINTAIN 5' WIDE ADA ACCESSIBLE SIDEWALK AT ALL TIMES

EXISTING 3/4" WATER SERVICE AS IDENTIFIED BY PWD. LINE TO BE LOCATED, SHUT CORPORATION, REMOVE SERVICE BOX AND ROD, AND CUT DOMESTIC SERVICE AT MAIN

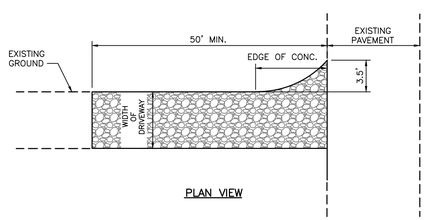
EXISTING OVERHEAD TELECOMMUNICATIONS LINE TO REMAIN

NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"-3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON-SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT-OF-WAY



SECTION



PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

10 0 10 20
SCALE: 1" = 10'

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/15/17

DRAWING NAME: DEMOLITION & CONSTRUCTION MANAGEMENT PLAN
PROJECT NAME: 197 SPRING STREET - RENOVATION AND ALTERATION
CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

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ACORN ENGINEERING, INC.
ENGINEERING LAND SURVEYING
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1081_CIVIL
JN:	1081
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-03

GENERAL SITE NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.

GENERAL LANDSCAPE NOTES:

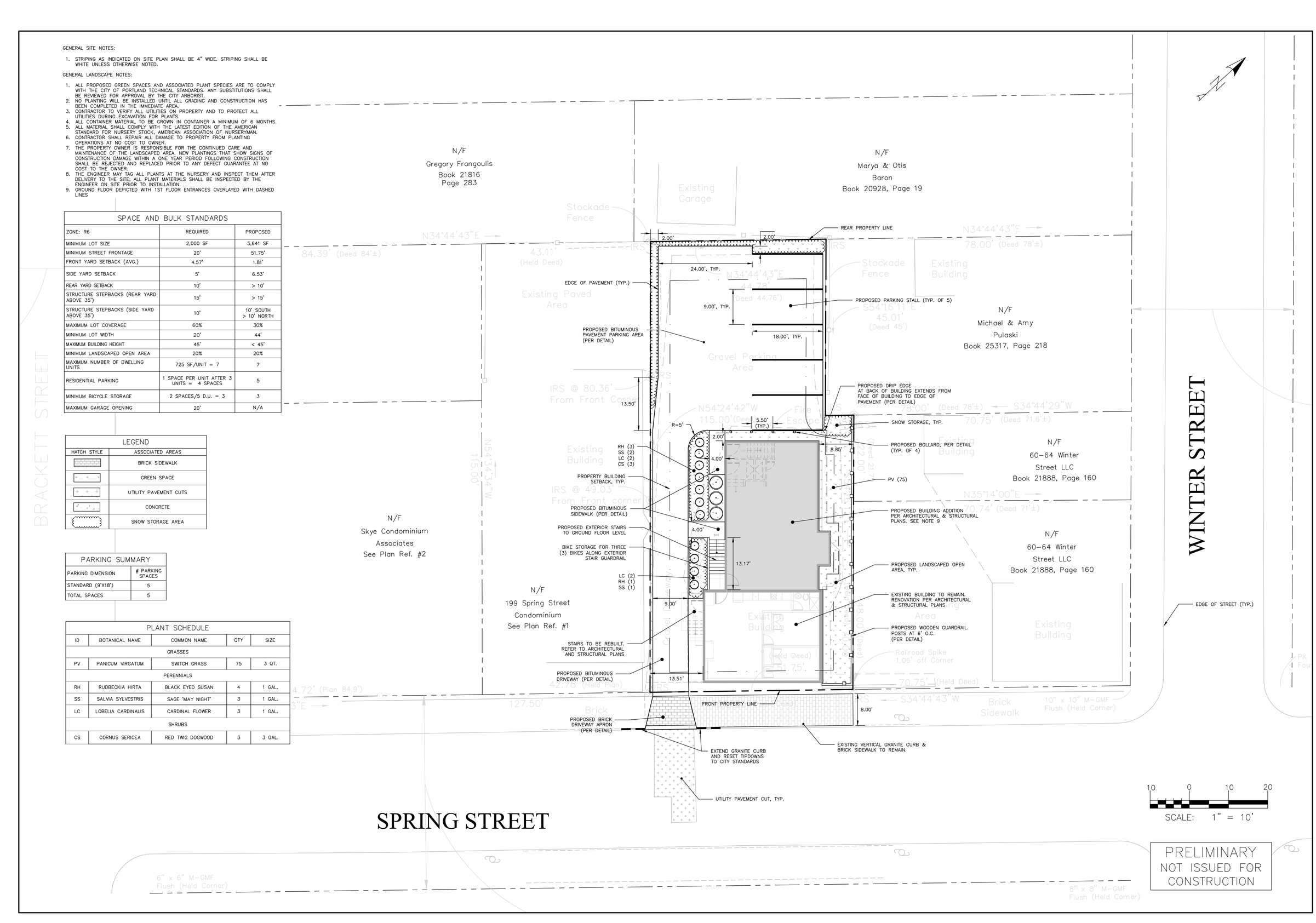
1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST.
2. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
3. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
4. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER A MINIMUM OF 6 MONTHS.
5. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
6. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. NEW PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REJECTED AND REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO COST TO THE OWNER.
8. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
9. GROUND FLOOR DEPICTED WITH 1ST FLOOR ENTRANCES OVERLAYED WITH DASHED LINES

SPACE AND BULK STANDARDS		
ZONE: R6	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	5,641 SF
MINIMUM STREET FRONTAGE	20'	51.75'
FRONT YARD SETBACK (AVG.)	4.57'	1.81'
SIDE YARD SETBACK	5'	6.53'
REAR YARD SETBACK	10'	> 10'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	> 15'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	10' SOUTH > 10' NORTH
MAXIMUM LOT COVERAGE	60%	30%
MINIMUM LOT WIDTH	20'	44'
MAXIMUM BUILDING HEIGHT	45'	< 45'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 7	7
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 4 SPACES	5
MINIMUM BICYCLE STORAGE	2 SPACES/5 D.U. = 3	3
MAXIMUM GARAGE OPENING	20'	N/A

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	BRICK SIDEWALK
	GREEN SPACE
	UTILITY PAVEMENT CUTS
	CONCRETE
	SNOW STORAGE AREA

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	5
TOTAL SPACES	5

PLANT SCHEDULE				
ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
GRASSES				
PV	PANICUM VIRGATUM	SWITCH GRASS	75	3 QT.
PERENNIALS				
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	4	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	3	1 GAL.
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	3	1 GAL.
SHRUBS				
CS	CORNUS SERICEA	RED TWIG DOGWOOD	3	3 GAL.



SCALE: 1" = 10'

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRE-APP. MTG	WHS 1/6/17
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: SITE & LANDSCAPE PLAN

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

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ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1081_CIVIL
JN:	1081
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 1-19-17 LICENSED PROFESSIONAL ENGINEER

DRAWING NO. C-10

GENERAL NOTES:

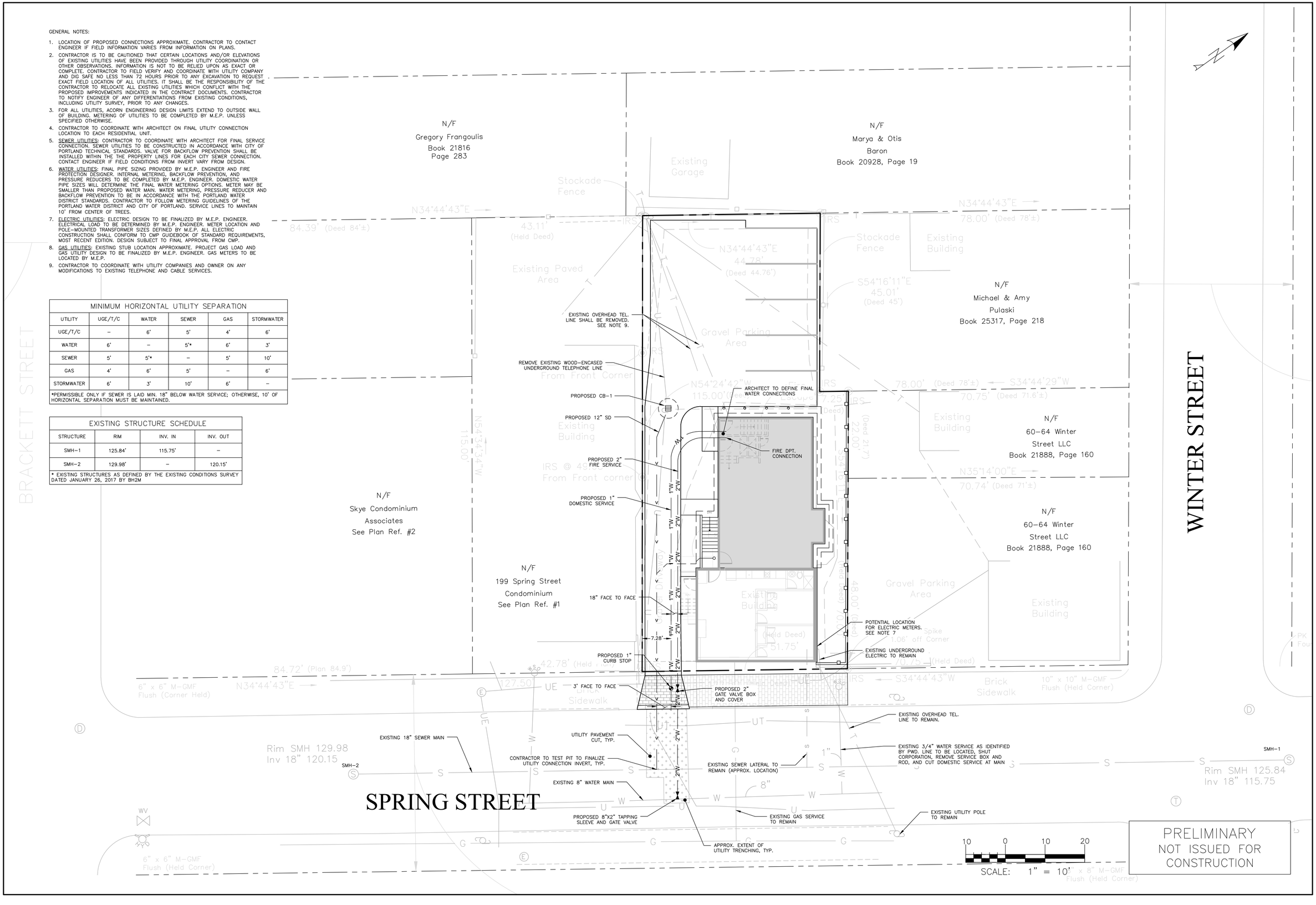
1. LOCATION OF PROPOSED CONNECTIONS APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTION LOCATION TO EACH RESIDENTIAL UNIT.
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 THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. 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. SERVICE LINES TO MAINTAIN 10' FROM CENTER OF TREES.
7. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND POLE-MOUNTED TRANSFORMER SIZES DEFINED BY M.E.P. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
8. GAS UTILITIES: EXISTING STUB LOCATION APPROXIMATE. PROJECT GAS LOAD AND GAS UTILITY DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. GAS METERS TO BE LOCATED BY M.E.P.
9. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES AND OWNER ON ANY MODIFICATIONS TO EXISTING TELEPHONE AND CABLE SERVICES.

MINIMUM HORIZONTAL UTILITY SEPARATION					
UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	6'
STORMWATER	6'	3'	10'	6'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.

EXISTING STRUCTURE SCHEDULE			
STRUCTURE	RIM	INV. IN	INV. OUT
SMH-1	125.84'	115.75'	–
SMH-2	129.98'	–	120.15'

* EXISTING STRUCTURES AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED JANUARY 26, 2017 BY BH2M



PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
ABILITY TO SERVE	WHS	3/10/17
PRELIM. APP.	WHS	3/15/17

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

ACORN ENGINEERING, INC.

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

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

FILE:	1081_CIVIL
JN:	1081
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-20

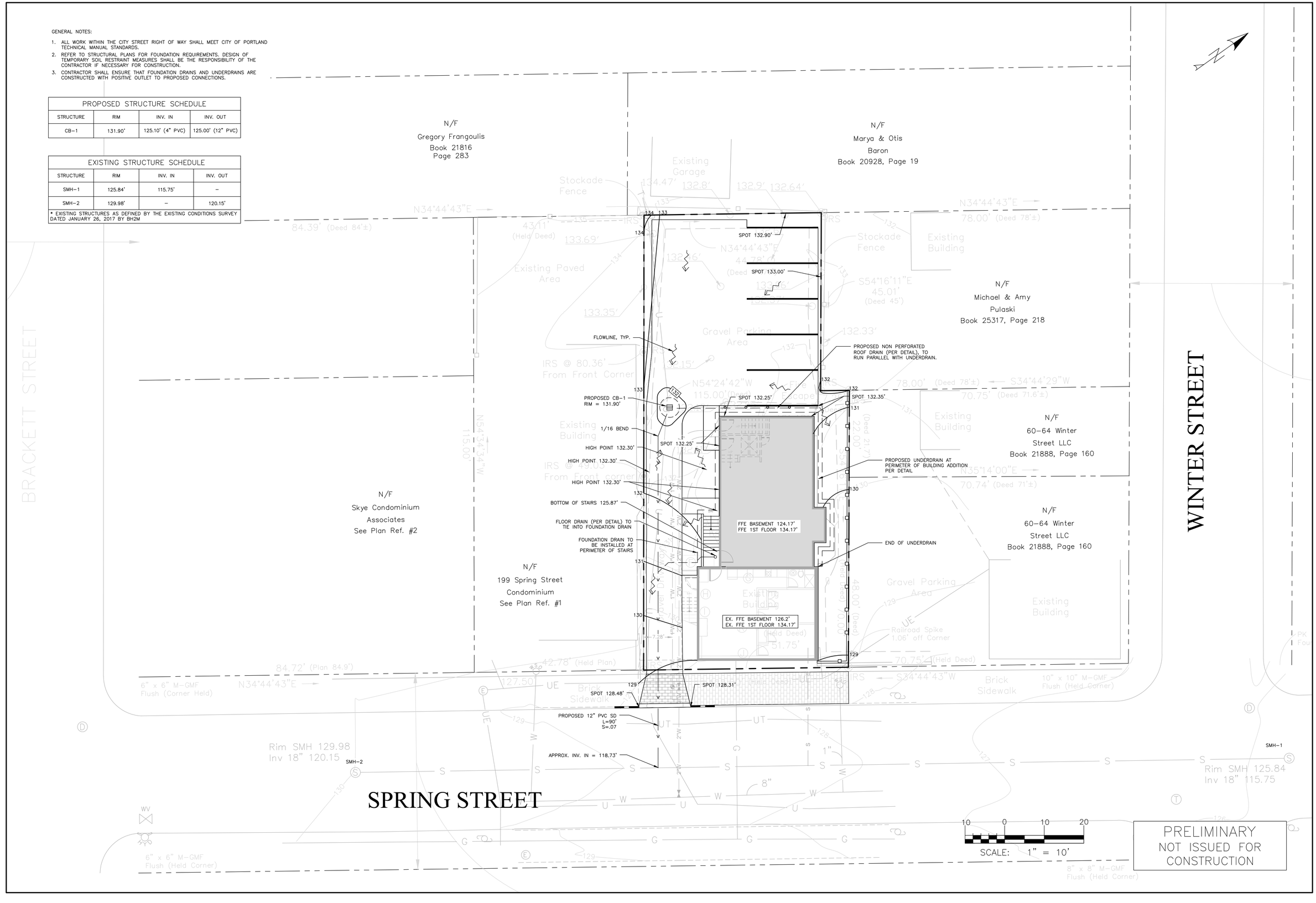
GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.

PROPOSED STRUCTURE SCHEDULE			
STRUCTURE	RIM	INV. IN	INV. OUT
CB–1	131.90'	125.10' (4" PVC)	125.00' (12" PVC)

EXISTING STRUCTURE SCHEDULE			
STRUCTURE	RIM	INV. IN	INV. OUT
SMH–1	125.84'	115.75'	–
SMH–2	129.98'	–	120.15'

* EXISTING STRUCTURES AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED JANUARY 26, 2017 BY BH2M



PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	3/15/17

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

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

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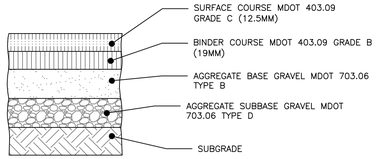
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-30

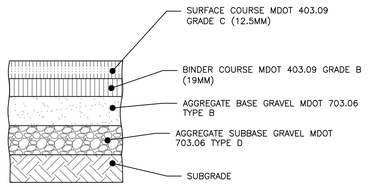


NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

BITUMINOUS PAVEMENT PROFILE: PARKING LOT & DRIVEWAY

NOT TO SCALE



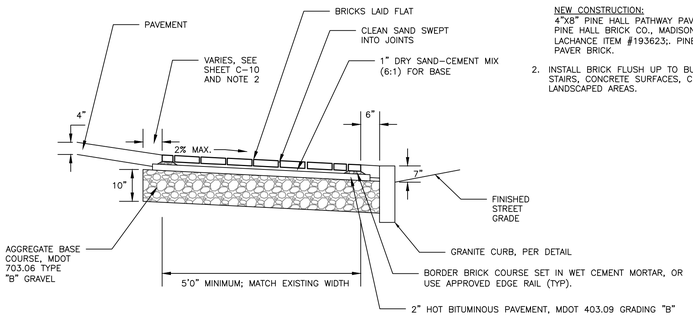
NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. ARTERIAL BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN SPRING STREET R.O.W.

THICKNESS OF LAYERS	
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE: SPRING STREET

NOT TO SCALE



NOTES:

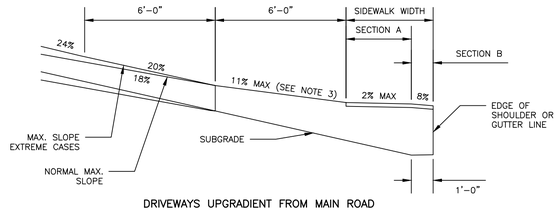
1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL

NOT TO SCALE



DRIVEWAYS UPGRADIENT FROM MAIN ROAD

SIDEWALK CROWN TABLE

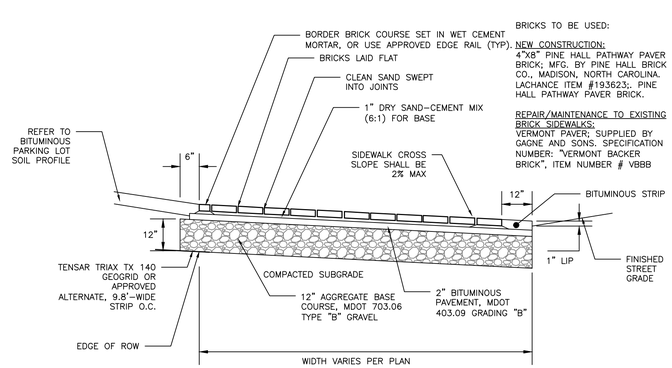
SIDEWALK WIDTH	5'
SECTION A	4'
SECTION B	1'

GENERAL NOTES:
1. SEE DETAILS FOR SIDEWALK CONSTRUCTION MATERIALS.
2. SEE DETAILS FOR DRIVEWAY CONSTRUCTION MATERIALS.

MAXIMUM DRIVEWAY PROFILE NOTES:
1. THESE PROFILES ARE A GUIDE FOR THE MAJORITY OF CASES. CONTRACTOR TO FIELD CHECK ALL DRIVEWAYS PRIOR TO CONSTRUCTION.
2. IT IS UNDERSTOOD THAT THIS DETAIL REPRESENTS THE EXTREME LIMITS OF CONSTRUCTION ANGLES, AND THAT THE MAJORITY OF DRIVEWAYS WILL BE CONSTRUCTED WELL WITHIN THESE BOUNDS.
3. WHEN GRADING DRIVES THAT ARE FLATTER THAN THE MAXIMUM PROFILES, CONTRACTOR SHOULD NOT EXCEED A GRADE PERCENT CHANGE OF MORE THAN 9% PER 6-FOOT INCREMENT OF DRIVEWAY LENGTH (APPLIES TO BOTH UP-GRADIENT AND DOWN-GRADIENT PROFILES).

DRIVEWAY SLOPES ON SIDEWALK SECTION

NOT TO SCALE

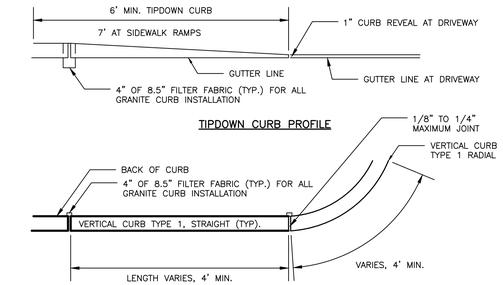


BRICKS TO BE USED:
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

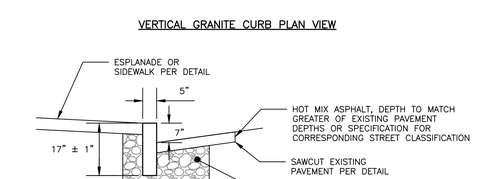
REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM NUMBER # VBBB

BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL

NOT TO SCALE



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW

VERTICAL GRANITE CURB CROSS SECTION

NOTES:

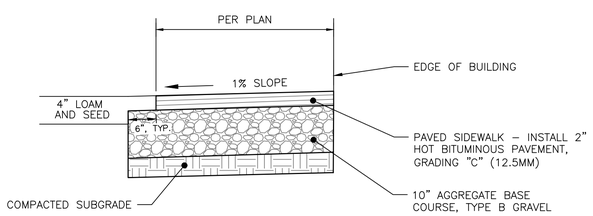
1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE

NOTE:

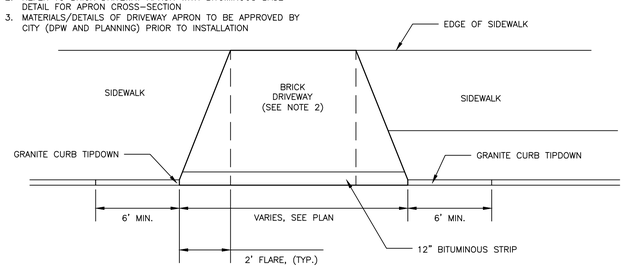
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORNDANCE WITH ASTM D-1557



BITUMINOUS SIDEWALK DETAIL

NOT TO SCALE

NOTES:
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL FOR APRON CROSS-SECTION
3. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO INSTALLATION



DRIVEWAY APRON LAYOUT DETAIL

NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: SITE DETAILS 1
PROJECT NAME: 197 SPRING STREET - RENOVATION AND ALTERATION
CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

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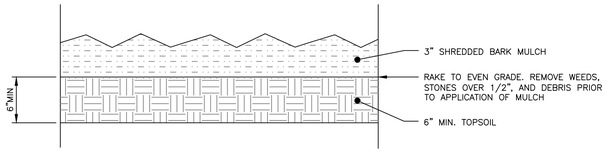
FILE:	1081_CIVIL
JN:	1081
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11415 — 3-14-17 — REGISTERED PROFESSIONAL ENGINEER

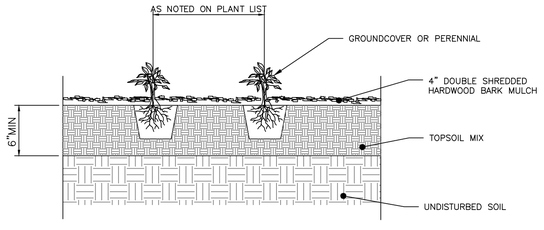
DRAWING NO.
C-40

PLANTING NOTES:

1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE. ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
6. ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS AND THE PLACEMENTS SHALL BE APPROVED BY ENGINEER BEFORE THE PLANTS ARE INSTALLED.
7. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND 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.
8. STAKING AND GUYING SHALL BE DETERMINED BY THE ENGINEER ON A TREE BY TREE BASIS. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
9. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.



BARK MULCH DETAIL
NOT TO SCALE

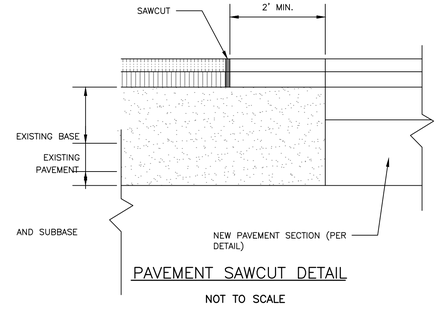


PERENNIAL PLANTING DETAIL
NOT TO SCALE

NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.

2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



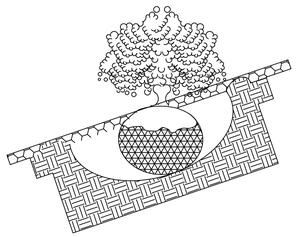
PAVEMENT SAWCUT DETAIL
NOT TO SCALE

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.

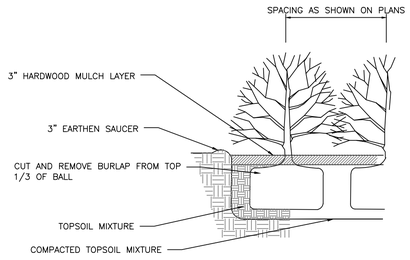
TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN NOT LESS THAN 6% NOR MORE THAN 20% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.

CONTAINER GROWN STOCK – REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.

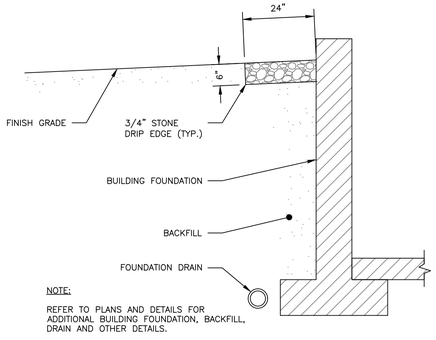
BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE TOPSOIL. REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF THE BALLED PLANTS. BACKFILL TO FINISH GRADE AND CREATE AN EARTHEN SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY–FOUR HOURS OF PLANTING.



TYPICAL PLANTING
NOT TO SCALE

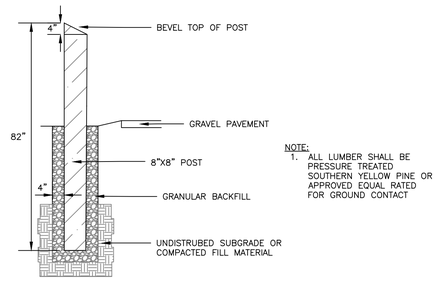


SHRUB PLANTING DETAIL
NOT TO SCALE



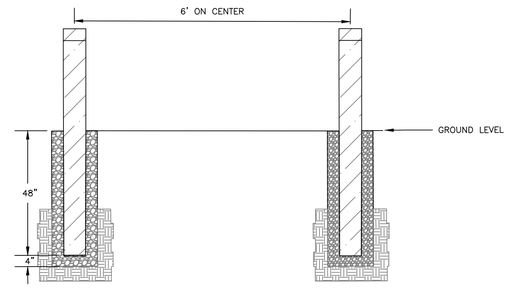
NOTE:
REFER TO PLANS AND DETAILS FOR ADDITIONAL BUILDING FOUNDATION, BACKFILL, DRAIN AND OTHER DETAILS.

DRIP EDGE DETAIL
NOT TO SCALE



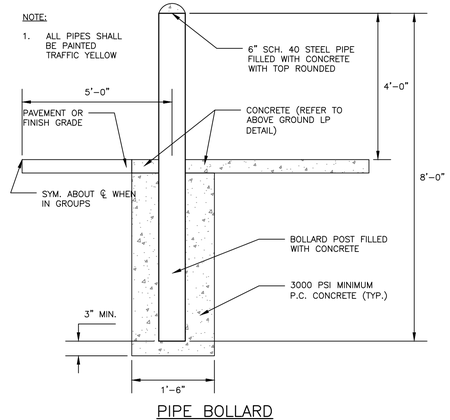
NOTE:
1. ALL LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE OR APPROVED EQUAL RATED FOR GROUND CONTACT

SIDE ELEVATION



FRONT ELEVATION

WOODEN GUARDRAIL DETAIL
NOT TO SCALE



PIPE BOLLARD
NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: SITE DETAILS 2

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
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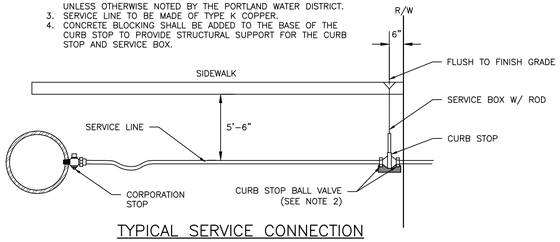
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11415
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-41

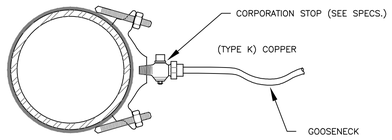
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION

NOT TO SCALE

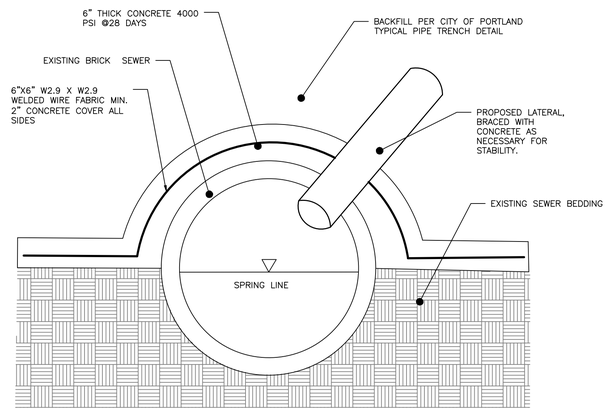


SERVICE SADDLE: 1-1/2" AND 2" C.C. THREAD)

NOT TO SCALE

NOTES:

1. CONCRETE CASING AROUND PIPE SHALL CONTINUE LENGTHWISE FOR AT LEAST 4' OF PIPE, OR LENGTH OF PIPE DAMAGED DURING CONSTRUCTION, WHICHEVER IS GREATER.
2. INSTALL ALL ITEMS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. ENGINEER SHALL BE CONTACTED DURING CONNECTION TO BRICK SEWER. IF SEWER IS FOUND TO BE IN VERY GOOD CONDITION BY ENGINEER, THEN ONLY CONCRETE CASING AROUND PROPOSED LATERAL AND STUB SHALL BE REQUIRED.

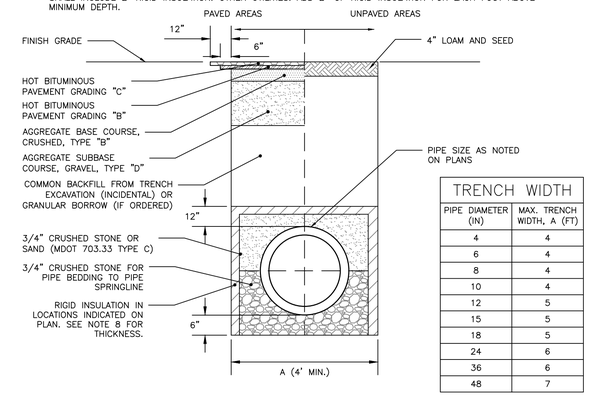


CONNECTION TO BRICK SEWER

NOT TO SCALE

NOTES:

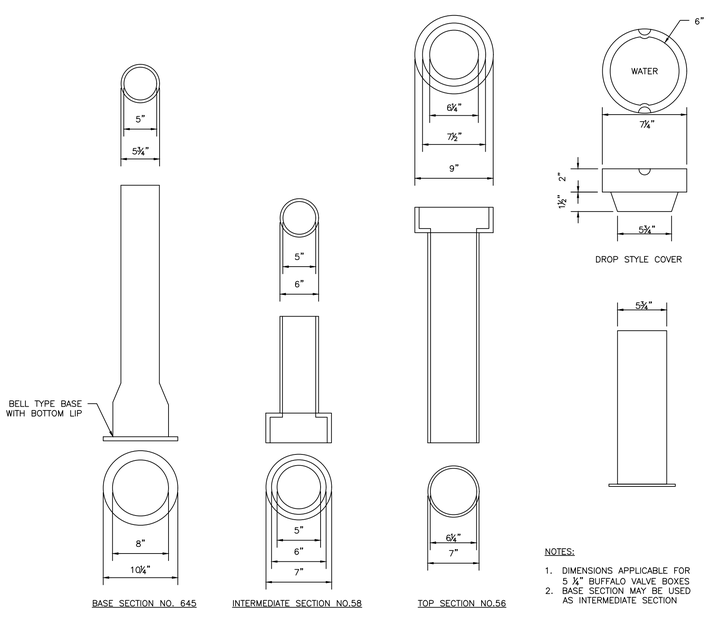
1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL IN RIGHT-OF-WAY

NOT TO SCALE

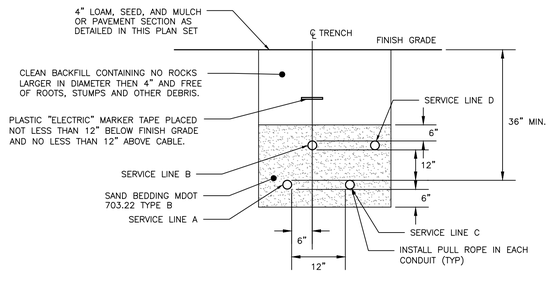


NOTES:

1. DIMENSIONS APPLICABLE FOR 5 ¼" BUFFALO VALVE BOXES
2. BASE SECTION MAY BE USED AS INTERMEDIATE SECTION

VALVE BOX & COVER

NOT TO SCALE



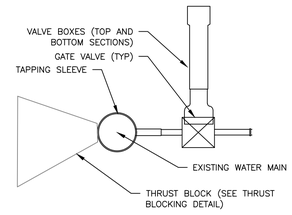
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH: PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE



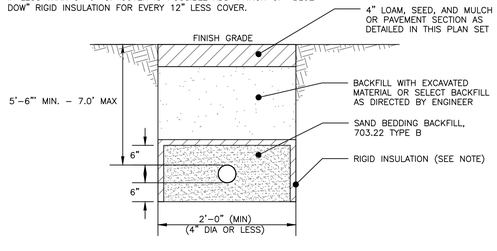
SIDE VIEW

TAPPING SLEEVE AND VALVE

NOT TO SCALE

NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.



WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

ACORN ENGINEERING, INC.
ENGINEERING, INC.
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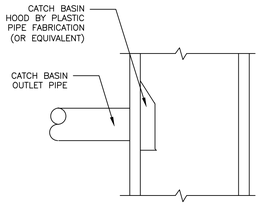
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1081_CIVIL
JN:	1081
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11415
3-14-17
REGISTERED PROFESSIONAL ENGINEER

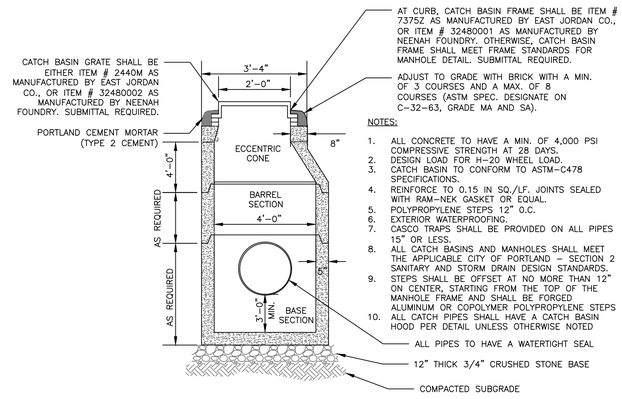
DRAWING NO.
C-42



NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS UNLESS OTHER WISE NOTED
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS

CATCH BASIN HOOD DETAIL
NOT TO SCALE



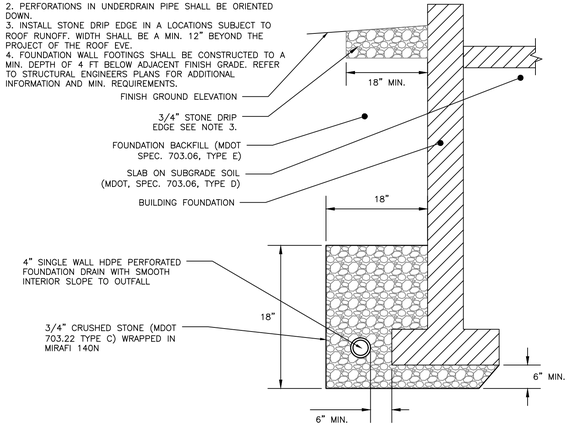
NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS
10. ALL CATCH PIPES SHALL HAVE A CATCH BASIN HOOD PER DETAIL UNLESS OTHERWISE NOTED

4'-0" DIAMETER PRECAST CATCH BASIN
NOT TO SCALE

NOTES:

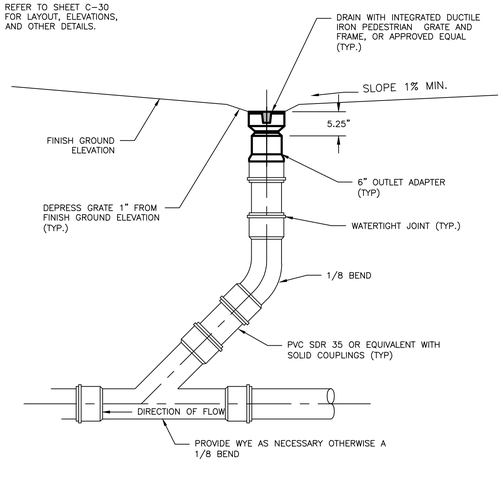
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECT OF THE ROOF EVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN AND DRIP EDGE DETAIL
NOT TO SCALE

NOTE:

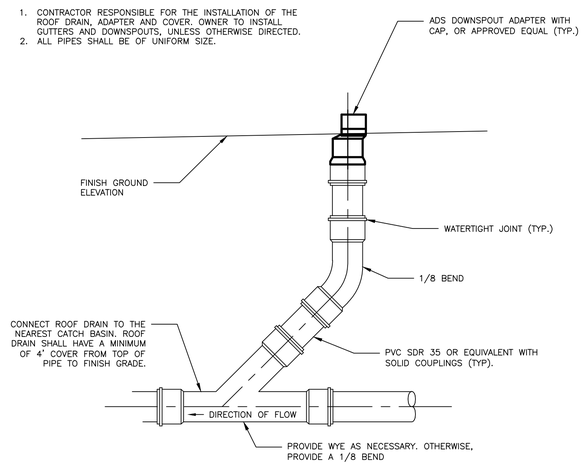
1. REFER TO SHEET C-30 FOR LAYOUT, ELEVATIONS, AND OTHER DETAILS.



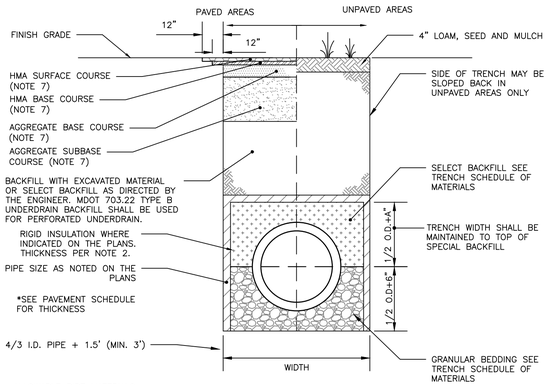
INLINE DRAIN DETAIL
NOT TO SCALE

NOTES:

1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER. OWNER TO INSTALL GUTTERS AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.



ROOF DRAIN DETAIL
NOT TO SCALE



ALLOWABLE PIPE MATERIALS:

- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   - 4.1. 2'-0" - STORM DRAIN
   - 4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS
8. ALL PROPOSED TREES WITHIN 5' PROXIMITY OF THE SEWER PIPE SHALL BE PLANTED AT A DEPTH NO GREATER THAN 3' DEEP. PERMEABLE LANDSCAPE FABRIC SHALL CREATE A ROOT BARRIER AROUND THE SEWER PIPES. CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE DRAWINGS.

STORM DRAIN TYPICAL TRENCH SECTION WITHIN PROPERTY
NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 197 SPRING STREET - RENOVATION AND ALTERATION

CLIENT: WAIT, LLC. P.O. BOX 25A, CUMBERLAND, ME 04021

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ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
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FILE:	1081_CIVIL
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CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
3-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-43

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 VERNON PLACE, AVON STREET, AND CONGRESS STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN SPRING STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

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–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

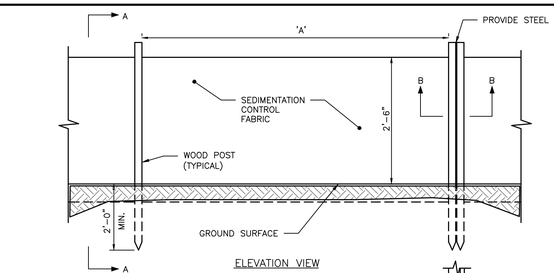
MULCHING

MULCH SHALL BE 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

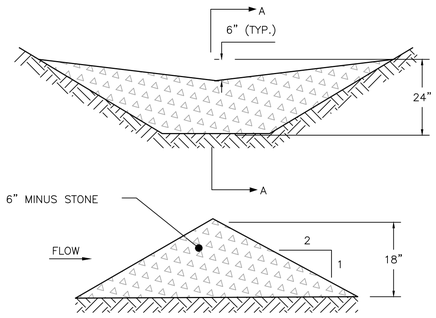
PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

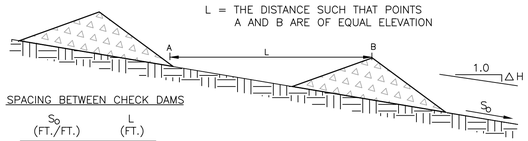
PRELIMINARY
NOT ISSUED FOR CONSTRUCTION



SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

SILTATION FENCE DETAIL
NOT TO SCALE

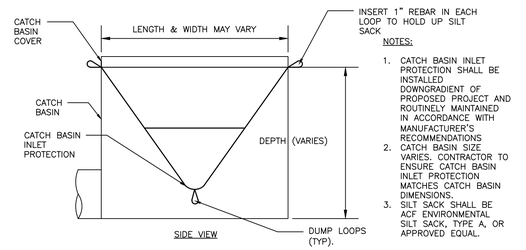




SPACING BETWEEN CHECK DAMS

So (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM
NOT TO SCALE



NOTES:
1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION
NOT TO SCALE

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 3/15/17

DRAWING NAME: EROSION & SEDIMENTATION CONTROL DETAILS
PROJECT NAME: 197 SPRING STREET – RENOVATION AND ALTERATION
CLIENT: WAIT, LLC.
P.O. BOX 25A, CUMBERLAND, ME 04021

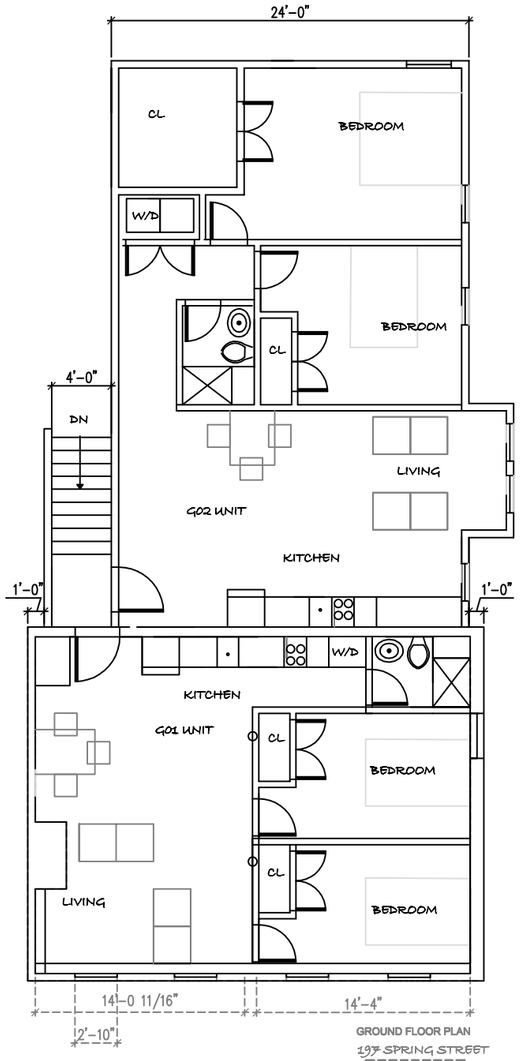
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE BY ANY PERSON OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
ENGINEERING • SURVEYING • PLANNING
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775–2655

FILE:	1081_CIVIL
JN:	1081
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MCB
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
3-14-17
REGISTERED PROFESSIONAL ENGINEER

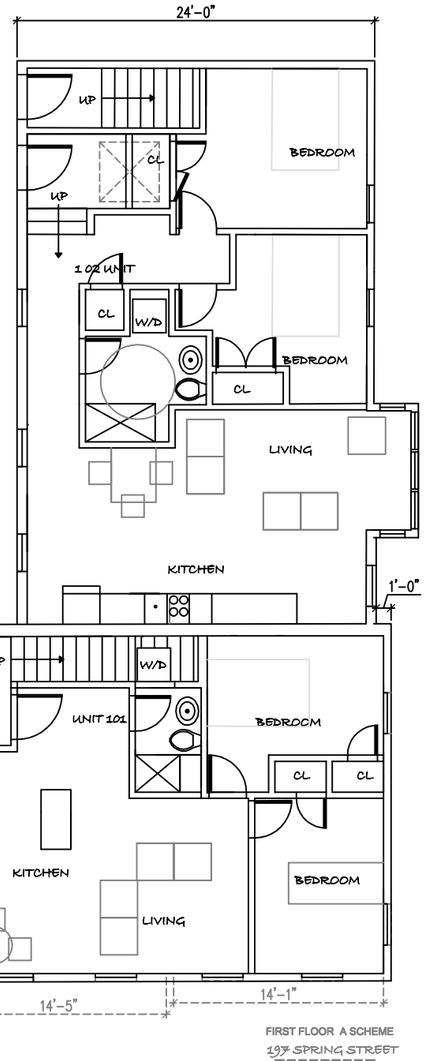
DRAWING NO.
C-44



GROUND FLOOR PLAN

197 SPRING STREET

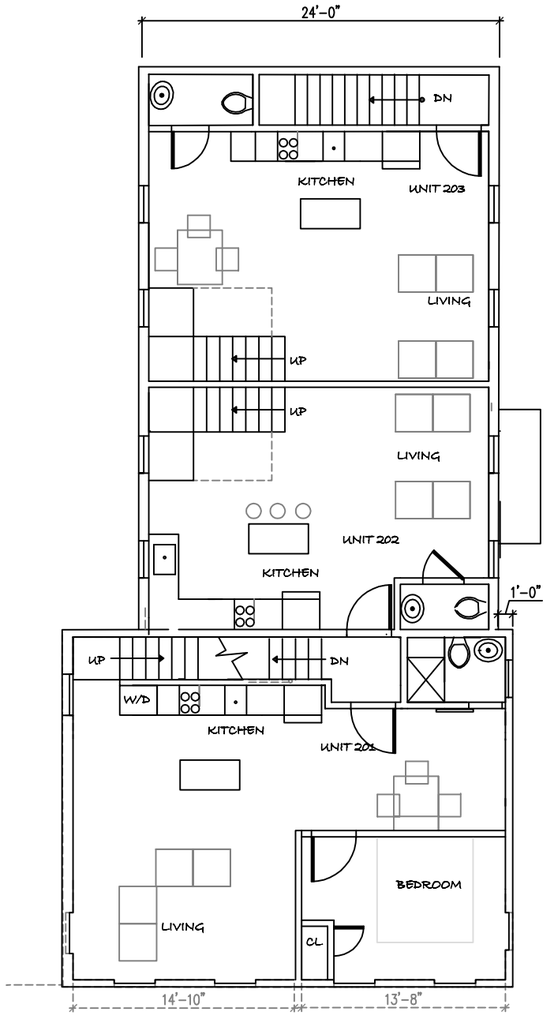
M Designs
Portland, Maine



FIRST FLOOR A SCHEME

197 SPRING STREET

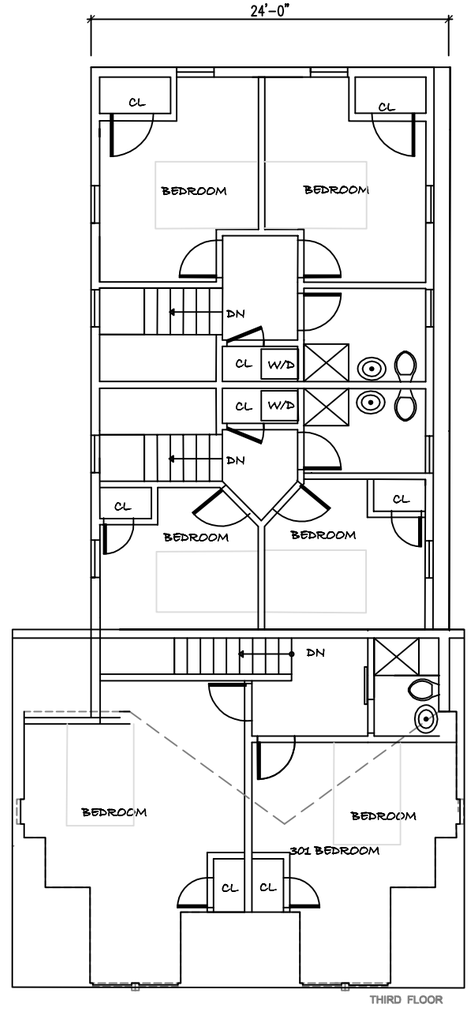
M Designs
Portland, Maine



SECOND FLOOR

197 SPRING STREET

M Designs
Portland, Maine



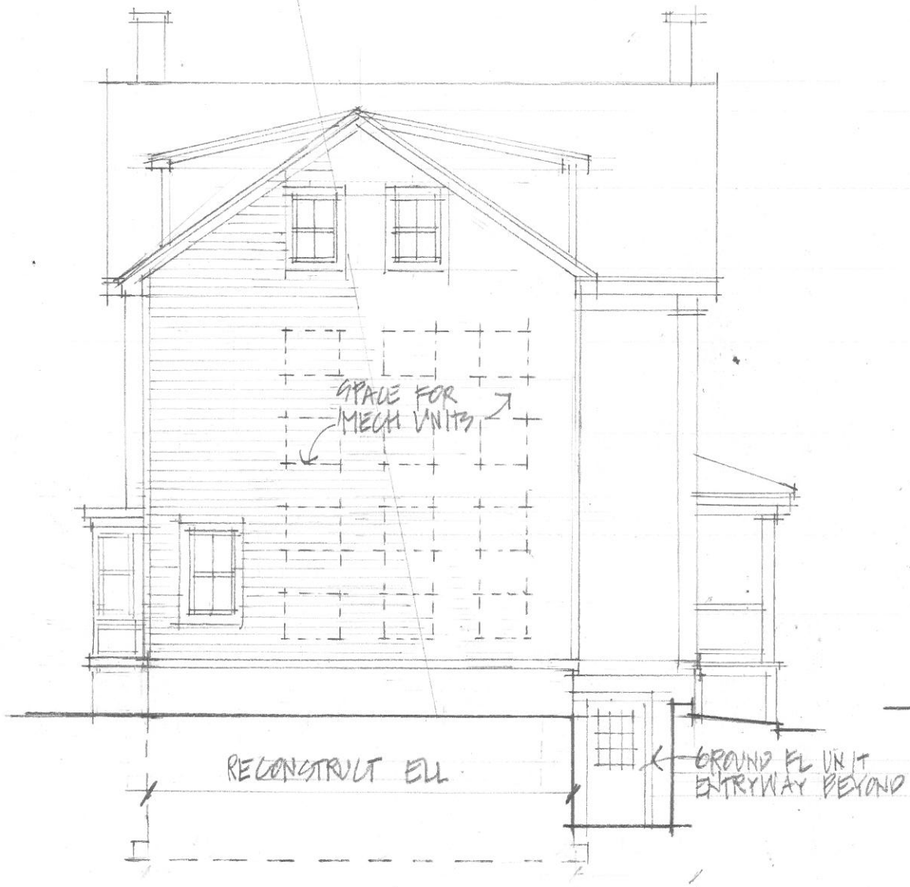
THIRD FLOOR

197 SPRING STREET

M Designs
Portland, Maine

MATERIAL NOTES

1. ASPHALT ROOF SHINGLES.
2. WOOD CLAPBOARD SIDING (EXIST) - REPAIR/REPLACE/REFINISH
3. WOOD TRIM (EXIST)
4. CLAD WOOD WINDOWS SDL - ANDERSEN EAGLE DH
5. WOOD SHUTTERS - BROSCO
6. WOOD SKIRT, BOX COLUMNS AND BALUSTERS
7. FIBRE CEMENT SIDING, TRIM (NEW)



NORTH ELEVATION

WEST ELEVATION

RENOVATION & ALTERATIONS TO 197 SPRING STREET · PORTLAND, MAINE

ISSUED FOR PRUNE 8 AUG 2016
REVISED 12 JAN 2017 4 MAR 2017

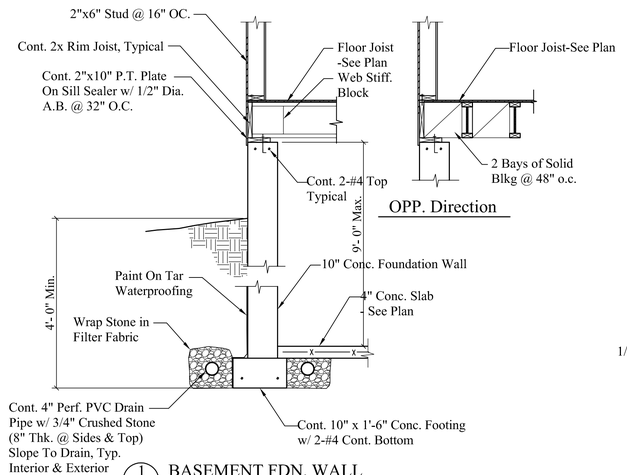
WAIT, LLC · CUMBERLAND, MAINE · 1/8"=1'-0"

5
2F6

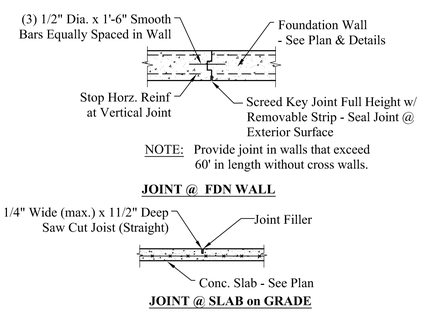
SOUTH ELEVATION

EAST ELEVATION

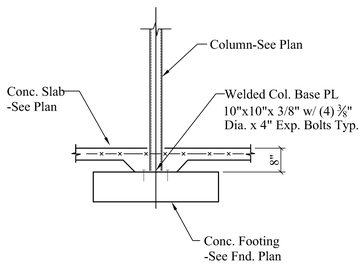
RENOVATION & ALTERATION TO 197 SPRING STREET, PORTLAND, MAINE
ISSUED FOR PERMITTING 8 AUG 2016
REVISED AUGUST 2016
WAITT LLC, CUMBERLAND, MAINE - 1/8" = 1'-0"
4 OF 6



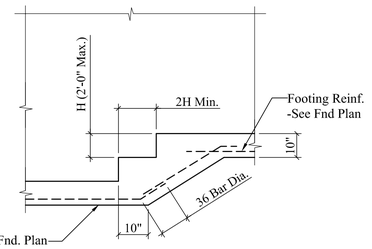
1 / S2 BASEMENT FDN. WALL
Scale: 1/2" = 1'-0"



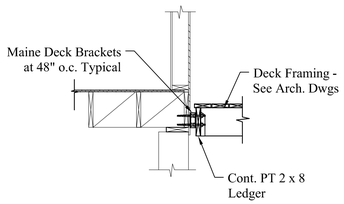
2 / S2 TYP. FLOOR & WALL JOINTS
Scale: 1/2" = 1'-0"



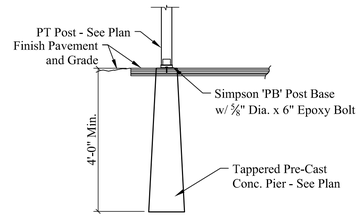
3 / S2 INTERIOR COLUMN FOOTING
Scale: 1/2" = 1'-0"



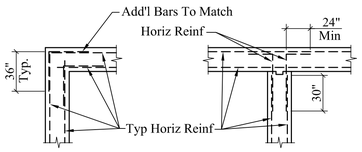
4 / S2 TYP STEP FOOTING DETAIL
Scale: 1/2" = 1'-0"



5 / S2 DECK FRMG @ FOUNDATION
Scale: 1/2" = 1'-0"



6 / S2 POST CONN. @ CONC. PIER
Scale: 1/2" = 1'-0"



NOTES:
1. See Details For Wall Reinf Size
And Spacing

7 / S2 TYP. WALL REINF. @ CORNER
Scale: 1/2" = 1'-0"

STRUCTURAL NOTES:

CODE: Comply with the 2012 International Residential Building Code.

DESIGN LOADS:
Dead Loads: Roof = 15.0 psf., Floor = 10.0 psf.
Live Loads: Roof = 45.0 psf (Plus Drift), 1st Floor = 40.0 psf, 2nd Floor = 40.0 psf, 3rd Floor = 30.0 psf.
Wind Load: Building = 31.0 psf

FOUNDATIONS:
1. Bear footings on firm, undisturbed dense native soil at 4"- 0" minimum below lowest adjacent finish or natural grade, which ever is lower. Step footings to achieve these depths as required. If stone ledge is encountered place footing directly on ledge where exists.
2. Assumed soil bearing pressure = 2,000 psf.
3. Place foundation concrete only on clean, firm, dry bearing material. Dowel to stone ledge as detailed.
4. Engineer shall be notified if stone ledge or marine clay is found during excavation.
5. Place concrete slab over a 15 mil vapor barrier (taped and sealed at all joints) and locate over stone fill and drainage piping required by civil drawings.
6. Install 4" dia. perforated drain tile (rotate perforations to top of pipe) on exterior and interior of footing perimeter. Wrap all drain tile in filter fabric and encase with 3/4" crushed stone around entire pipe. Create a positive drain to atmosphere or dry well with drainage away from structure. Provide (2) stubs through slab for possible use in radon mitigation system. See contractor for mitigation system requirements. Contractor shall be responsible for any additional drainage requirements, such as sump pumps etc.
7. All foundation wall exteriors shall be coated with damp proofing per manufacturer's spec. Damp proofing shall not be visible above final grade.
8. See architectural drawings for additional information not shown.

CONCRETE:
1. Concrete regular weight (144 pcf) with Type II cement per ASTM C150, aggregate per ASTM C33, and potable water. No fly-ash permitted in floor slab. Aggregate size = 1" maximum for footings and slab. Minimum compressive strength = 3000 psi for foundations and slab on grade and 4,000 psi for exterior slabs and sidewalks.
2. Saw cuts for floor slab control joints (CJ) shall be made as soon as the slab can support the weight of the saw, but no more then 12 hours after placing concrete.
3. Pitch all garage floor slabs 1/4/ft. toward over head door.

REINFORCING:
1. ASTM A 615-S1, Grade 60 except #2 and #3 bars ASTM A615-S1: Grade 40.
2. Lap splices in concrete: 42 bar diameters.
3. Provide bent corner reinforcing to match and lap with horizontal reinforcing at corners and intersections of walls, and footings.
4. Reinforcing shall be placed with 3" clearance at all surfaces.

STEEL:
1. Rolled sections and plates: ASTM A-36, Fy = 36 ksi.
2. Steel Lally Columns: ASTM A513, Fy = 32 ksi. 16 gage steel filled w/ 3,000 psi concrete.
3. Steel Pipe Column: (not lally columns) ASTM A-36, Fy = 36 ksi.
4. Bolts and plain anchors: ASTM A 307.
5. Submit shop drawings. Fabricate after Engineers review.

WOOD:
1. General:
   a. Each piece of lumber shall be "S-DRY" and bear the grade stamp of a grading rules agency approved by the American Lumber Standards Committee.
   b. Double up studs at jambs and under beams.
   c. Do not notch or drill joists, beams or load bearing studs without approval.
2. Connections:
   a. Nail roof plywood with 8d common at 6" o.c. at all edges and boundary members and 10"o.c. at intermediate supports.
   b. Glue floor plywood to all framing members and nail with 8d common at 6" o.c. at all plywood edges and boundary members and 10" o.c. at intermediate supports.
   c. Nail CDX wall plywood with 10d common nails at 6" o.c. at all edges and boundary members and 12"o.c. at intermediate supports.
   d. Nail Advantech R-6 wall sheathing with 0.131" Dia. x 3" common nails at 3"o.c. along all panel edges and 6"o.c. along intermediate supports.
3. Structural Sawn Lumber:
   a. 2 x 6 thru 2 x 14 joists: Spruce Pine Fir No. 2 with Fb (repetitive) = 1200 p.s.i.
   b. Studs: Spruce Pine Fir No. 2 with Fb (repetitive) = 1200 p.s.i.
4. Laminated Veneer Lumber (LVL); Beams: Fb = 2,800 psi, Fv = 285 psi, E = 2,000 ksi
   Posts: Fb = 2,400 psi, Fv = 190 psi, E = 1,800 ksi
5. Plywood:
   a. Roof Sheathing: C-D INT-APA (PSI-94) with exterior glue; 5/8" with Identification Index 48/24. Lay up with face grain perpendicular to supports. Stagger joints. Each plywood piece to be continuous over a minimum of two spans with a minimum width of 1'-0" unless blocking is provided at all joints.
   b. Sub-flooring: C-D INT-APA (PSI-94) with exterior glue: 3/4" with Identification Index 48/24. lay up with face grain perpendicular to supports. Stagger joints. Each plywood piece to be continuous over a minimum of two spans with a minimum width of 1'-0" unless blocking is provided at all joints.
   c. Wall Sheathing:
   C-D INT-APA (PSI-74) with exterior glue, 1/2" CDX with Identification Index 24/0. All panel edges backed with 2" nominal or wider framing.
   Optional: Advantech R-6 Zip System, 7/16" OSB sheathing with 1" of foam. All panel edges backed with 2" nominal or wider framing.

6. Trus Joist Wood Trusses:
   a. Design, fabricate and erect per ICC Evaluation Service Committee Report No. ESR-1153 for TJI joists.
   b. Design, fabricate and erect per ICC Evaluation Service Committee Report No. ESR-1387 for TimberStrand LSL, Microllam LVL & Parallam PSL members.
   c. Design for loads, in addition to member weights,as given under "Design Loads" above.
   d. Fire and sound ratings are to be established in accordance with assemblies as detailed in ICC ES ESR-1153 or the Directory of Listed Products, published by Intertek Testing Services.
   e. TJI joists shall have "Flak Jacket" fire protection coating at first floor level or equivalent.
   f. All ' I joists ' shall be manufactured with LVL flange material. Web material shall be equivalent to Performance Plus OSB.
   g. Store product on site as recommended by product manufacturer.
   h. Each of the joists shall be identified by a stamp indicating the joist series and ICC ES evaluation report number, manufacturer's name, plant number and the independent inspection agency's logo.
   i. Submit product manufacturers "Specifier's Guide" for Engineer's review. Include wood grades to be used.
   j. All permanent and temporary bracing and fastening at bearings by truss manufacturer.
   k. Comply with "Supplementary Notes " below.

SUPPLEMENTARY NOTES:
5. Verify all dimensions and conditions with architectural drawings prior to starting work. Notify the Engineer of any discrepancies or inconsistencies.
6. Provide all necessary temporary bracing, shoring, guying or other means to avoid excessive stresses and to hold structural elements in place during construction.

Mechanical, Electrical and Plumbing Design and Building Weatherization-Insulation-Ventilation by Others.

ENGINEERING DESIGN PROFESSIONALS
Consulting Engineers
P.O. BOX 575, FREEPORT, MAINE 04032 • (207) 865-9505
EDP

PROJECT: Renovations & Alternations
197 Spring Street, Portland, Maine

DRAWING: **STRUCTURAL NOTES & DETAILS**

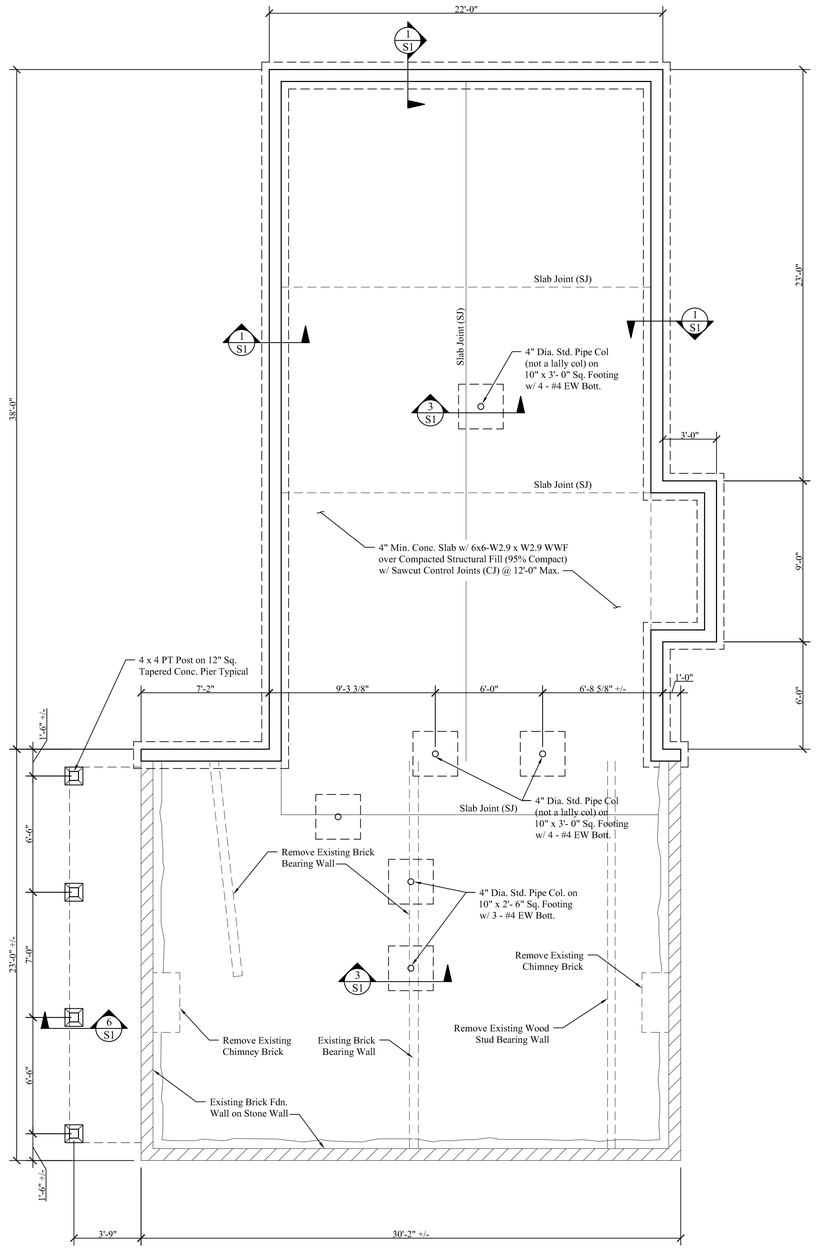
STATE OF MAINE
LARRY A. WICHROSKI
No. 5990
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: Larry A. Wichroski, P.E.
DRAWN BY: LAW
JOB #: 06616
DATE: 12-16-2016

REVISIONS

SHEET: S1 of 4

06616 – 197 Spring Street.dwg

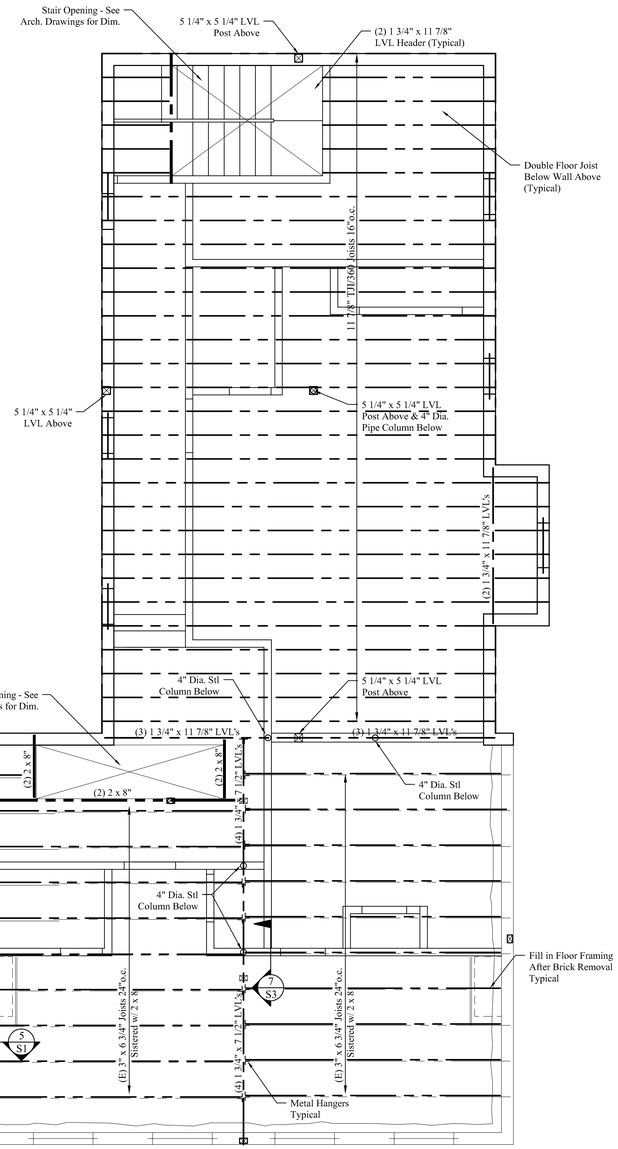


FOUNDATION PLAN

Scale: 1/4" = 1'-0"

FOUNDATION NOTES:

1. See General Structural Notes on Sheet S-1.
2. Verify all wall heights and dimensions with architectural drawings prior to commencing work. Notify engineer of any discrepancies.
3. Step footing in field to obtain minimum frost depth. See detail 4/S1.
4. Saw cut concrete floor slab at 12'- 0" maximum on center. See plan for layout and detail 2/S1 for size.
5. Shoring of existing framing to install proposed columns, posts & beams the responsibility of the general contractor. Request load information from engineer if needed.



NOTE: Verify all stair opening sizes and locations with architectural drawings before beginning framing. Notify engineer of any discrepancies.

1st FLOOR FRAMING PLAN

Scale: 1/4" = 1'-0"

FLOOR FRAMING NOTES:

1. See Structural Notes , Sheet S-1.
2. Built-up girders, headers and beams shall be spiked w/ 3 rows of 16d nails @ 12" o.c.
3. Provide metal hangers at all flush joist connections.
4. Provide double joists below all upper parallel walls.
5. Provide solid blocking at mid-span of floor joists.
6. See architectural drawings for wall layout and dimensions.
7. Provide (2) 1¾" x 9½" LVL header w/ 2" rigid insulation between over all exterior door and window openings unless noted on plan.
8. Leave ⅜" gap between top of all beams/girders and bottom of floor sheathing for expansion and contraction.
9. Add solid blocking between floor joists below all posts.

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Consulting Engineers
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EDP

PROJECT: Renovations & Alternations
197 Spring Street, Portland, Maine

DRAWING: **FOUNDATION & 1st FLOOR FRAMING PLANS**

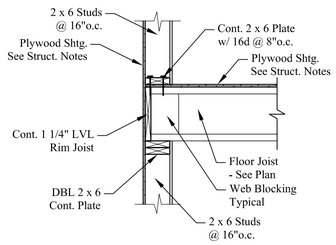
STATE OF MAINE
LARRY A. WICHROSKI
No. 5990
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: Larry A. Wichroski, P.E.
DRAWN BY: LAW
JOB #: 06616
DATE: 12-16-2016

REVISIONS

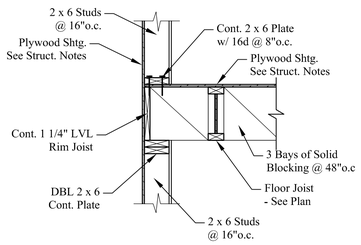
SHEET: S2 of 4

06616 – 197 Spring Street.dwg



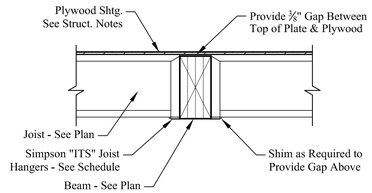
1 S3 JOIST to STUD WALL CONN.

Scale: ¾" = 1'-0"



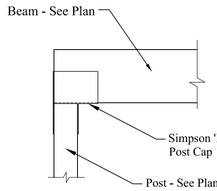
2 S3 JOIST PARALLEL to WALL CONN.

Scale: ¾" = 1'-0"



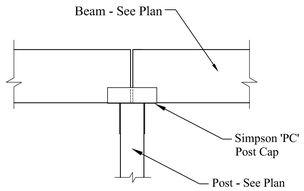
3 S3 JOIST to WOOD BEAM CONN.

Scale: ¾" = 1'-0"



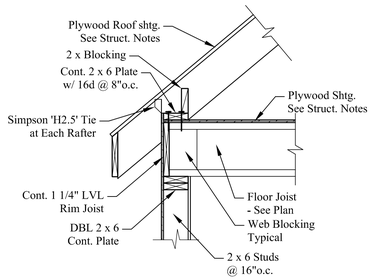
4 S3 WOOD BM. to WOOD POST CONN.

Scale: ¾" = 1'-0"



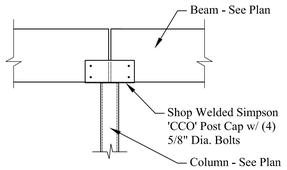
5 S3 WOOD BM. to WOOD POST CONN.

Scale: ¾" = 1'-0"



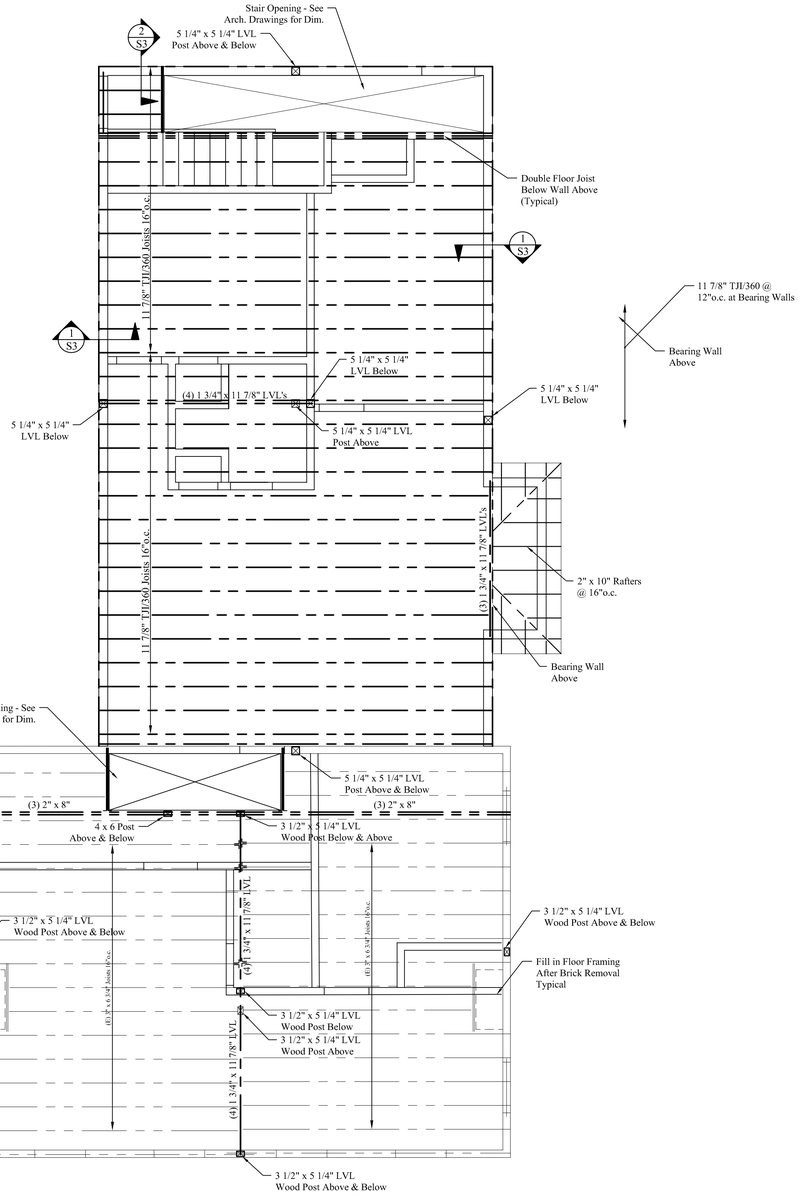
6 S3 JOIST to STUD WALL CONN.

Scale: ¾" = 1'-0"



7 S2 WOOD BM. to STEEL POST CONN.

Scale: ¾" = 1'-0"



NOTE: Existing floor framing sizes and spacing could not be verified during design. Framing show are minimum sizes required. Contractor shall notify engineer if framing does not meet framing shown.

2nd FLOOR FRAMING PLAN

Scale: 1/4" = 1'-0"

FLOOR FRAMING NOTES:

1. See Structural Notes , Sheet S-1.
2. Built-up girders, headers and beams shall be spiked w/ 3 rows of 16d nails @ 12" o.c.
3. Provide metal hangers at all flush joist connections.
4. Provide double joists below all upper parallel walls.
5. Provide solid blocking at mid-span of floor joists.
6. See architectural drawings for wall layout and dimensions.
7. Provide (2) 1¾" x 9½" LVL header w/ 2" rigid insulation between over all exterior door and window openings unless noted on plan.
8. Leave ⅜" gap between top of all beams/girders and bottom of floor sheathing for expansion and contraction.
9. Add solid blocking between floor joists below all posts.

Mechanical, Electrical and Plumbing Design and Building Weatherization-Insulation-Ventilation by Others.

ENGINEERING DESIGN PROFESSIONALS
Consulting Engineers
P.O. BOX 575, FREEPORT, MAINE 04032 • (207) 865-9505
EDP

PROJECT:
Renovations & Alternations
197 Spring Street, Portland, Maine

DRAWING:
2nd FLOOR FRAMING PLAN & DETAILS

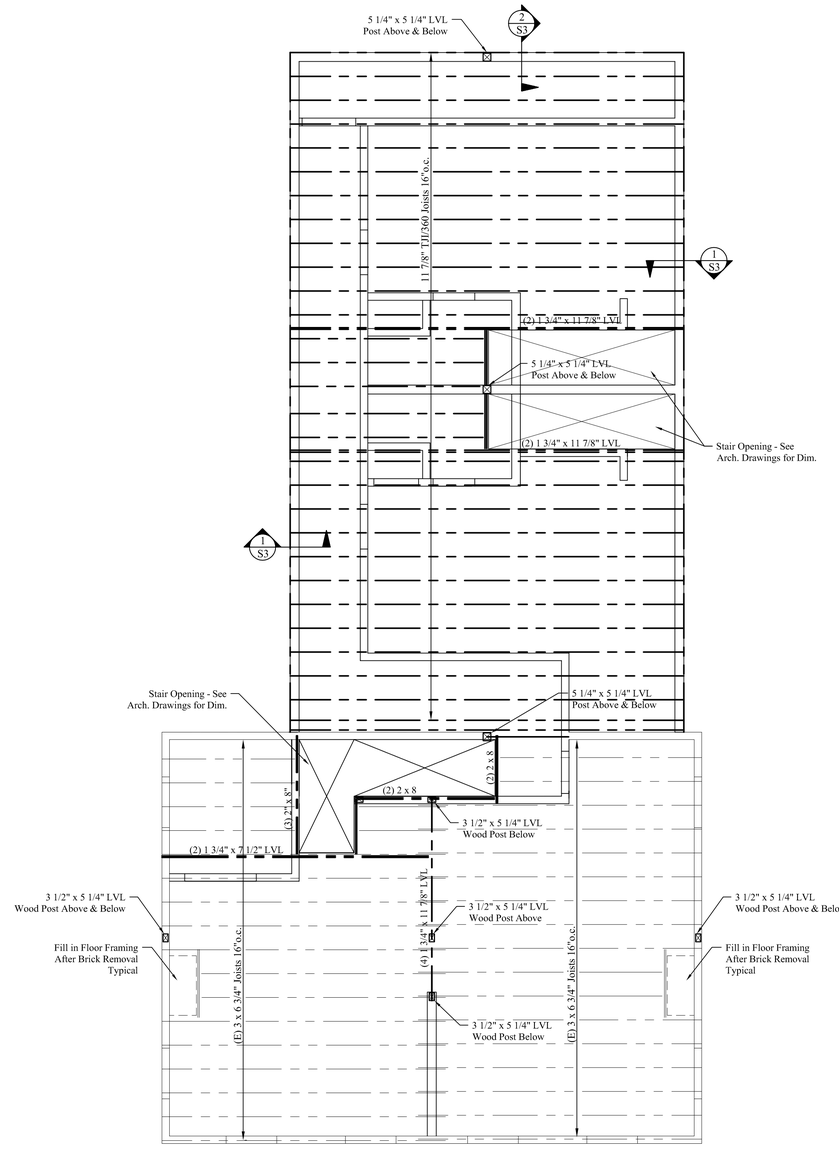
STATE OF MAINE
LARRY A. WICHROSKI
No. 5990
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: Larry A. Wichroski, P.E.
DRAWN BY: LAW
JOB #: 06616
DATE: 12-16-2016

REVISIONS

SHEET: S3 of 4

06616 – 197 Spring Street.dwg



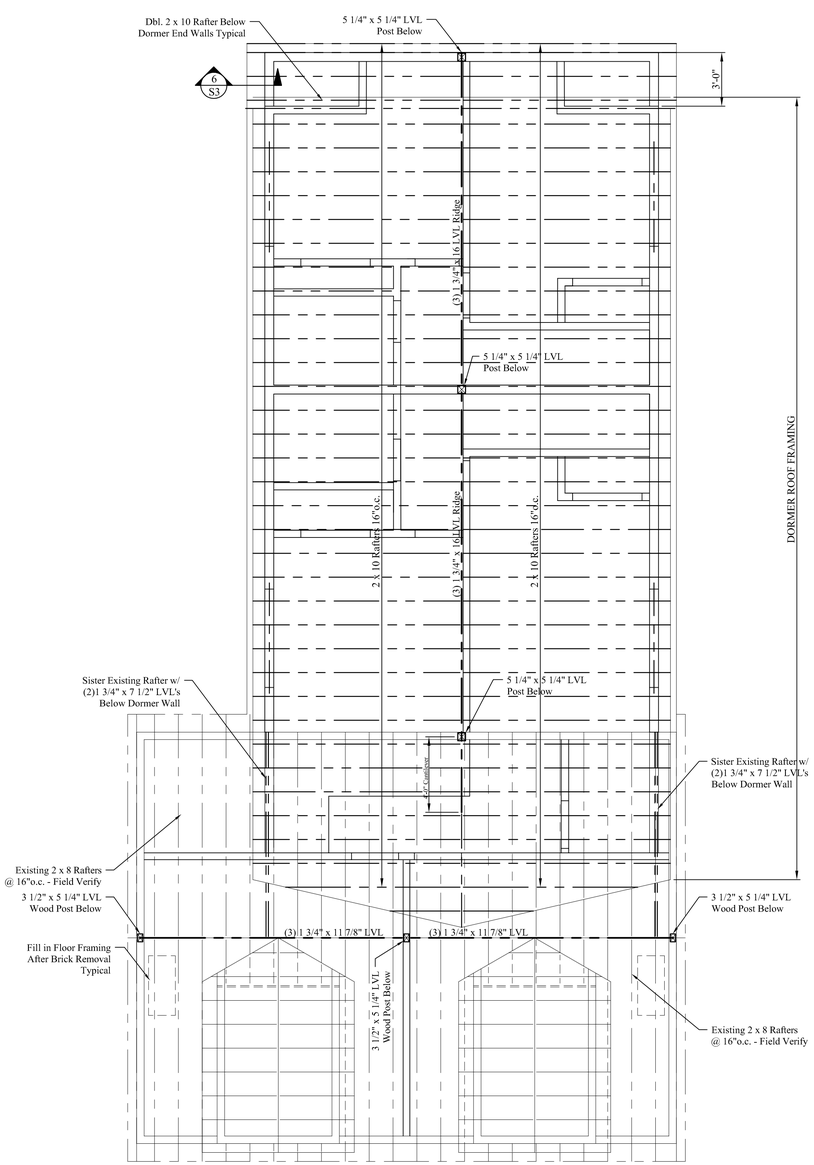
NOTE: Existing floor framing sizes and spacing could not be verified during design. Framing show are minimum sizes required. Contractor shall notify engineer if framing does not meet framing shown.

3rd FLOOR FRAMING PLAN

Scale: 1/4" = 1'-0"

FLOOR FRAMING NOTES:

1. See Structural Notes , Sheet S-1.
2. Built-up girders, headers and beams shall be spiked w/ 3 rows of 16d nails @ 12" o.c.
3. Provide metal hangers at all flush joist connections.
4. Provide double joists below all upper parallel walls.
5. Provide solid blocking at mid-span of floor joists.
6. See architectural drawings for wall layout and dimensions.
7. Provide (2) 1¾" x 9¼" LVL header w/ 2" rigid insulation between over all exterior door and window openings unless noted on plan.
8. Leave ½" gap between top of all beams/girders and bottom of floor sheathing for expansion and contraction.
9. Add solid blocking between floor joists below all posts.



ROOF FRAMING PLAN

Scale: 1/4" = 1'-0"

ROOF FRAMING NOTES:

1. See Structural Notes , Sheet S-1.
2. Built-up headers and beams shall be spiked w/ 3 rows of 16d nails @ 12" o.c.
3. Provide metal hangers at all flush rafter connections.
4. Provide (2) 1¾" x 9¼" LVL header w/ 2" rigid insulation between over all exterior door and window openings unless noted on plan.
5. See architectural drawings for wall layout and dimensions.
6. Connect all Rafters to wall plate with Simpson H2.5 Seismic & Hurricane Ties per Manufacturer's Instructions..

Mechanical, Electrical and Plumbing Design and Building Weatherization-Insulation-Ventilation by Others.

ENGINEERING DESIGN PROFESSIONALS
Consulting Engineers
P.O. BOX 575, FREEPORT, MAINE 04032 • (207) 865-9505
EDP

PROJECT:
Renovations & Alterations
197 Spring Street, Portland, Maine

DRAWING:
3rd FLOOR & ROOF FRAMING PLANS

STATE OF MAINE
LARRY A. WICHROSKI
No. 5990
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: Larry A. Wichroski, P.E.
DRAWN BY: LAW
JOB #: 06616
DATE: 12-16-2016

REVISIONS

SHEET: S4 of 4

06616 – 197 Spring Street.dwg

GENERAL NOTES:

1. FOR INFORMATION REGARDING THE LANDSCAPING AND PLANT SPECIES, REFER TO THE SITE AND LANDSCAPE PLAN, SHEET C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY MDESIGNS; REFER TO INTERIOR DESIGN PLANS FOR FLOOR PLANS. REFER TO ARCHITECTURAL PLANS FOR BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.1295 ACRE (5,641 S.F.). R.O.W. WIDTH FOR SPRING STREET IS 49.5 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY BH2M DATED JULY 2013 AND REVISED 1/26/17.
6. THE PROPOSED REDEVELOPMENT SITE IS WITHIN THE CITY OF PORTLAND'S WEST END HISTORIC DISTRICT.
7. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY BH2M.
8. AS OF 5/2/17, SITE IS BOUNDED BY THE R-6 ZONE ON ALL ABUTTING SIDES PER CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 45, BLOCK E, LOT 21.
10. LOCUS PARCEL DOES NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300510013B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SEVEN (7) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.

WAIVERS & CONDITIONS OF APPROVAL:

TBD

EASEMENTS:

ALL PROPOSED EASEMENTS TO BE REVIEWED BY BH2M AND RECORDED IN CCRD. ALL EXISTING EASEMENTS WILL BE RELEASED PRIOR TO PROJECT START. THERE ARE NO PROPOSED EASEMENTS.

EXISTING EASEMENTS:

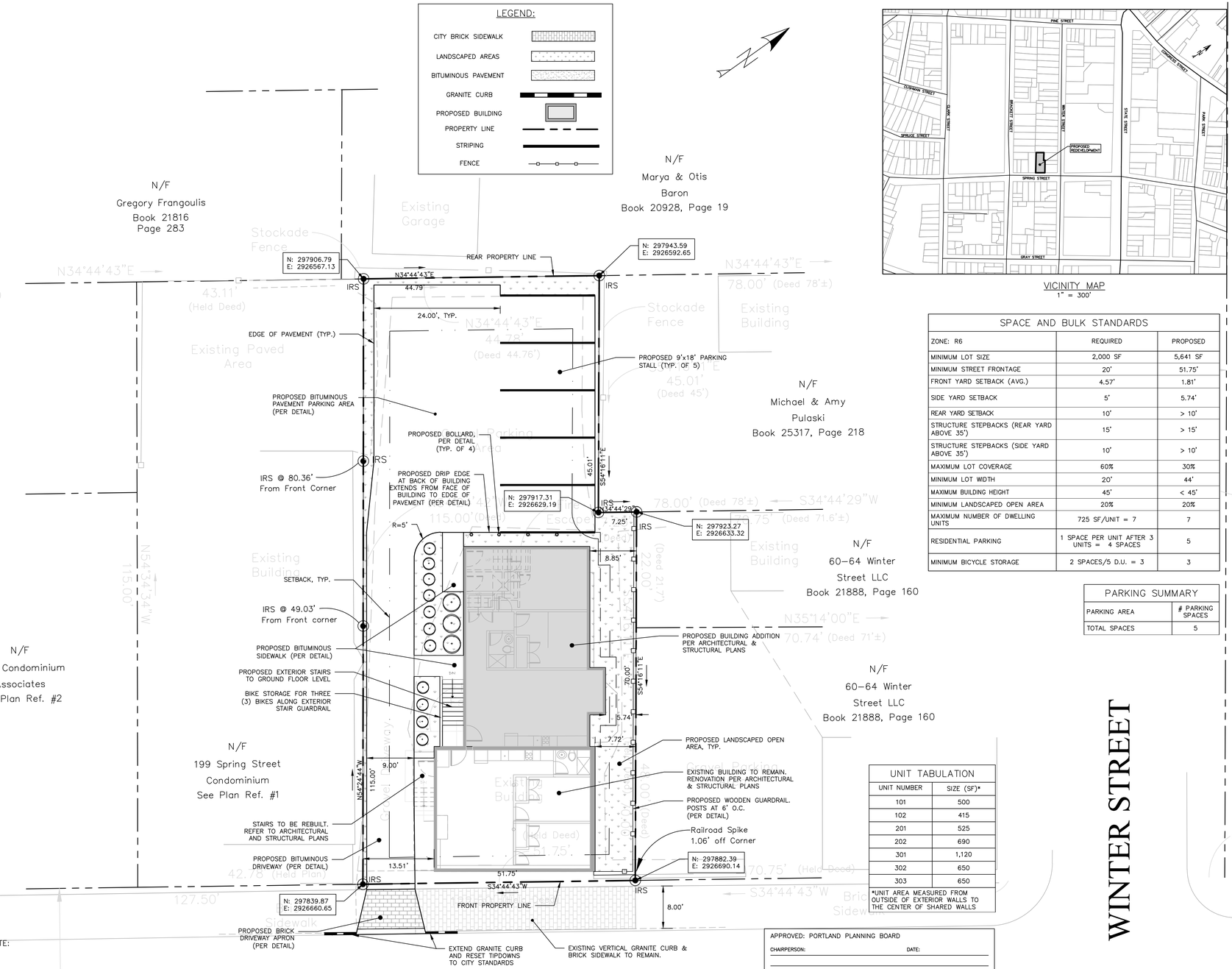
1. THERE ARE NO EXISTING EASEMENTS.

SURVEY NOTES:

1. DEED REFERENCES:
   1.1. BOOK 30942, PAGE 285
   1.2. BOOK 21444, PAGE 18
2. PARCEL AREA: 5641 SF
3. BENCH MARK: TOP OF GRANITE MONUMENT FOUND AT THE NORTHEAST CORNER OF SPRING STREET & STATE STREET, PROVIDED BY THE CITY OF PORTLAND. ELEVATION 116.206 (NGVD 1929).
4. COORDINATES/BEARINGS: BEARINGS AND NORTH ORIENTATION SHOWN HEREON ARE BASED UPON THE MAINE STATE COORDINATE SYSTEM, WEST ZONE (NAD 83), USING CITY OF PORTLAND COORDINATE POINTS T104-48-128 (#2708) & T124-25-1214

PLAN REFERENCES:

1. CONDOMINIUM PLAT, "199 SPRING STREET CONDOMINIUM", 199 SPRING STREET, PORTLAND, MAINE, FOR CRISTOPHER & KRISTI SARCHI, DATED 1/25/2006, BY OWEN HASKELL, INC. AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 206, PAGE 59.
2. SKYE CONDOMINIUM ASSOCIATES, 205-207-209-211 SPRING STREET, PORTLAND, MAINE, DATED 6/19/86, BY WELLS ENGINEERING, INC. AND RECORDED IN THE CUMBERLAND COUNTRY REGISTRY OF DEEDS IN PLAN BOOK 156, PAGE 7.
3. CITY OF PORTLAND "BLUE SHEETS" AND VARIOUS PLANS FOR SPRING STREET, WINTER STREET & BRACKETT STREET AND AVAILABLE FROM THE CITY OF PORTLAND ENGINEERING DEPARTMENT.



VICINITY MAP
1" = 300'

SPACE AND BULK STANDARDS

ZONE: R6	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	5,641 SF
MINIMUM STREET FRONTAGE	20'	51.75'
FRONT YARD SETBACK (AVG.)	4.57'	1.81'
SIDE YARD SETBACK	5'	5.74'
REAR YARD SETBACK	10'	> 10'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	> 15'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	> 10'
MAXIMUM LOT COVERAGE	60%	30%
MINIMUM LOT WIDTH	20'	44'
MAXIMUM BUILDING HEIGHT	45'	< 45'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 7	7
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 4 SPACES	5
MINIMUM BICYCLE STORAGE	2 SPACES/5 D.U. = 3	3

PARKING SUMMARY

PARKING AREA	# PARKING SPACES
TOTAL SPACES	5

UNIT TABULATION

UNIT NUMBER	SIZE (SF)*
101	500
102	415
201	525
202	690
301	1,120
302	650
303	650

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED:

RECORDED IN

ATTEST: REGISTRAR

10 0 10 20

SCALE: 1" = 10'

PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

OWNER/SUBDIVIDER:

WAIT, LLC
PORTLAND, MAINE
CONTACT: STEVE MORRISON

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.

SURVEYOR:

BH2M
GORHAM, MAINE
CONTACT: ROBERT LIBBY JR, P.L.S.

ROBERT LIBBY JR., MAINE P.L.S. #2190

BH2M DATE:

ISSUED FOR	BY	DATE
PB HEARING	WHS	5/2/17

DRAWING NAME: SUBDIVISION PLAT

PROJECT NAME: 197 SPRING STREET - RENOVATION AND ALTERATION

CLIENT: WAIT, LLC.
P.O. BOX 25A, CUMBERLAND, ME 04021

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

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

FILE: 1081_CIVIL
JN: 1081
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: SJL
CHECKED BY: WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11411 — REGISTERED PROFESSIONAL ENGINEER — 12-1-17

DRAWING NO.
PLAT

PLANNING BOARD REPORT
PORTLAND, MAINE

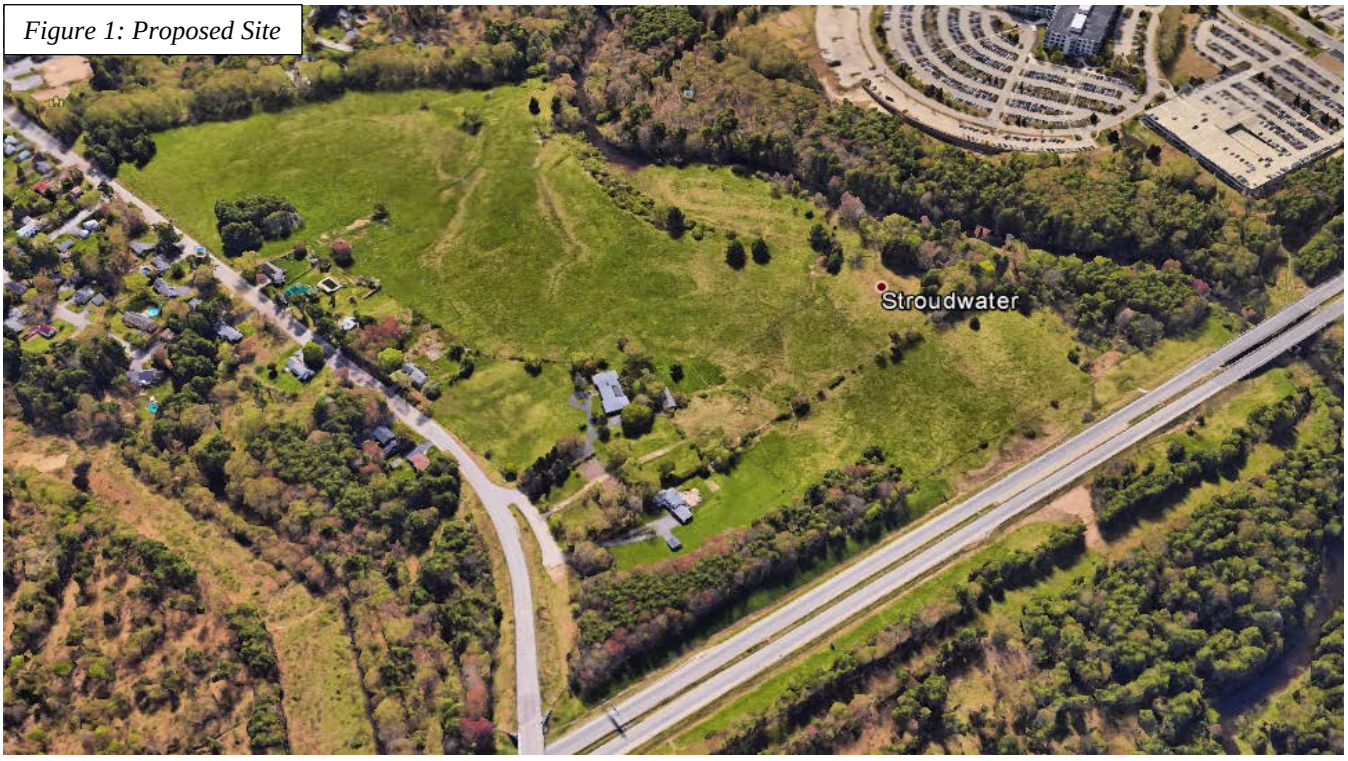
Camelot Farms Rezone
1700 Westbrook Street
Rezone from Residential R1 to Residential R3 and Recreational Open Space ROS
2016-282
Camelot Holdings, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: May 9th, 2017	Prepared by: Shukria Wiar Date: May 5th, 2017

I. INTRODUCTION

Camelot Holding LLC has requested a public hearing with the Planning Board to consider proposed rezoning from Residential R-1 to Residential R-3 and Recreational Open Space ROS for the property at 1700 and 1714 Westbrook Street, commonly referred to as Camelot Farms. The Resource Protection zone (RPZ) portion of the property will not be rezoned. The proposed zoning map amendment would enable the applicant to construct approximately a one hundred (100) lot subdivision of which ninety-five (95) lots will be for single-family homes and four will be open space lots. The intent and purpose of the rezoning is for the proposed development to have smaller-scaled residential lots, while providing more green space directly along Westbrook Street and the Stroudwater River.

Figure 1: Proposed Site



There have been three workshops, as well as a fourth public comments session with the Planning Board for this project; the first workshop was held on January 17th, 2017, the second was held February 28th, 2017, the third was on April 6, 2017, and a public comments session only on April 13, 2017.

Applicant and Property Owner: Camelot Holdings LLC
Engineer: William Savage, Acorn Engineering Inc.

II. PUBLIC COMMENT

Notices were sent to ninety-five (95) residents and the interested citizen list. The notice also appeared in the Portland Press Herald on April 24th and May 1st, 2017, as well as being posted on the City's web page. E-mail notices were sent at the same time as the mailed notices as well as being posted on the City's web page and posted on the legal ad. No additional written public comments have been received by the Planning Office since the last workshop. The compilation of the public comments from the previous workshops is included as Attachment PC1 to PC42.

The applicant has held two introductory neighborhood meetings in September and December and meetings with the Stroudwater Village Association Board in January and February 2017. As part of this application, a required neighborhood meeting was held on January 24, 2017. The neighborhood meeting packet and minutes are included in the Applicant's Submittals G. Additionally, the applicant has made multiple public outreach efforts with the neighborhood and the Stroutwater Village Association Board, as well as Portland Trails, Land Bank Commission, other constituents. Please see the meetings below:

Date of Meeting	Constituents
July '16	City Planning Staff Meeting - Initial plans discussed with Jeff Levine
August '16	Outreach Began - Portland Trails, Stroudwater Village Association, Stroudwater Neighbors, and other constituents were alerted to our acquisition of the property and what the goals of the project were looking like.
September 15, 2016	Informal Neighborhood Meeting - Stroudwater Village Church. Approximately 20 residents came to here about the land acquistion and provide feedback. The attached aerial plan was reviewed. o http://us8.campaign-archive2.com/?u=f5801912b6db760858312643c&id=1b6be18ebc o This link is the SVA minutes published internally with some misinformation (lot size, target price). There is also some commentary within that is opinion based.
October '16	Plan Refinement - Feedback received from the meeting: preservation of green space, green buffer along Westbrook St, lot size comparable to surroundings on Westbrook St, access points to the site not being accross from existing homes, etc was integrated into a concept plan dated 10/27 included on the attached showing 101-106 lots.
October ' 16	Additional Outreach Initiated.
November '16	Plan Refinement - Environmental, survey, and traffic studies were commissioned and information gathered.
November 23 '16	Preapplication Meeting - Minutes and attendees attached.
December '16	Plan refinement - Comments from the preapplication meeting were integrated into the plan as well as information compiled from the environmental survey. The result is the plan that is currently within the Zone Change Packet.
December 10, 2016 - 10 AM	Informal Informational Meeting #2 - Met with residents at the Stroudwater Church to review the updated plan. The minutes from that meeting were emailed to you today.
January 9, 2017 - 9 AM	Met with Godfrey Wood to review the project upon his request
January 9, 2017 - 730 PM	Follow up meeting with the Stroudwater Village Association Board
January 13, 2017 - 9 AM	Met with Jamie Parker from Portland Trails to review plan development
January 17, 2017- 7 PM	PB Workshop 1
January 18, 2017 - 330 PM	Phone conversation with president of Stroudwater Village Association to review plan development and neighborhood meeting goals
January 23, 2017 - 10 AM	Met with Christian Milneil regarding project concepts. Reviewed land use designation as trigger for further refinement.
January 24, 2017 - 6 PM	Formal Neighborhood Meeting at Stroudwater Village Church. Minutes in packet
February 1, 2017 - 11 AM	City staff review of project

February 9, 2017 - 9 AM	Met with Charles Hartfelder regarding mid-century neighborhood and housing styles to gauge appropriateness for project
February 15, 2017 - 11 AM	Portland Trails, Planning Staff, Counsel meeting to discuss more formalization of open space
February 22, 2017	Reminder email to SVA regarding second workshop. Submission material and summary email sent.
February 27, 2017 - Noon	Met with Wendy & Michael Taylor and Genie O'Brien to review plan revisions, sensitivity to nature, phasing, etc.
February 28, 2017	PB Workshop II
March 1, 2017 - 9 AM	Met with Ian Jacob to discuss project approach, alternative land use considerations (R5A)
March 9, 2017 - 5 PM	Informational presentation regarding the project to the Land Bank Commission. Minutes. http://www.portlandprf.com/AgendaCenter/ViewFile/Item/4875?fileID=23922
March 10, 2017 - 2 PM	Met with Mark Senglemann to review R3 & R5A concepts
March 13, 2017 - 130 PM	Portland Trails, Planning Staff, Counsel meeting to refine formalization of open space and public access.
March 30, 2017 - 3 PM	IZ policy review with city staff for homeownership track
April 3, 2017 - 10 AM	Phone conversation with president of Stroudwater Village Association to review plan development, public access, and open space. Email information forwarded to area residents
April 6, 2017 - 5 PM	PB Workshop III
April 13, 2017 - 5 PM	PB Workshop III Extended Comment Period
April 19, 2017 - 8 AM	Informational meeting with PSA Advocacy Committee to discuss the project and land use and the "Growing Portland" document they generated

III. PROJECT DATA

Existing Zoning	Residential R-1, Resource Protection Zone and Shoreland Overlay Zone
Proposed Zoning	Residential R-3 for the front of parcel and ROS for the rear portion
Existing Use	One Single-family
Proposed Use	95 single-family lots and four open spaces lots
Parcel Size	~27.6 acres for original parcel and roughly 45 acres with the new parcel.
Impervious Surface Area	
-Existing	20,884 SF
-Proposed	275,424 SF

IV. EXISTING CONDITIONS

The Camelot Farm parcel is approximately 45 acres on five different parcels. The property has frontage along Westbrook Street and extends to the Maine Turnpike and Stroudwater River. Presently the parcel has a single-story ranch house and a small barn on it, built in 1961. Most of the site consists of cleared fields used historically as farmland and pastures. The property has a total of 1,500 feet of frontage along the Stroudwater River. A portion of the site is zoned Resource Protection along the river and the Shoreland Overlay Zone extends 250 feet from the high-water line, which is subject to Shoreland Zone site development standards. The site has two existing utility easements for the Portland Water District and Portland Pipeline Company, which bisect the property. There are single family homes along both sides of Westbrook Street in the

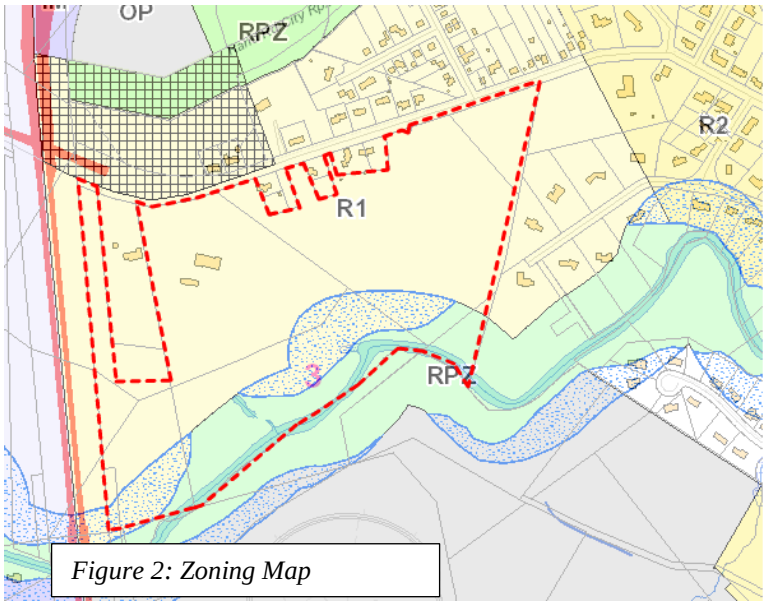


Figure 2: Zoning Map

vicinity of the site. The advertised map for the rezoning includes the other parcels along Westbrook Street for the Board's consideration.

V. PROPOSED DEVELOPMENT

The project proposes to redevelop the existing, small farm into a traditional single-family development within the Stroudwater neighborhood. Approximately 95 house lots are proposed ranging in size between 6,500 sf to 20,000 sf. The proposed roads are to be built to City standards. The applicant is proposing to phase the development into four phases; each phase will have 20 to 25 lots and accompanying infrastructure. The newly acquired land will be used as a buffer between the Stroudwater Neighborhood and the turnpike with the potential for some more residential development. The applicant is proposing adding additional landscape buffer to help with the noise coming from the highway.

Development may occur under the Shoreland Overlay Zone. The overlay zone requires that any development be 75 feet from high watermark and additional development standards apply within 250 feet from the river. The Resource Protection Zone, does allow for some limited development, but does not permit residential structures and in general, is a conservation zone. The finished building footprints of any proposed homes will also have to comply with floodplain regulations, where applicable. The site does have steep slopes around the bank of the Stroudwater River; it is the intent of the applicant to keep most of the development away from these slopes develop on the more level portion of the site. With smaller lot size under the R-3 zone, the development can be designed to stay farther away from the Stroudwater River; thus, providing for more green space and less impervious area.

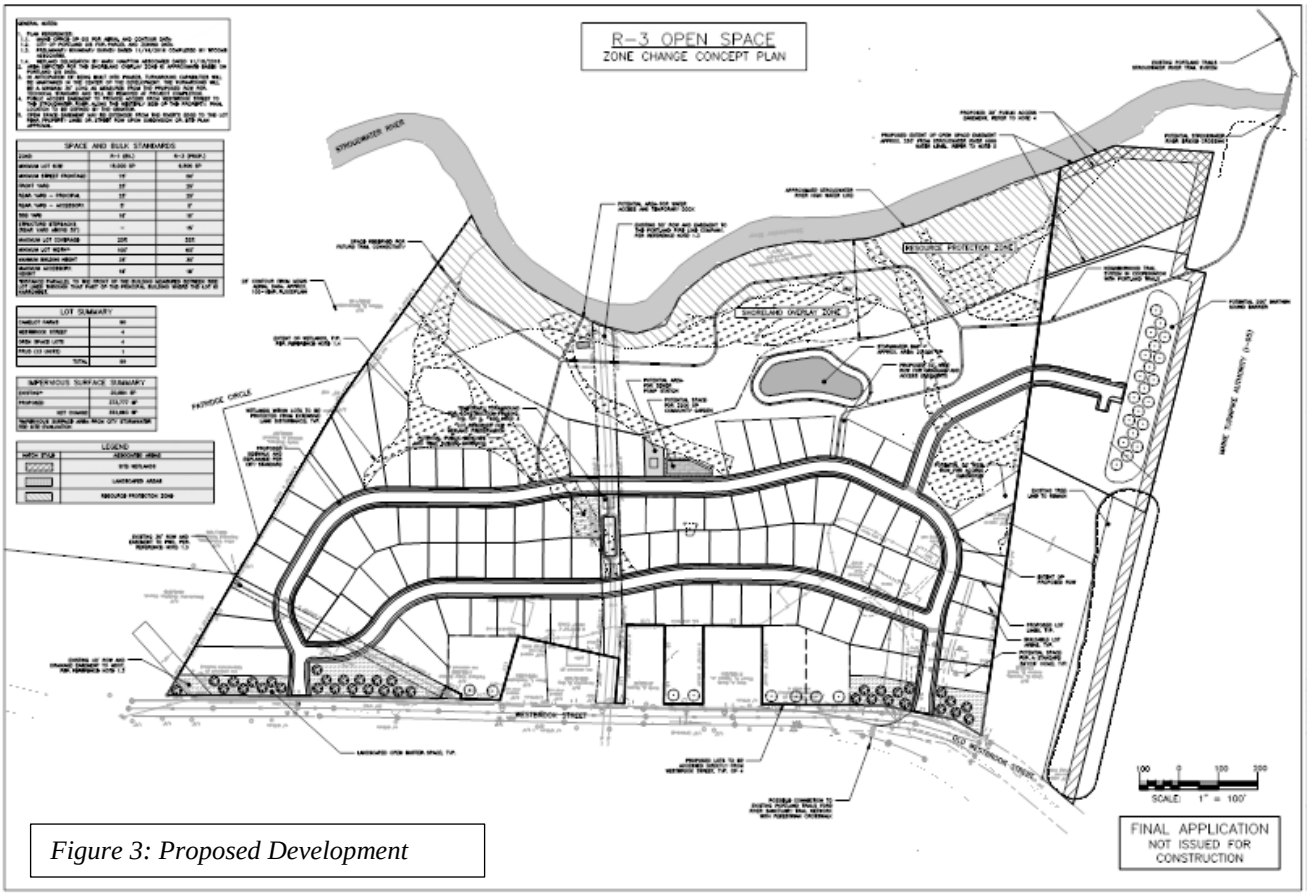


Figure 3: Proposed Development

The applicant's request is to rezone the front portion of the property to R-3 zone and the rear portion to ROS zone, excluding the RPZ areas. In order to rezone to ROS, there needs to be easements on the that portion of the site to be conveyed to the City, or a third-party nonprofit, as public access and preserved open space. The applicant has provided a zoning map of the exact locations proposed of the rezoning on the site, see Attachment Plan 9. The applicant is proposing to place easements on the site to convey public access and preserve open space, primarily along the Stroudwater River. The public access and open space easements provide the basis for meeting the purpose statement of the ROS zone and thus eligible to be included in an ROS map amendment. The intent is for the property to be used for passive recreation with connection into the neighborhood trail system connections and

to offer other shared amenities. The open space area would provide direct waterfront access to the river. The proposed open space easement will extend from the Stroudwater River high water line to the single-family subdivision, which is the proposed R-3 zone. The proposed open, shared-use green space includes more than 55% of the total site. Corporation Counsel supports the draft easement and the applicant is working on finalizing the easements prior to the City Council hearing. The draft agreement is included as Attachment K.

Since the applicant owns the property along the Maine Turnpike, a 30-foot wide public easement is currently proposed along the common boundary line with the turnpike. In the applicant's cover letter dated 03.30.2017, they state the following as to how the open space easements will be handled:

> *The open space and public access to the site is to be assured by the Applicant via an easement completed in two steps. The initial Open Space and Public Access Easement will be signed and issued to the public for the parcel directly abutting the Turnpike immediately following a successful rezone of the parcel to R- 3 and ROS. Because the larger parcel is subject to a Purchase and Sale Agreement, the Open Space and Public Access Easement will be held in escrow until the exchange of ownership of the parcel is complete at the conclusion on the PS&A. At a minimum, all land within 250 feet. of the Stroudwater River will be rezoned ROS, however the final Open Space and Public Access Easement will be continued and expanded beyond the 250-foot buffer to the proposed property lines and/or public right-of-way.*

The proposed project will also be subject to the Inclusionary Zoning Ordinance, which 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. According to the applicant's cover letter, dated 03.30.2017, which states the following in regard to Inclusionary Zoning Ordinance:

> *Under the R-3 rezone, the smaller lot sizes would drive the house price point closer to the affordability requirements set by the Inclusionary Zoning Ordinance. Because it is proposed that the IZ units be provided within the development, the lesser home costs of the R-3 zone would create a more cohesive neighborhood with less distinction between the R-3 and IZ homes. This idea is described in further detail within the attached Housing Attainability Summary (Attachment I).*

R-3 Proposed Development and Traffic Impacts

The applicant has provided calculations of the proposed development buildout of the site under the R-3 rezone with the 100 lots of which approximately 95 will be single-family house lots and four would be open space lots on a 45-acre parcel. Access to the proposed subdivision will be provided with construction of two proposed roadways that will be offered for public street acceptance.

The applicant has provided Tom Errico, Consulting Traffic Engineer, with the estimated trips that would be generated under all proposed development scenario. Tom Errico's comments are as follows:

> *I have reviewed the application materials and offer the following traffic comments as it specifically relates to the rezoning proposal. My comments focus on the traffic implication of the rezoning request and items that would be reviewed during the site plan permitting process.*
>
> · *The key traffic issue related to the rezoning of the subject property is the increase in trip generation expected with the change. According to application materials, under current zoning (R1), 83 residential units can be construction. With full build-out of the property under the proposed zone (R3), 166 residential units could be construction. The applicant has provided plans that note construction of 100 residential units. Accordingly, the zone change would be expected to add traffic levels above current zoning requirements by 17 residential units. (Although a maximum increase could be 83 residential units, this level of development may not be possible given site constraints). During the worst-case peak hour trip generating scenario, the increase in 17 residential units would correlate to an additional 17 vehicles entering and exiting the project site during the PM peak hour (under the current application proposal). In my professional opinion, this level of traffic increase would not have a*

significant impact on traffic operations and therefore the zone change would not be expected to have a significant impact on traffic conditions.

· *Whether under current zoning and the construction of 83 residential units or under the rezoned scenario with 100 residential units, the following traffic issues/requirements would be considered during site plan permitting.*

- *o The applicant has provided a traffic study and the general content of the study is appropriate and would be used during the site plan review process.*
- *o Traffic conditions would be reviewed at the Congress Street/Westbrook Street intersection. Current traffic congestion would likely require mitigation improvements.*
- *o A traffic speed study along Westbrook Street would likely be required with recommendations on addressing specific vehicle speed issues an recommendations.*
- *o Intersection/Driveway design conditions including sight distance, driveway separation, and geometric features would be reviewed.*
- *o A pedestrian and bicycle facility analysis would be expected within the vicinity of the project.*
- *o Crash data would be reviewed in the vicinity of the project and for locations that are determined to have deficiencies, the applicant would be expected to mitigate problems.*

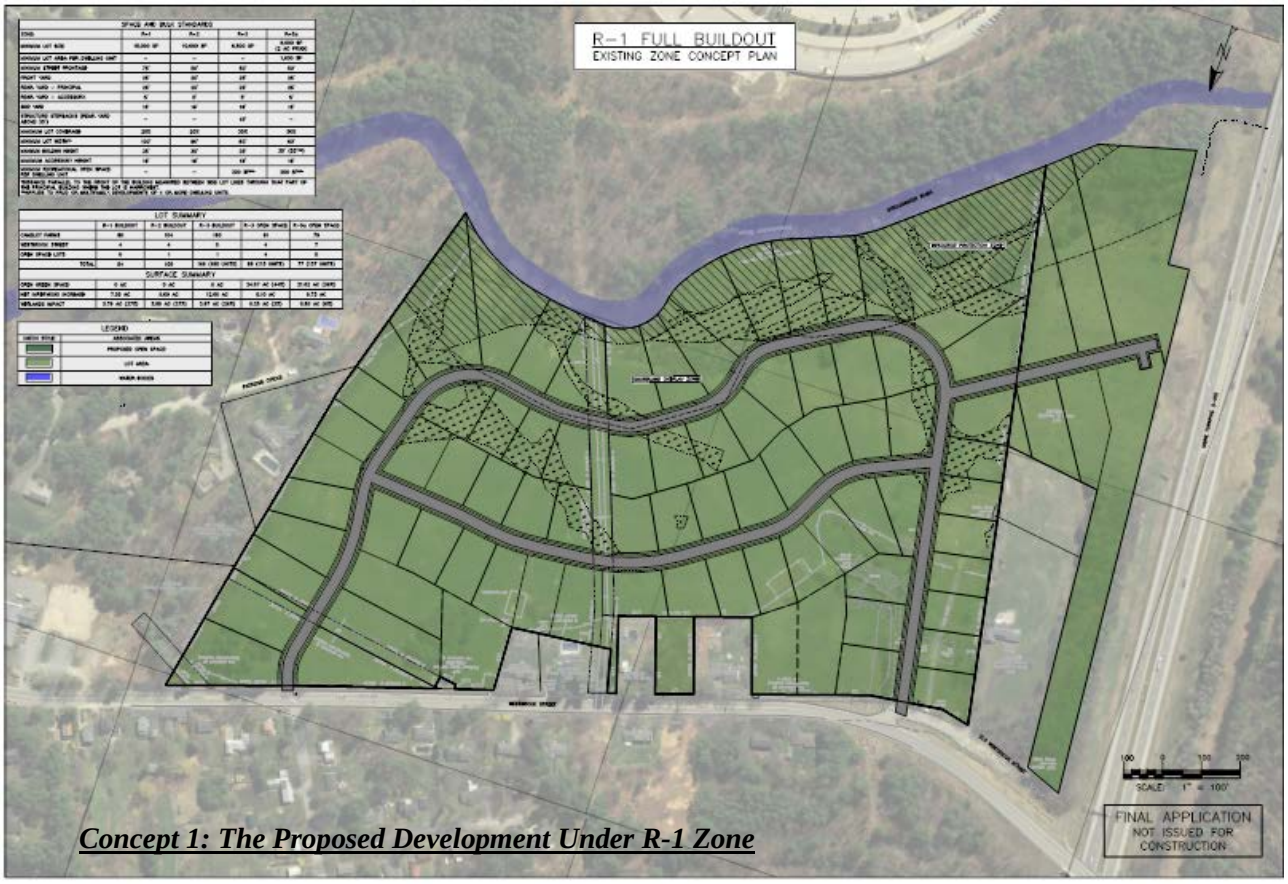
VI. POLICY CONSIDERATIONS

A. Development Concepts Under the Various Zones:

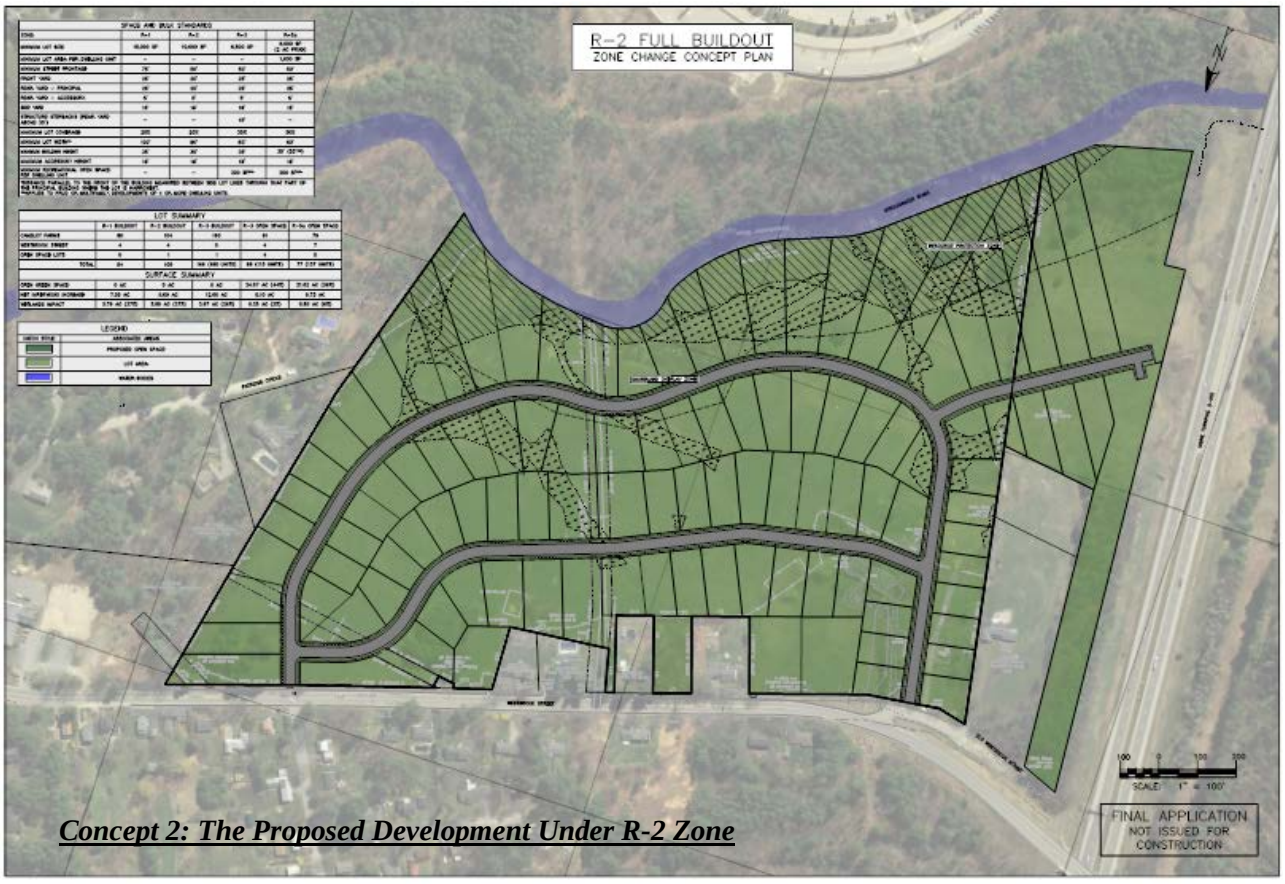
The applicant has submitted plans of the proposed subdivision development under the R-1 zone with the new acquired lot and R-5a zone. Rezoning from R1 to the R3 zone will permit the developer to build a smaller buildable footprint that would result in less impervious area and less wetland impact, while providing a significantly larger buffer to the Stroudwater River and greater open space. The proposed development will provide more housing and is intended to blend with the surrounding neighborhood. The green spaces along Westbrook Street and Stroudwater River will be a buffer between this development and the existing neighborhood. The R-3 zones are found along several of the city's collectors and arterials, such as Washington Avenue, Allen Avenue, outer Brighton Avenue, and on the Forest Avenue corridor, which may offer opportunities for a moderate density infill project.

Below are the concepts that the Planning Board requested at the three workshops. The concepts are under the current zoning, the R-1 zone, R-2, R-3, the full buildout under the R-3 with the 100-year floodplain shown, and R-5a; the light green is the proposed residential lots and the darker green is the proposed open space on the concept maps on the following pages. The chart below illustrates the lot and surface summaries for the five concepts:

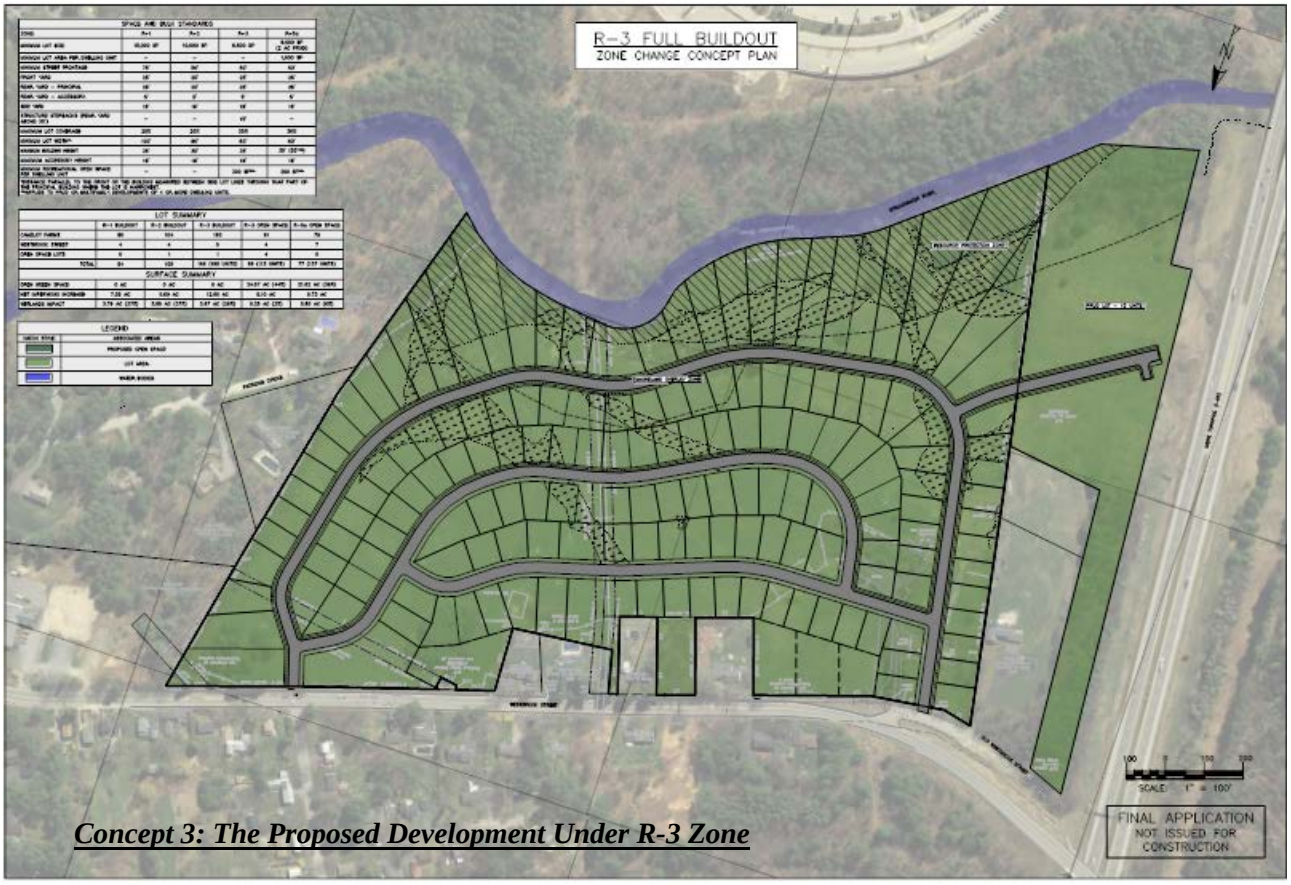
Lot Summery					
	R-1 Zone	R-2 Zone	R-3 Buildout	R-3 Zone	R-5a Zone
Camelot Farms	80	94	160	91	70
Westbrook Street	4	4	5	4	7
Open Space Lots	0	1	1	4	0
Total	84	99	166	99	77 (137 Units)
Surface Summary					
Open Green Space	0 AC	0 AC	0 AC	24.67 AC (44%)	21.62 AC (39%)
Net Impervious Increase	7.58 AC	9.09 AC	12.75 AC	8.10 AC	9.73 AC
Wetland Impact	3.79 AC (27%)	3.85 AC (27%)	3.67 AC (26%)	0.25AC (2%)	0.80 AC (6%)



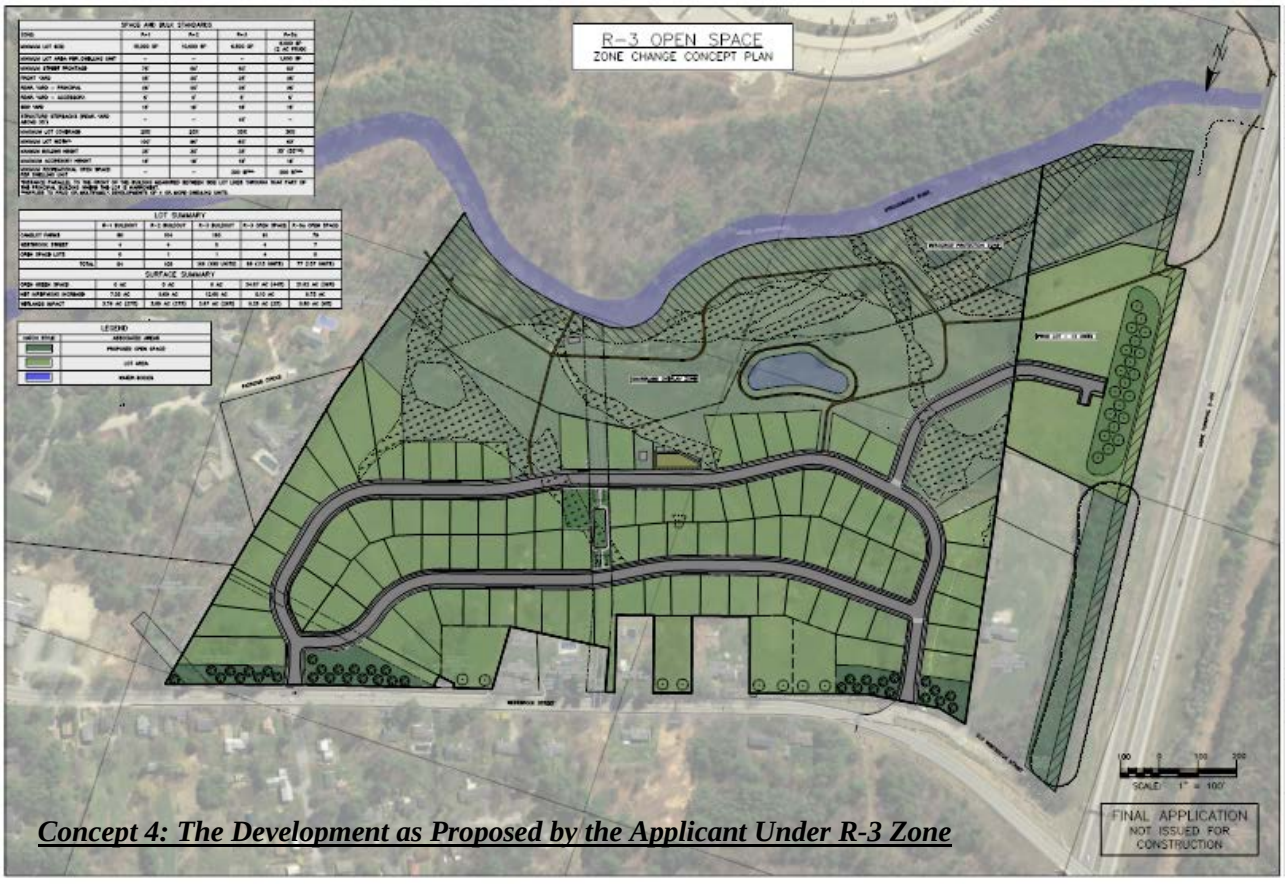
Concept 1: The Proposed Development Under R-1 Zone



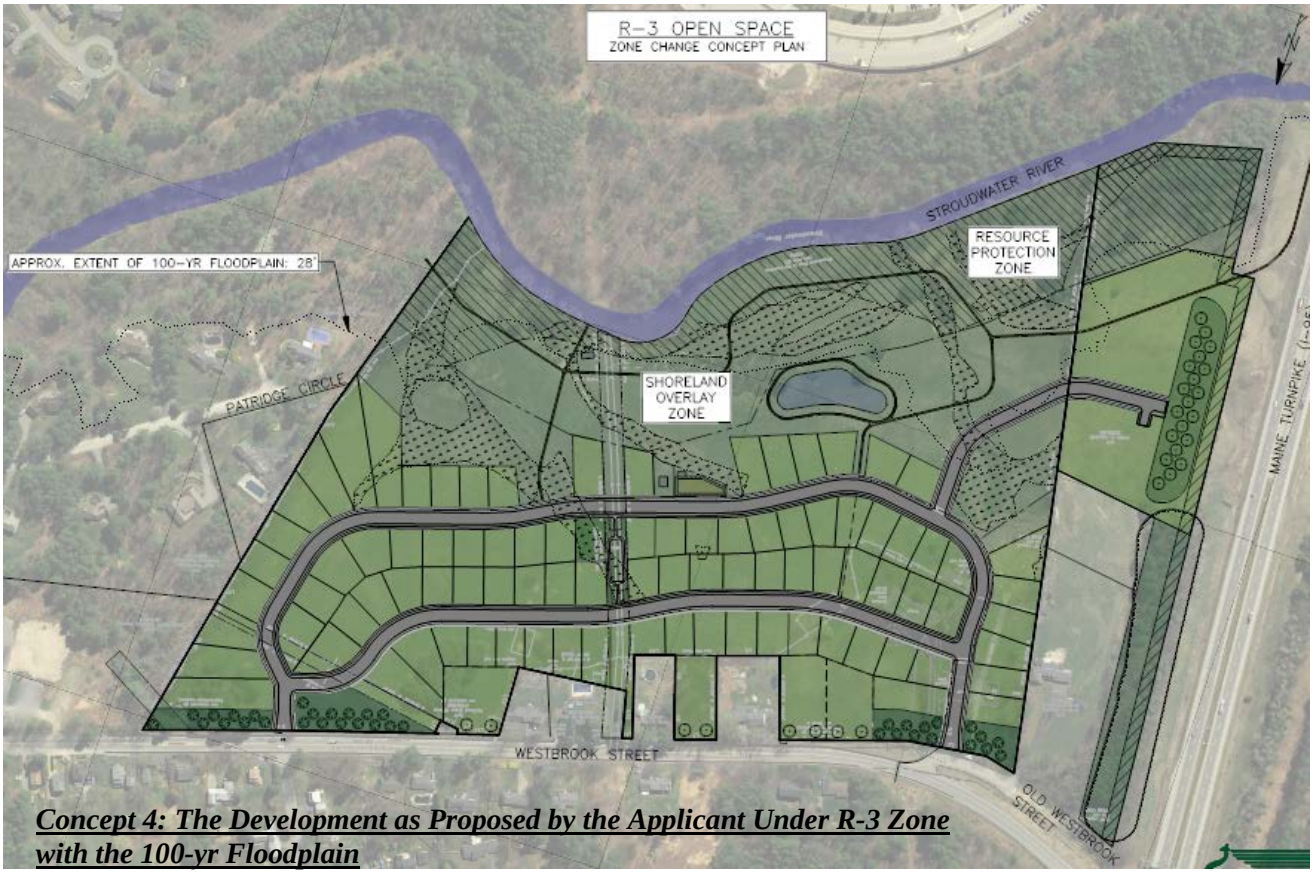
Concept 2: The Proposed Development Under R-2 Zone



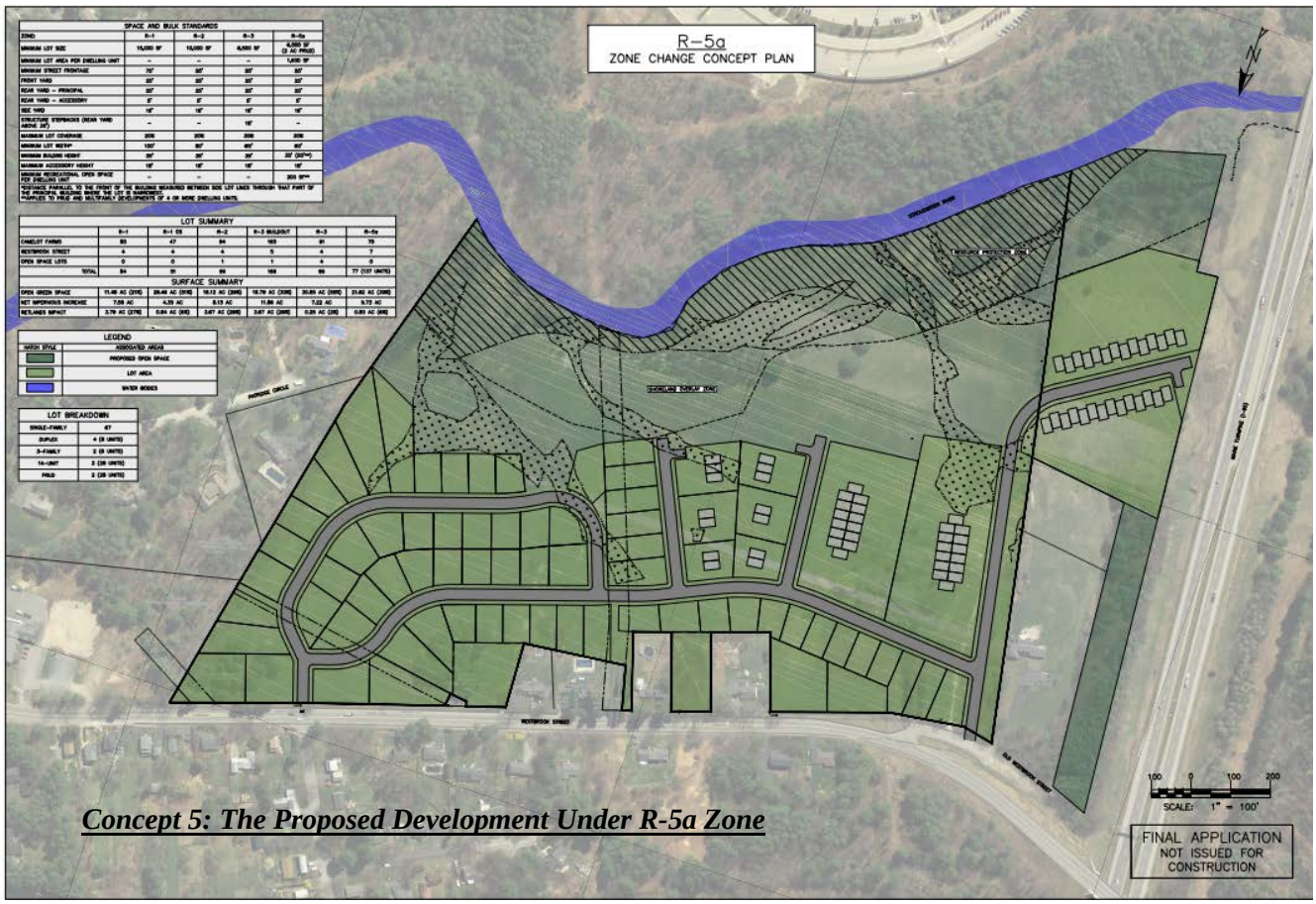
Concept 3: The Proposed Development Under R-3 Zone



Concept 4: The Development as Proposed by the Applicant Under R-3 Zone

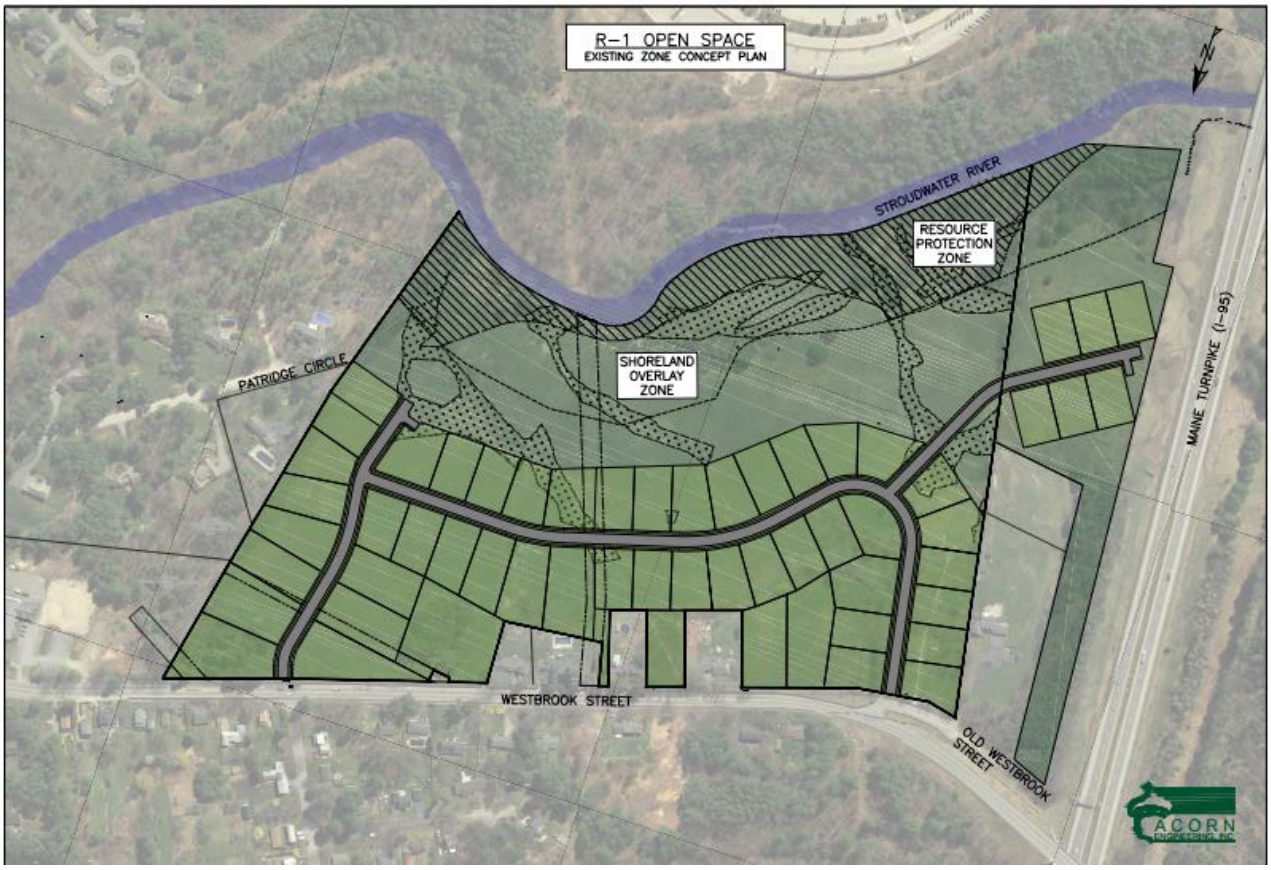


Concept 4: The Development as Proposed by the Applicant Under R-3 Zone with the 100-yr Floodplain

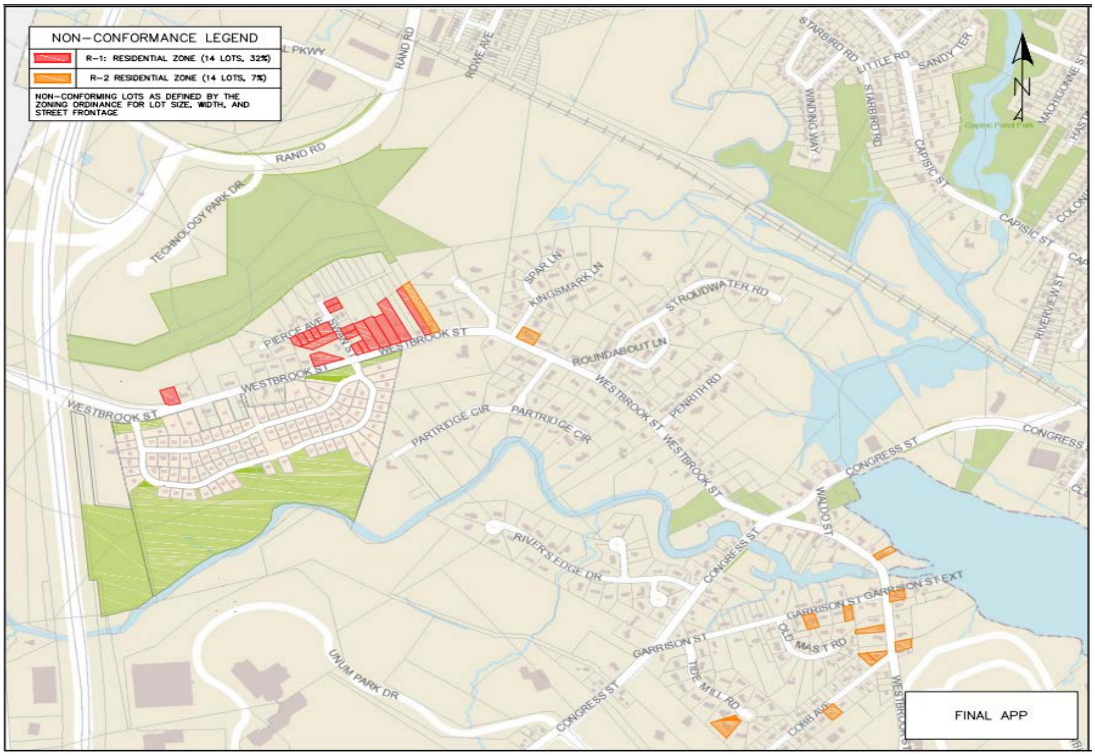


Concept 5: The Proposed Development Under R-5a Zone

At the request of the surrounding neighborhood, the applicant has submitted a concept plan of the proposed subdivision development under the R-1 zone with open space.



In addition to providing the conceptual plans under the different zones, the applicant has also provided an analysis of the nonconforming existing lots in the Stroudwater neighborhood. The abutting and surrounding lots to Camelot Farms zoned as R-1 or R-2 were evaluated for conformance with the City zoning standards. There were fourteen (14) existing lots within the R-1 zone and fourteen (14) within the R-2 zone that were identified as nonconforming.



According to the applicant, "Non-conforming lots were defined as not meeting the minimum lot size, lot width, or street frontage; building setback requirements were omitted from the list". Please refer to Attachment E and Plan 7 for the applicant's complete analysis.

The applicant has also converted this data onto a map, see map on the right:

At the last workshop, members of the public stated that the full buildout of the R-1 concept that the applicant has submitted was not feasible. The applicant responded to the concern in their cover letter:

> *The Applicant has completed additional environmental due diligence normally associated with a Site Plan/Subdivision Application in response to site impact concerns addressed by the neighbors. In addition to Wetland Delineation and outreach to State and Federal Agencies (Army Corps, US Fish & Wildlife Service, Maine Natural Areas Program, Maine Inland Fisheries & Wildlife, and Maine Historic Preservation Commission) completed in the Fall, an Ecological Habitat Assessment Report has been developed and included in this submission package.*
>
> *There has also been a concern from select neighbors that a full buildout R-1 concept as submitted is not feasible. After reviewing the information received to date from our Environmental Consultants and Regulatory Agencies, and standards and regulations set by the City of Portland's Chapter 14 Land Use Code, it is our professional opinion that the full buildout of the R-1 concept is feasible.*

At the April 6th meeting, the applicant submitted additional information regarding home construction data, neighborhood density, comparison of housing attainability summary between R-1 and R-3 concepts, and architectural designs of the proposed homes. The power point presentation is included as Attachment J. The documents presented shows the demographics of Stroutwater Neighborhoods through the years and how will be under the proposed development. It also outlines the affordability of homes if built under the R-1 zone versus the R-3 zone. The applicant also shows existing and proposed architectural design examples for the site.

B. Proposed Development Under Residential R-1, R-2, R-3 and R-5a Zone:

The applicant as provided conceptual development plans under various residential zones. The following chart illustrates the comparison between the current R-1 zone, R-2 zone, R-3 zone, and R-5a zone; the chart shows the purpose statements, permitted uses, and dimensional requirements of each zone. The minimum lot size varies in R-1, R-2, R-3 and R-5a zones with R-1 having the largest minimum lot size of 15,000 square feet. Generally, the R-3 and R-5a has more flexible dimensional requirements than R-1 and R-2. The intent of the rezone is to provide the proposed project a medium density residential development, which can be accomplished with the R-3 zone and R-5a.

	R-1 Zone	R-2 Zone	R-3 Zone	R-5a
Purpose Statements	To provide for lower density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.	To provide for low-density residential development characterized by single-family homes on individual lots in outlying areas of the city and along traffic corridors with limited additional traffic capacity.	To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.	To provide for moderate-density residential development in off-peninsula sections that can provide a unique residential living experience with a high degree of natural site amenities; and to provide areas of the city in the general proximity of the peninsula that have the capability for adequate municipal services, including traffic corridors with adequate traffic capacity, that can appropriately accommodate a more intensive use of land than other lower-density zoned land and be compatible with surrounding neighborhoods; and to increase affordable housing opportunities in off-peninsula locations by providing a moderate-density zone.
Permitted Uses	**Residential:** Single family; Handicapped family unit; Single-family, multiple-component manufactured	**Residential:** Single family; Handicapped family unit; Single-family, multiple-component	**Residential:** Single family; PRUD; Handicapped family unit; Single-family, multiple-component	**Residential:** Single family; PRUD; Handicapped family unit; Single-family, multiple-component manufactured

	housing; Single-family single-component manufactured housing; **Other:** Agriculture and Agriculture parking; Parks; Accessory uses; Home occupation; Municipal uses; Wind energy systems	manufactured housing; Single-family single-component manufactured housing; **Other** Parks; Agriculture; Accessory uses; Home occupation; Municipal uses; Wind energy systems	manufactured housing; Single-family single-component manufactured housing; **Other:** Parks; Accessory uses; Home occupation; Municipal uses; Wind energy systems	housing; Single-family single-component manufactured housing; Multifamily dwellings; Congregate care **Other:** Parks; Accessory uses; Home occupation; Municipal uses; Intermediate, extended and long-term care facilities; Wind energy systems
Conditional Uses	**Residential:** Sheltered Care group homes; adding one accessory dwelling unit; **Institutional:** Schools; Long term and extended care facilities; intermediate care facilities; places of assembly; hospital; **Other:** Utility substations; Cemeteries; Raising of domestic animals for noncommercial; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.	**Residential:** Sheltered Care group homes; adding one accessory dwelling unit; **Institutional:** Schools; Long term and extended care facilities; places of assembly; College, university, trade school **Other:** Utility substations; Cemeteries; Raising of domestic animals for noncommercial; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.	**Residential:** Sheltered Care group homes; adding one accessory dwelling unit; **Institutional:** Schools; Long term and extended care facilities; intermediate care facilities; places of assembly; hospital; **Other:** Off-street parking; utility substations; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.	**Residential:** Sheltered Care group homes; **Institutional:** Schools; Long term and extended care facilities; intermediate care facilities; places of assembly; hospital; **Other:** Utility substations; Nursery school and kindergartens; day care or home babysitting services; temporary wind anemometer towers; wind energy systems.
Dimensional Standards				
Minimum lot size	15,000 SF	10,000 SF	6,500 SF	Residential: 6,000 SF
Street Frontage	75 feet	50 feet	50 feet	50 feet
Front Yard (Min)	25 feet	25 feet	25 feet	25 feet
Rear Yard	25 Feet	25 feet	25 feet	25 feet
Side Yard	14 feet for 2-story building	14 feet for 2-story building	14 feet for 2-story building	14 feet for 2-story building
Structure Height	35 feet	35 feet	35 feet	35 feet; Multifamily development of 4 or more dwelling units – 55feet
Lot Coverage (max)	20%	20%	35%	30%
Parking	Two parking spaces for each dwelling unit.	Two parking spaces for each dwelling unit.	Two parking spaces for each dwelling unit.	Two parking spaces for each dwelling unit.

C. Recreation Open Space, Resource Protection and Shoreland Overlay Zones:

The following chart illustrates the comparison between the Recreation and Open Space R-OS (proposed for a portion of the site) and the Resource Protection zone (existing along the river); the chart shows the purpose statements, permitted uses, and dimensional requirements of each zone when stated in the ordinance.

	Recreation Open Space (ROS)	Resource Protection Zone (RPZ)
Purpose	(a) The purpose of this division is: 1. To preserve and protect open space as a limited and valuable resource; 2. To permit the reasonable use of open space, while simultaneously preserving and protecting its inherent open space characteristics to assure its continued availability for public use as scenic, recreation, and conservation or natural resource area, and for the containment and structuring of urban development;	

	3. To coordinate with and carry out federal, state, regional, and city recreation and open space plans; 4. To provide a suitable location for large-scale regional sports and athletic facilities; and 5. To develop an open space system throughout the downtown, which provides the highest quality parks, plazas, and pedestrian environment. (b) The recreation open space zone may include parcels of public property, and private property legally restricted from intensive use or development through deed, covenant, or otherwise.	
Permitted Uses	Municipal parks, public open spaces, picnic areas, playgrounds and play lots; Cemeteries; Arboretums; Golf courses; Boat landings, beaches, and marinas for public uses; Outdoor ballfields and public athletic fields; Swimming pools and tennis courts; Picnic groves and areas; Natural parks and scenic overlooks; Hiking, walking, bicycling or cross-country ski trails; Community gardens for cultivation by and for city residents; Sewage pumping stations and sewage treatment facilities; Sports complexes; Accessory uses; Wind energy systems; Street vendors licensed pursuant to Chapter 19; Events, activities, and uses licensed by the city, including but not limited to markets, festivals, café seating, concerts, and other gatherings.	No building shall be erected, altered, enlarged, rebuilt or used, and no premises shall be used, in a R-P resource protection zone except for the following uses: Non-intensive recreational uses not requiring structures; Motorized and nonmotorized vehicular traffic on existing roads, trails and rails, as appropriate; Bikeways, pedestrian trails and walkways; Fire prevention activities; Wildlife management activities; Soil and water conservation activities; Surveying and natural resource analysis; Emergency operations as defined in section 14-47; Harvesting of wild crops; Nonresidential structures for educational, scientific or nature interpretation purposes; Public and private parks and recreational areas; Permanent and temporary piers, docks, wharves, bridges and uses projecting into water bodies; Storehouses for fishermen's gear; Signs, as allowed in division 22 of this article; Road construction; Parking facilities for uses permitted under this section; Landfill and other earth-moving activity.
Conditional Uses	Accessory uses of two thousand five hundred (2,500) SF or more of floor area; Other recreational facilities and uses that are open to the public; Water pumping stations; Temporary wind anemometer towers; Wind energy systems.	The following uses are permitted in the R-P zone only upon the issuance of a conditional use permit, subject to the provisions of section 14-474 (conditional uses) of this article and any special provisions, standards or requirements specified below. 1. Temporary wind anemometer towers, 2. Wind energy systems.
Dimensional Standards		
Minimum lot size	n/a	20,000 SF
Minimum width of lot	n/a	100 feet
Street Frontage	n/a	100 feet (Street Frontage or Shoreline)
Front Yard (Min)	25 feet	25 feet
Rear Yard	25 feet	75 feet
Side Yard	12 feet	15 feet
Structure Height	35 feet; buildings located more than 1,000 feet from a shoreland zone - 45 feet.	25 feet for a 2-story structure
Minimum Shoreline Setback	n/a	75 feet

It is important to note that the Shoreland Overlay Zone extends over the current R-1 zone and in general extends 250 from the high-water line of the Stroudwater River (excluding the RPZ zone). As noted above, development may occur within the Shoreland Overlay Zone with additional applicable development standards. The overlay zone limits clearing, site improvements and maintains a 75-foot setback from the high-water mark for most structures. Below is a chart that illustrates the Shoreland Overlay Zone purpose statement and applicability:

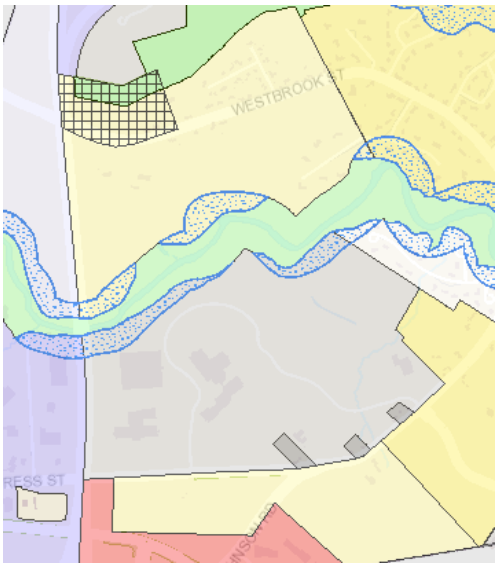
Purpose	The purposes of this division are to further the maintenance of safe and healthful conditions; prevent and control water pollution; protect fish spawning grounds, aquatic life, bird and other wildlife habitat; protect buildings and lands from flooding and accelerated erosion; protect archaeological and historic resources; protect commercial fishing and maritime industries; protect freshwater and coastal wetlands; control building sites, placement of structures and land uses; conserve shore cover, visual as well as actual points of access to inland and coastal waters and natural beauty, as appropriate in an urbanized environment; and to anticipate and respond to the impact of development in shoreland areas.
Applicability	This division applies to all land areas, uses, structures and land use activities within two hundred fifty (250) feet, horizontal distance, of the normal high water line of any river; within two hundred fifty (250) feet, horizontal distance, of the upland edge of a coastal wetland, including all areas affected by tidal actions within two hundred fifty (250) feet, horizontal distances, of the upland edge of a freshwater wetland; and within seventy-five (75) feet, horizontal distance, of the normal high water line of a stream. This division also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending beyond the normal high water line of a water body or within a wetland.
Zoning districts and shoreland regulations	The regulations and controls of this division apply to all land areas, uses, structures and land use activities cited in section 14-447, in all zones of the city.
Principal and accessory structures	75 feet Setback from Normal High Water Mark

D. Similar Rezones from R-1 to R-3

The two areas in Portland that are zoned R-1 are shown on the map to the right. The light-yellow areas are R-1 and encompass land along outer Westbrook Street and an area along outer Congress Street.

In response to public inquiries, the staff researched whether other R-1 zones had been rezoned to R-3. In 1992, the City Council approved the project, River's Edge, as a Conditional Rezone to R-3. Greater Portland Development Group requested a conditional rezone from R-1 and R-2 to R-3 for a parcel of land located on outer Congress Street, along the Stroudwater River. The parcel has a total of 27.41 acres. The conditional rezoning allowed the applicant to have a privately owned and maintained road serving 29 single-family lots.

Figure 4: The R-1 Zones



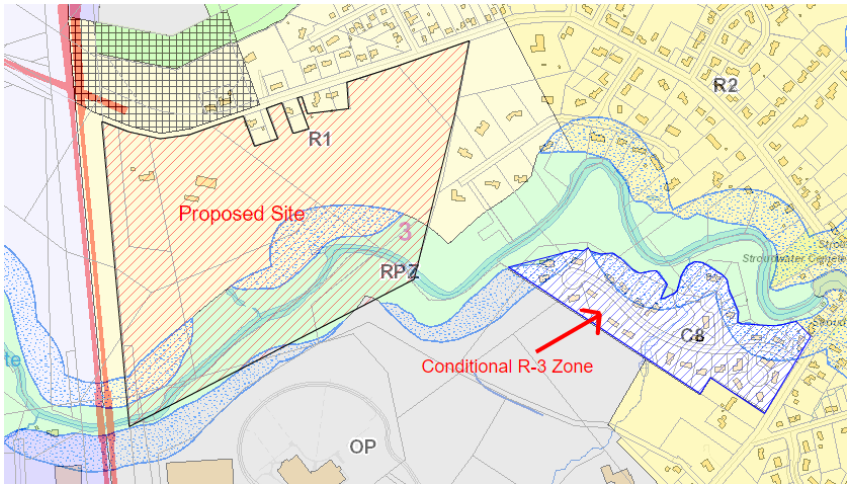


Figure 5: Conditional R-3 Zone (C8)

The conditional zone change was requested to the R-3 zone because R-3 allowed a Planned Residential Unit Development (PRUD) for single family homes at that time. The applicant kept the density of the proposed subdivision at 29 lots which was the same density as permitted under the R-1 and R-2 zones. The applicant built a 24-foot private road which is allowed only in PRUD; an association was formed to maintain the road, land held in common, and any utilities. As part of the proposal, the applicant deeded a 10-acre parcel located along the Stroudwater River for use as public pedestrian trail to Portland Trails; the easement also provided access to the trail from Congress Street is also part of the proposal. It should be noted that the City Council amended the

R-3 zone, so that single family PRUD's are no longer a permitted use and only attached housing may be built as a PRUD.

VII. Comprehensive Plans Analysis

The applicant has submitted their analysis of the projects conformance with the Comprehensive Plan (refer to Attachment C). The staff has identified the additional goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the adapted Comprehensive Plan and as well as the pending Comprehensive Plan. As stated the purpose of the R-3 Residential Zone is:

> *To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.*

A. Adopted Comprehensive Plan:

Housing: Sustaining Portland's Future contains several goals which are applicable to this proposed map amendment. The relevant goals and policies as identified by staff are as follows:

Housing Sustaining Portland's Future

Housing Policy #1

Ensure an Adequate and Diverse Supply of Housing for All

- Ensure the construction of a diverse mix of housing types that offers a continuum of options across all income levels for both renter and owner-occupied;
- A variety of housing choices should be available such that no one should have to spend more than 30% of their income for housing.
    - Encourage and support Portland Housing Authority to become active in development of more housing.
- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation.

Housing Policy #3

Maintain and enhance the livability of Portland's neighborhoods as the City grows and evolves through careful land use regulation, design and public participation that respects neighborhood integrity.

- Encourage innovative new housing development, which is designed to be compatible with the scale, character, and traditional development patterns of each individual residential neighborhood.
    - Evaluate and update, as needed, the current zoning and subdivision codes to encourage new residential development that:
        - Offers diverse and quality living options;
        - Provides traditional neighborhood elements;
        - Promotes a walkable city; and
        - Is compatible with Portland's existing neighborhoods.
- Encourage new housing development in proximity to neighborhood assets such as open space, schools, community services and public transportation.
- Ensure the integrity and economic value of Portland's neighborhoods
- Encourage neighborhood populations that are economically, socially, culturally and ethnically diverse.
    - Encourage a mix of housing types for all ages, household sizes, and incomes throughout the city.
    - Increase density where appropriate in order to achieve neighborhood diversity.
- Locate and design housing to reduce impacts on environmentally sensitive areas.

Green Spaces, Blue Edges: An Open Space and Recreation Plan

Conservation of natural resources should include a complete array of natural features and habitats, so that the public may learn about and experience the full realm of Portland's natural environment.

- Develop high point parks, open spaces located on the higher elevations of the city, in neighborhoods throughout the city such as the Ocean Avenue landfill, hilltop on Ocean Avenue by rock shop, Rocky Hill and hills in Stroudwater.

B. Pending Comprehensive Plan

Housing: A Livable City

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

Local Goals:

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

Goals from Future Strategies:

3. Remove Housing Barriers

- Evaluate whether current zoning allows for new development consistent with historic patterns of form, density and/or use, as well as whether it allows for priority growth areas.
- Identify priority growth areas.
- Allow for a range of housing models in City codes, whether small units, co-housing, or others that may suit changing needs and demographics.

6. Explore New Tools

- Explore tools that support innovative frameworks for housing creation, stability, and affordability, such as but not limited to community land trusts and a Transfer of Development Rights program to encourage preservation of highly valued open spaces, natural resources, or historic resources while allowing development potential to be transferred to areas considered appropriate for more intensive growth.

9. Adopt Affordable Housing

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

Recreation and Open Space: An Active City

*State Goal***:** To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

Local Goal: Portland commits to sustain and build our system of parks, trails, and open spaces to enhance our quality of life, protect our environment, and promote the economic well-being of our remarkable city by the sea.

- Provide high quality, well-designed, well-maintained, safe and integrated parks, trails, public open spaces, and recreational opportunities accessible to all residents.
- Strengthen connections between open spaces.
- Preserve the intrinsic values of the park and open space system, including historic resources, vistas, healthy ecosystem functions, and biological diversity.

Goals of Future Strategies:

10. Connect to the Waterfront

- Encourage physical and visual access to Portland's waterfront - Casco Bay, Back Cove, and the Stroudwater, Presumpscot, and Fore Rivers - as a "blueway" network and an extension of public space for local and regional recreation and transportation needs.

12. Connect the Chain

- Prioritize open space acquisition and programming toward creating linkages where there are gaps in the network, particularly between Stroudwater and the Fore River, Evergreen Cemetery and the Presumpscot River, Portland Transportation Center and Bayside, Martin's Point and the Back Cove, and the western waterfront and the Fore River.

VIII. CONSIDERATION OF MAP AMENDMENT AREA

At the first workshop, the Planning Board requested an analysis of extending the R-3 map amendment to include the four single-family home lots abutting the site, as well as the property along the turnpike, which is now part of the application (the red dotted line), see map. The Board felt the other adjacent areas may be appropriate candidates for a similar rezoning which were included in the advertised area along Westbrook Street. The applicant will be presenting the extent of the R-3 map amendment that they are seeking at the workshop and it will also show the area proposed for the ROS zone. The Board may consider reducing the area of the R-3 if the Board deems appropriate.

At the second workshop, the Board considered the appropriateness of the Flexible Housing Zone in this area and recommended advertising that it be rescinded. As shown on the zoning map, the properties to the north, across Westbrook Street from the site, is zoned R-1 and RPZ with the Flexible Housing Overlay Zone. The purpose of the Flexible Housing Zone is as follows:

> *The intention of this division is to establish an overlay zone in which manufactured housing development is permitted in addition to those uses permitted in the underlying residential zone.*
>
> *The purpose of this division is to accommodate additional housing types in appropriate areas of the city, while protecting the value and integrity of established residential neighborhoods and ensuring a balanced and orderly pattern of residential development.*

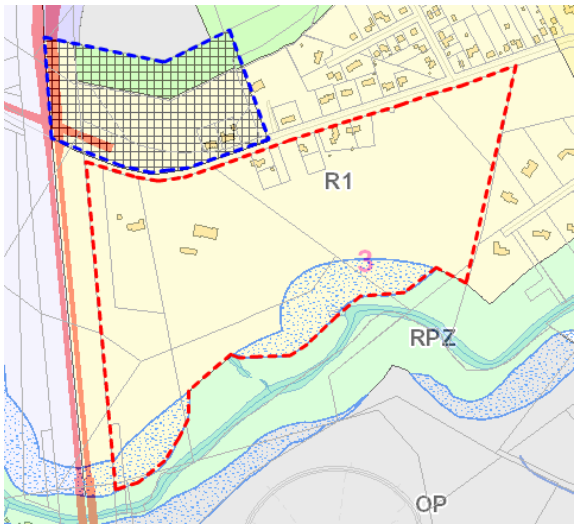


Figure 6: Other Potential Properties to be included in the Rezone/Plan

The Flexible Housing Zone allows manufactured housing parks or subdivisions. The properties to the north of the applicant's site have not been developed. There are two single-family homes abutting the site along Westbrook Street. There are other sites in Portland that have the Flexible Housing Overlay Zone. As shown in Figure 6, the underlying residential zone is R-1 and it is adjacent to a natural resource are that is zoned Resource Protection Zone RPZ. It needs to be recognized that the RPZ resource protection zone was not in place at the time of the overlay adoption and that designation was no longer as appropriate. The Board recommended advertising the removal of the FH zone in this location. The removal of the overlay will simplify the complexity and legibility of the code and the land use map in the area, as well maintain the integrity of the open space corridor and maximize open space.

IX. STAFF RECOMMENDATION

Staff is recommending to the Planning Board a positive recommendation to City Council to adopt the map amendment as presented.

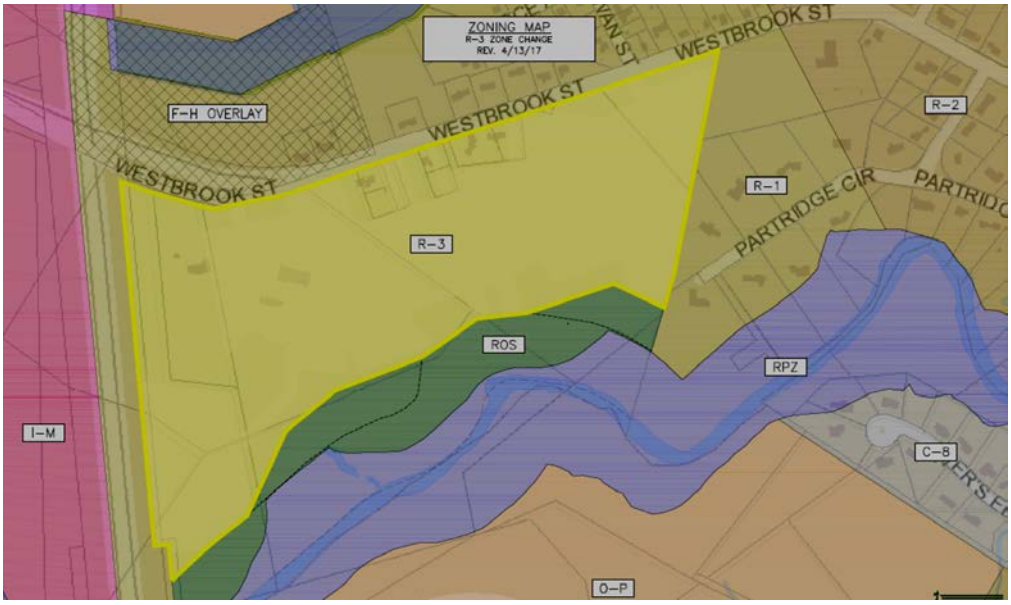
X. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant, the City of Portland Zoning Code, Portland's Comprehensive Plan, public comment, the information provided in public hearing on May 9, 2017 for the project #2016-282 (1700 Westbrook Street), and/or other findings as follows:

1. The Planning Board finds that the proposed rezoning to the Residence R-3 and Recreational Open Spaces (ROS) zone for the property located at 1700 Westbrook Street **[is or is <u>not</u>]** consistent with the Comprehensive Plan for the City of Portland; and

Therefore, the Planning Board **[<u>recommends</u> or <u>does not recommend</u>]** to the City Council adoption of the zoning map amendment for 1700 Westbrook Street from Residential R1 to the Residence R-3 and Recreational Open Spaces (ROS) Zones for the area shown on the map below.

2. The Planning Board finds that the Zoning Map of the City of Portland, dated December 2000 as amended and on file in the Department of Planning & Urban Development, and incorporated by reference into the Zoning Ordinance by Sec. 14-49 of the Portland City Code, is hereby amended to reflect the rescinding of the Flexible Housing Overlay Zone along Westbrook Street as shown on the map below.



XI. ATTACHMENTS

PUBLIC COMMENTS

PC1 Art McEvoy Dated 01.11.2017
PC2 Mark Senglemann
PC3 Stroudwater Village Assoc. 1-16-17
PC4 Angela Wheaton 1-16-17
PC5 Sandy Beal 1-16-17
PC6 Michael Scannell 1-16-17
PC7 Colleen Griffin 1-16-17
PC8 Bruce Harrington 1-14-17
PC9 Ryan Scipione 1-16-17
PC10 Tom Minervino 1-16-17
PC11 Jen Borland 1-17-17
PC12 David Silk 1-17-17
PC13 Martha McEvoy 1-17-17
PC14 Christian MilNeil 1-17-17
PC15 Mary Davis 1-17-17
PC16 Mark Sengelmann 1-17-17
PC17 Lisa McLaughlin 1-17-17
PC18 Eugenia O'Brien 1-17-17
PC19 Meagan Smith 1-13-17
PC20 Marc Hodroff 1-20-17
PC21 Raelene Gardner 2-7-17
PC22 David Walter 1-21-17
PC23 Mihku PaulAnderson 2-8-17
PC24 Jackie Day 2-20-17
PC25 Kevin Regan 2-21-17
PC26 Bruce Harrington 2-20-17
PC27 Holly Hoffman 2-22-17
PC28 Shaun Donlin and Silvia Vasquez 2-23-17
PC29 Linda Dambrie 2-23-17
PC30 Richard Michel 2.24.2017
PC31 Art McEvoy 2.14.207
PC32 Angela Wheaton 02.27.2017
PC33 James Mooney 2-26-17
PC34 Janet Page 02.26.2017
PC35 Colleen Griffin 2-27-17
PC36 Eugenia O'Brien 2-27-17
PC37 Xiao Jun Huang 02.28.2017
PC38 Linda Dambrie 02.28.2017
PC39 Michael Archibald 2-28-17
PC40 Dan Koloski 2-28-17
PC41 Carolyn Claiborn 2-28-17
PC42 Lisa McLaughlin 2-28-17
PC43 Public Comments Submitted 05.05.2017

PLANNING BOARD REPORT ATTACHMENTS

1. Traffic Review (Tom Errico) 02.23.2017

APPLICANT'S SUBMITTALS

A. Cover Letter (from Will Savage of Acorn Engineering, Inc., 03.30.2017)
B. Zoning Map Amendment Application
C. Project Narrative
D. Purchase and Sale Agreement
E. Non-Conforming Lot Summary
F. Architectural Design Examples
G. Neighborhood Meeting
    1. Camelot - Neighborhood Meeting Certification_2-1-17
    2. Camelot - Neighborhood Meeting Letter_1-6-17
    3. Camelot - Neighborhood Meeting Minutes_1-31-17
    4. Camelot - Neighborhood Meeting Sign-In Sheet_1-24-17
H. Ecological Habitat Assessment Report, by Verdanterra
I. Housing Attainability Summary, by Camelot Holdings, LLC
J. Camelot Farms Presentation, dated 4.6.17
K. Draft Easements Language
    K1. Draft Public Access Easement -- 1700 Westbrook -- 30' wide along river
    K2. Draft Public Access Easement
    K3. Draft Open Space Easement -- 1700 Westbrook -- 250 Feet of River
    K4. Draft Open Space Easement -- 1714 Westbrook -- 250 feet of river
L. Traffic Report

PLANS

Plan 1 Existing Conditions
Plan 2 R-3 Open Space Concept Aerial Site Plan, C-11
Plan 3 R-3 Full Buildout Concept Aerial Site Plan, C-12
Plan 4 R-2 Full Buildout Concept Aerial Site Plan, C-21
Plan 5 R-1 Full Buildout Concept Aerial Site Plan, C-31
Plan 6 R-5a Open Space Concept Aerial Site Plan, C-41
Plan 7 Ex-2 Parcel Exhibit, Dated 2.14.17
Plan 8 Zoning Exhibit
Plan 9 Zoning Change Map

 Att. 1

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

1700 Westbrook Street - Camelot Farms - Initial Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Feb 23, 2017 at 4:43 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Jeff Tarling <jst@portlandmaine.gov>

Hi Shukria – I have reviewed the application materials and offer the following traffic comments as it specifically relates to the rezoning proposal. My comments focus on the traffic implication of the rezoning request and items that would be reviewed during the site plan permitting process.

- The key traffic issue related to the rezoning of the subject property is the increase in trip generation expected with the change. According to application materials, under current zoning (R1), 83 residential units can be construction. With full build-out of the property under the proposed zone (R3), 166 residential units could be construction. The applicant has provided plans that note construction of 100 residential units. Accordingly, the zone change would be expected to add traffic levels above current zoning requirements by 17 residential units. (Although a maximum increase could be 83 residential units, this level of development may not be possible given site constraints). During the worst-case peak hour trip generating scenario, the increase in 17 residential units would correlate to an additional 17 vehicles entering and exiting the project site during the PM peak hour (under the current application proposal). In my professional opinion, this level of traffic increase would not have a significant impact on traffic operations and therefore the zone change would not be expected to have a significant impact on traffic conditions.

- Whether under current zoning and the construction of 83 residential units or under the rezoned scenario with 100 residential units, the following traffic issues/requirements would be considered during site plan permitting.
    - The applicant has provided a traffic study and the general content of the study is appropriate and would be used during the site plan review process.
    - Traffic conditions would be reviewed at the Congress Street/Westbrook Street intersection. Current traffic congestion would likely require mitigation improvements.
    - A traffic speed study along Westbrook Street would likely be required with recommendations on addressing specific vehicle speed issues an recommendations.
    - Intersection/Driveway design conditions including sight distance, driveway separation, and geometric features would be reviewed.
    - A pedestrian and bicycle facility analysis would be expected within the vicinity of the project.
    - Crash data would be reviewed in the vicinity of the project and for locations that are determined to have deficiencies, the applicant would be expected to mitigate problems.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate

Traffic Engineering Director
T·Y·LIN INTERNATIONAL

12 Northbrook Drive

Falmouth, ME 04105

207.781.4721 (main)

207.347.4354 (direct)

207.400.0719 (mobile)

207.781.4753 (fax)

thomas.errico@tylin.com

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"One Vision, One Company"

Please consider the environment before printing.

ACORN ENGINEERING, INC.

Attn: Shukria Wiar
Planning and Urban Development Department
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

March 30, 2017

Subject: Zoning Map/Text Amendment Application – Final Submission
Camelot Farms Subdivision

Dear Shukria,

Camelot Holdings, LLC is pleased to submit the accompanying package of submission materials for the proposed Camelot Farms zone change. The new and updated materials were developed in response to the feedback from the second Planning Board Workshop meeting (2/28/17), in preparation for the third Workshop meeting to be held on April 6th, 2017.

During the February Workshop meeting, the Planning Board identified their need to see a R-5a zone change concept. The R-5a rezone layout is to propose a higher unit density layout. The resulting concept consist of 77 lots for the R-5a Zone that includes a mix of single-family, duplex, three-family, multi-unit and PRUD lots, 137 units total.

The concept includes developing the acquired parcel, adjacent to the Turnpike. As such, the previously submitted concepts were also updated to propose additional lots within the parcel. As a result, the overall open green space, net impervious surface, and wetland impacts has changed slightly since the last application submittal.

When comparing the potential number of lots and units, and corresponding surface and site impacts, the rezone to the R-3 Open Space Concept provides the basis for a sustainable, cohesive project design that implements smart growth principles. By allowing smaller lot areas, the extent of construction can remain closer to Westbrook Street, away from the Stroudwater River providing a vegetated buffer between the developed areas and the river. The proposed lot layout will reflect characteristics of a Conservation Subdivision by clustering the site development and designating a preserved natural area for shared public use. Within the developed areas, there is also the opportunity for incorporating decentralized LID stormwater techniques to mitigate and treat onsite runoff.

Under the R-3 rezone, the smaller lot sizes would drive the house price point closer to the affordability requirements set by the Inclusionary Zoning Ordinance. Because it is proposed that the IZ units be provided within the development, the lesser home costs of the R-3 zone would create a more cohesive neighborhood with less distinction between the R-3 and IZ homes. This idea is described in further detail within the attached Housing Attainability Summary (Attachment I).

A summary of the lots and surfaces for each concept are as follows (also noted on the Site Plans):

Concept Lot Summary					
	R-1 Buildout	R-2 Buildout	R-3 Buildout	R-3 Open Space	R-5a Open Space
Camelot Farms	80	104	160	91	70
Westbrook Street	4	4	5	4	7
Open Space Lots	0	1	1	4	0
TOTAL	84	109	166 (180 units)	99 (108 units)	77 (137 units)
Concept Surface Summary					
Open Green Space	0 ac	0 ac	0 ac	24.67 ac (44%)	21.62 ac (39%)
Net Impervious Surface Increase	7.58 ac	9.09 ac	12.75 ac	8.10 ac	9.73 ac
Wetlands Impact	3.79 ac (27%)	3.85 ac (27%)	3.67 ac (26%)	0.25 ac (2%)	0.80 ac (6%)

The open space and public access to the site is to be assured by the Applicant via an easement completed in two steps. The initial Open Space and Public Access Easement will be signed and issued to the public for the parcel directly abutting the Turnpike immediately following a successful rezone of the parcel to R-3 and ROS. Because the larger parcel is subject to a Purchase and Sale Agreement, the Open Space and Public Access Easement will be held in escrow until the exchange of ownership of the parcel is complete at the conclusion on the PS&A. At a minimum, all land within 250 feet. of the Stroudwater River will be rezoned ROS, however the final Open Space and Public Access Easement will be continued and expanded beyond the 250-foot buffer to the proposed property lines and/or public right-of-way.

The Applicant has completed additional environmental due diligence normally associated with a Site Plan/Subdivision Application in response to site impact concerns addressed by the neighbors. In addition to Wetland Delineation and outreach to State and Federal Agencies (Army Corps, US Fish & Wildlife Service, Maine Natural Areas Program, Maine Inland Fisheries & Wildlife, and Maine Historic Preservation Commission) completed in the Fall, an Ecological Habitat Assessment Report has been developed and included in this submission package.

There has also been a concern from select neighbors that a full buildout R-1 concept as submitted is not feasible. After reviewing the information received to date from our Environmental Consultants and Regulatory Agencies, and standards and regulations set by the City of Portland's Chapter 14 Land Use Code, it is our professional opinion that the full buildout of the R-1 concept is feasible.

This final submission package is intended to meet and expand upon the City's Submission Requirements as outlined in the Zoning Map/Text Amendment. The following documents and drawings are to be uploaded onto the City's electronic submission site in addition to the previously uploaded documents (please note that all new and updated documents are as highlighted):

Documents:

- A. Cover Letter – *Updated*
- B. Zoning Map Amendment Application – *Updated*
- H. Ecological Habitat Assessment Report, by Verdanterra Dated 3/15/17 – *New*
- I. Housing Attainability Summary, by Camelot Holdings, LLC Dated 3/30/17 - *New*

Drawings:

- R-3 Open Space Concept Site Plan, C-10 Dated 10/26/16 – *Updated 3/29/17*
- R-3 Open Space Concept Aerial Site Plan, C-11 Dated 12/9/16 – *Updated 3/29/17*
- R-3 Full Buildout Concept Aerial Site Plan, C-12 Dated 2/10/17 – *Updated 3/29/17*
- R-2 Full Buildout Concept Aerial Site Plan, C-21 Dated 2/10/17 – *Updated 3/29/17*
- R-1 Full Buildout Concept Aerial Site Plan, C-31 Dated 1/17/17 – *Updated 3/28/17*
- R-5a Open Space Concept Aerial Site Plan, C-41 Dated 3/28/17 – *New*
- Ex-2 Parcel Exhibit, Dated 2/14/17 - *Updated*

Camelot Holdings, LLC and the design team look forward to your review of these updated and new additions to the final project application to be presented at and spoken to at the next Planning Board Workshop meeting. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

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

Zoning Map/Text Amendment/Contract or Conditional Rezoning Application
Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the review of requests for zoning map amendments, zoning text amendments and contract or conditional re-zoning. The Division also coordinates site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Zone Change.

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

Land Use Code: http://me-portland.civicplus.com/DocumentCenter/Home/View/1080
Design Manual: http://me-portland.civicplus.com/DocumentCenter/View/2355
Technical Manual: http://me-portland.civicplus.com/DocumentCenter/View/2356

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
planning@portlandmaine.gov

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

PROJECT NAME:

CAMELOT FARMS

PROPOSED DEVELOPMENT ADDRESS:

1700 WESTBROOK STREET

PROJECT DESCRIPTION:

Proposed redevelopment of existing farmland into a traditional single-family development within the Stroudwater neighborhood. A portion of the site is to be preserved as a recreational, green space using the Recreational Open Space Zone.

CHART/BLOCK/LOT: 229-A-2, 246-A-3, 247-A-3, 248-A-9, 256-A-3, 246-A-6, 247-A-2, 245-B-5

CONTACT INFORMATION:

Applicant – must be owner, Lessee or Buyer Name: Michael Barton Business Name, if applicable: Camelot Holdings, LLC Address: 62 Portland Road, Suite 25 City/State : Kennebunk Zip Code: 04043	**Applicant Contact Information** Work #: Home #: Cell #: (207) 939-5432 Fax#: e-mail: michael.corbett.barton@gmail.com
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:	**Owner Contact Information** Work #: Home #: Cell #: Fax#: e-mail:
Agent/ Representative Name: Address: City/State : Zip Code:	**Agent/Representative Contact information** Work #: Home #: Cell #: Fax#: e-mail:
Billing Information Name: [See Applicant Information] Address: City/State : Zip Code:	**Billing Information** Work #: Home #: Cell #: Fax#: e-mail:

Engineer	**Engineer Contact Information**
Name: William H. Savage, P.E. Acorn Engineering, Inc. Address: PO Box 3372 City/State : Portland, ME Zip Code: 04104	Work #: (207) 775-2655 Home #: Cell #: (207) 317-1884 Fax#: e-mail: wsavage@acorn-engineering.com
Surveyor	**Surveyor Contact Information**
Name: David Titcomb, PLS Titcomb Associates Address: 133 Gray Road City/State : Falmouth, ME Zip Code: 04105	Home #: Work #: (207) 797-9199 Cell #: Fax#: e-mail: DTitcomb@titcombsurvey.com
Architect	**Architect Contact Information**
Name: Address: City/State : Zip Code:	Work #: Home #: Cell #: Fax#: e-mail:
Attorney	**Attorney Contact Information**
Name: Address: City/State : Zip Code:	Work #: Home #: Cell #: Fax#: e-mail:

Designated person/person(s) for uploading to e-Plan:

Name: Olivia Dawson
e-mail: odawson@acorn-engineering.com

Name: William Savage
e-mail: wsavage@acorn-engineering.com

Name:
e-mail:

Right, Title, or Interest: Please identify the status of the applicant's right, title, or interest in the subject property:

The application submission includes the purchase and sale agreement for the lots 229-A-2, 246-A-3, 247-A-3, 248-A-9, 256-A-3 and the deed to the additional parcel (CBL, 246-A-6, 247-A-2, 245-B-5).

Provide documentary evidence, attached to this application, of applicant's right, title, or interest in the subject property. (For example, a deed, option or contract to purchase or lease the subject property.)

Vicinity Map: Attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use. (Applicant may utilize the City Zoning Map or Parcel Map as a source.)

Existing Use: Describe the existing use of the subject property:

The existing property is comprised of a single family home with accessory barn and storage structures. The majority of the site is farmland and fronts the Stroudwater River.

Current Zoning Designation(s): R-1, RESIDENTIAL ZONE

Proposed Use of Property: Please describe the proposed use of the subject property. If construction or development is proposed, please describe any changes to the physical condition of the property.

The project proposes to redevelop the existing, small farm with a single-story home and accessory shed and barn structures into a traditional single-family development within the Stroudwater neighborhood; house lots will range in size between 6,500 sf to 20,000 sf. The portion of the site adjacent to Westbrook Street is proposed to be regraded to support a road network, subdivided lots, and ancillary infrastructure. The remaining space will remain a shared green space.

Site Plan: On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries. This may be a professionally drawn plan, or a carefully drawn plan, to scale, by the applicant. (Scale to suit, range from 1" = 10' to 1' = 50'.) Contract and conditional rezoning applications may require additional site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood.

APPLICATION FEES:

Zoning Map Amendment ___ $3,000.00 (from R-1 zone to R-3 & ROS zone) *fee provided in previous application submission **Zoning Text Amendment** ___ $3,000.00 (to Section 14-_____) **Combination Zoning Text Amendment and Zoning Map Amendment** ___ $4,000.00 **Conditional or Contract Zone** ___ $5,000.00 (A conditional or contract rezoning map be requested by an applicant in cases where limitations, conditions, or special assurances related to the physical development and operation of the property are needed to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Please refer to Division 1.5, Sections 14-60 to 62.)	The City invoices separately for the following: • Notices ($.75 each) • Legal Ad (% of total Ad) • Planning Review ($50.00 hour) • Legal Review ($75.00 hour) Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

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

1. Fill out the application completely and e-mail the **application only** to planning@portlandmaine.gov (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.

2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at Pay Your Invoice , by mail or in person at City Hall, 4th Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.

3. The designated person responsible for uploading documents and drawings will receive an email from eplan@portlandmaine.gov with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

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

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

   Applying Online Instructions

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

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

APPLICANT SIGNATURE:

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

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

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

Signature of Applicant:	**Date:**
Michael Barton	3/30/17

ACORN ENGINEERING, INC.

C. Project Narrative

Camelot Farm Residential Development

Revised February 2017

The Camelot Farm parcel is an approximately 54-acre piece of pastureland with frontage along Westbrook Street and the Stroudwater River. It offers a unique opportunity to provide something the City of Portland has not experienced in generations: a chance to create an innovative, environmentally thoughtful, and diverse mix of home ownership options unified by a comprehensive approach to its implementation. Neighborhood amenities will also include zone protected access to shoreland areas and preserve recreational space for diverse, shared-uses. The anticipated plans call for the creation of approximately 95 homeownership opportunities.

In alignment with the current and goals of the future comprehensive plan, the proposed development intends to take queues in consideration as a whole. The following goals have been highlighted from the plan and are not intended to be an exhaustive list:

As Highlighted from the Current Comprehensive Plan:

- **Maximize development where infrastructure exists**
  - Westbrook Street contains access to water, sewer, electricity, and natural gas and is within 200 feet of the proposed development

- **Balance the natural and built environment**
  - Concentration of infrastructure and proposed house lots towards the Westbrook Street frontage will maximize the use of the land that lends itself to responsible development and provides access to several acres of shared natural spaces currently in place on the parcel. Opportunities for recreational space on lower portions of the site are also being explored.
  - Providing green buffer spaces directly along Westbrook Street that flank the access points to the development intend to provide a natural transition that respects the history of the parcel

- **Link existing trail systems and provide access to shoreline areas**
  - Provide Green Spaces with Blue Edges that naturally transition from the residential development towards the Stroudwater River
  - Promote walkability and bike-ability within the neighborhood and onsite amenities

- With the addition of the 9-acre parcel, new opportunities are provided within the site to access the Stroudwater River and provide connectivity between the Fore River Sanctuary to the Stroudwater River trail systems.

- **Offer a diverse mix of housing options to help increase homeownership opportunities for all types of households**
  - The home offerings are intended to be without bias. The goal is to provide equal opportunities for first time home buyers, empty nesters, growing families, and working professionals alike.

- **Provide innovative new housing development near service centers and employers while maintaining proximity to neighborhood assets**
  - The Stroudwater area has a classic neighborhood feel to which this development intends to respect. It includes single family lot sizes within the range of those being proposed (both minimum and maximum). The area also lays claim to large employers such as Unum to which the convenience of new housing product might inspire employees to consider relocation to the city. Additionally, there is the Portland International Jetport a mere mile away and the Portland Transportation Center and Thompson's a manageable 2.5-mile travel via vehicle or trail making this location appealing to those who work remotely but choose Portland as their place to live and enjoy.
  - Innovation also shows through the intent to amend the current zone from R-1 to R-3. This is an attempt to reverse the trend of lower density in the outskirts of the city associated with sprawl, while respecting the existing housing stock in the area. The intended result is to provide as many new residents as is practical the opportunity to enjoy the unique amenities the Stroudwater area has to offer. An added benefit of the increase in density is the access to several acres of shared green space within the parcel.

- **Utilize new technologies and materials to provide quality, efficient, and sustainable homes**
  - New residences will be constructed using high quality materials that provide ease of maintenance and operation, and consider the total life cycle a home experiences. Interior finish materials will be sensitive to the end users well-being with indoor air quality taking high priority.
  - The site will utilize innovative management techniques to control and treat stormwater run-off as the site transitions from an historically agrarian impact to residential. Design will also respect natural topography and resources with intentions to preserve or improve those that could be pre-existing on the parcel.

As Highlighted from the Future Comprehensive Plan Goals and Strategies:

- **Incorporate multiple functions in recreation & open space**
  - The proposed project site is an underutilized piece of pastureland that has the capacity to be developed into a diverse space of both residential and recreational open space to create a complementary, shared-use of the land.
  - The property presents the opportunity to link the Stroudwater River Trail with the Fore River Sanctuary system under a partnership with Portland Trails to create a more integrated trail network.
  - The project proposes open space that can potentially be used as a Community Garden to be accessed and utilized by the entire neighborhood.
  - The open space within the site also offers the potential for a mixed-use pond functioning as a stormwater quality and quantity device as well as recreationally as a seasonal ice skating rink.

- **Create economic prosperity by growing Portland's tax and employment base**
  - The proposed project has the capacity to attract new professionals to the area by providing a less urban, greater green space appeal still within the City limits and a shorter commute to the greater Portland businesses

- **Improve water quality**
  - The proposed project will be designed to meet and potentially exceed the stormwater quality and quantity control measures as outlined by the Maine Department of Environmental Protection's (MDEP) Chapter 500 – Stormwater Management Law rules and regulations. The runoff is proposed to not enter the existing municipal combined sewer system within Westbrook Street and instead be treated and detained within the property before dispersing into the existing onsite buffer area to be preserved and maintained as such after construction.
  - Stormwater will be treated using best management practices (BMP) designed to the standards set by the MDEP BMP Manual
  - Construction and maintenance activities will incorporate erosion and sedimentation control practices to limit sediment transport, wetland and waterbody impact, and land disturbance. Erosion Control Inspection will be provided by a MDEP Approved Third-Party Inspector.

In closing, this development should be viewed to provide some relief to the pressures of low housing inventories that some believe are hampering growth within the city. It will provide chances for those who want to relocate to or within this city, downsize or upsize, and/or transition from rental to homeownership. It will give Portland a chance to create a modern neighborhood to take pride in and will do so on a scale that should make noticeable differences in a relatively short timeframe at a price point that is attainable.

ATTACHMENT D

Purchase and Sale Agreement for Lots: 229-A-2, 246-A-3, 247-A-3, 248-A-9, 256-A-3

PURCHASE AND SALE AGREEMENT
(Real Estate)

Agreement made and entered into this day by and between **ONEX CO.**, a/k/a Onex Company, a Maine business corporation having a mailing address of 399 Old Brunswick Rd., Bath, ME ("Seller") and **DIVERSACORP, LLC**, a Maine limited liability company having a mailing address of 5 Stone Pony Circle, Saco, ME, or its assigns ("Buyer"). In consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

1. **PURCHASE AND SALE OF PREMISES**. Seller agrees to sell and Buyer agrees to buy, on the terms and conditions hereinafter set forth, the land and buildings commonly known and designated as "Camelot Farm," located generally at 1700 Westbrook Street, Portland, Maine, and consisting of roughly 44.8 acres of real property, together with all improvements and fixtures thereon and all rights appurtenant thereto, being more particularly described in a Warranty Deed recorded in the Cumberland County Registry of Deeds in Book 14598, Page 346 (the "Deed") ("Premises" or "Property"). A copy of the deed is attached hereto as **EXHIBIT A** and made a part hereof. The description of the Premises in the Deed is understood to be general in nature and the description in the deed of conveyance contemplated herein shall be subject to approval by Buyer.

2. **PURCHASE PRICE**. Subject to any adjustments and prorations hereinafter described, Buyer agrees to pay for the Premises the sum of [redacted] payable as follows:

a. The sum of [redacted] as Deposit payable upon the signing of this Agreement by both parties ("Deposit"). This Deposit shall be held by ~~Maine Law Holdings Company~~ Drummond Woodsum ("Escrow Agent") in a non-interest bearing account. It shall be applied as credit to the purchase price at closing or disposed of as set forth herein. In the event of a dispute over the return or forfeiture of any deposit held by the Escrow Agent, the Escrow Agent shall continue to hold the deposit until it has received a written release from the parties consenting to its disposition, or until a final order. Regardless of its representation of any party to this Agreement, Escrow Agent shall not, as Escrow Agent, have any responsibility or liability to any party beyond the proper disposition of the escrow funds actually paid over to it. All parties agree to indemnify and hold the Escrow Agent harmless from any and all costs, actions, failure to act, or payment or refusal to pay, so long as said actions are made in good faith and are not a result of willful misconduct, including any defense costs or attorney's fees. The Escrow Agent shall incur no liability in acting upon any signature, notice, request, waiver, consent or other document believed by the Escrow Agent to be genuine.

KD 8-15-16

AOL 8-18-16

b. The BALANCE of the purchase price, the sum of [redacted] by bank check, wire transfer or equivalent, at the time of closing subject to adjustment and as set forth in the Prorations.

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3. **VESTING OF DEPOSIT**. The Deposit set forth in Section 3 above shall be refundable in full until the following occurrences, at which point, such portions of the deposit shall become non-refundable and shall vest in, and be released to, Seller: (a) [redacted] shall become non-refundable upon final approval of the subdivision plan by the City of Portland; (b) [redacted] shall become non-refundable upon satisfaction of the financing contingency set forth below.

4. **CLOSING**. The closing shall take place at the offices of Bergen & Parkinson, 62 Portland Road, Kennebunk, Maine within sixty (60) days after the later of: a) receipt of final subdivision approval from the City of Portland, or; b) satisfaction of any of the conditions precedent to buyers obligation to purchase set forth below. Notwithstanding the intended deadline set forth in the preceding sentence, Buyer and Seller agree that Buyer may extend the closing date up to sixty (60) additional days.

5. **TRANSFER OF TITLE**. Seller shall convey the Premises to Buyer at the closing in fee simple with good and marketable title, free and clear of liens and encumbrances, subject to the following:

a. Buyer shall have until thirty (30) days after the Effective Date to determine if title to the Premises is acceptable and notify Seller of the same. In the event that Buyer determines that Seller would be unable to convey title to the Premises as aforesaid and Buyer properly notifies Seller, then Seller shall have thirty (30) days notice from Buyer in which either to: notify Buyer that Seller via its own counsel shall remedy such title defects, to the satisfaction of Buyer's Counsel, at Sellers expense, or; notify Buyer that Seller shall reimburse Buyer at closing all Buyer's legal and other costs associated with remedying such title defects. If Seller fails to provide notice to Buyer within 30 days as set forth in the preceding sentence, then Seller hereby agrees that Buyer's costs of curing such title issues, including legal and other fees and costs, shall be offset against the purchase price at closing. Any period of time ninety (90) days after Seller received notice of a title defect, and the final recording or filing of any curative documents shall toll all deadlines and periods for any contingencies set forth anywhere in this agreement. In the event that said defects cannot be corrected or remedied within said time period to the satisfaction of Buyer's counsel, Buyer may terminate this Agreement by written notice to the parties and any non-vested portion of the Deposit shall be returned to Buyer. Buyer may, however, at its sole discretion elect to close notwithstanding such defects as may exist. Seller and Buyer understand and agree that any mortgages and liens on the Premises shall not be considered title defects provided that the same shall be discharged at or prior to the closing at Seller's expense. Seller may use purchase money proceeds for this purpose.

b. Seller agrees that it will not further encumber or permit to be encumbered the Premises by any liens, mortgages, attachments, covenants, restrictions or easements after the date of this Agreement.

c. At the closing, Seller shall execute and deliver to Buyer, against payment of the purchase price, a Quitclaim Deed with Covenants to the Premises, in accordance

with the Short Form Deeds Act, 33 M.R.S.A. § 761 et seq., (the "Deed") together with a Bill of Sale for personal or intangible property, and such other rights as may be associated with the Property, if any. If Seller fails to execute and deliver a separate Bill of Sale or Assignments, then this Agreement shall be deemed to convey the same and this Provision survives closing, and in such instance, Seller hereby grants and assigns to Buyer all such personal property as of the date of Closing.

d. Seller further agrees to execute and deliver to Buyer at the closing such Affidavits and Certificates as are reasonably necessary for Buyer's acquisition and financing of the Premises, including without limitation a Certificate of Non-Foreign Status (as required by Internal Revenue Service regulations), an affidavit regarding underground storage tanks (as required by Maine Laws), and a title insurance "Seller's Affidavit" regarding mechanics liens and persons in possession.

e. Seller is a corporation and Seller certifies that it is duly authorized and validly existing under the Laws of the State of Maine and agrees to provide evidence satisfactory to Buyer of due organization, authority, and good standing, including an opinion of counsel evidencing the same, which opinion may be required at Buyer's sole discretion.

6. **CONDITION OF IMPROVEMENTS**. Improvements at the Premises shall be delivered to Buyer at closing in "broom clean" condition. The improvements shall be sold and conveyed strictly on an "as is", "where is" and "with all defects" basis. Notwithstanding the foregoing, Seller covenants that it has no knowledge that the improvements violate any federal, state, municipal or local statutes, laws, rules, regulations or ordinances, including, without limitation, those pertaining to land use (or permits issued in connection therewith), zoning, lead paint, urea formaldehyde foam insulation, asbestos, hazardous or toxic wastes or substances, pollutants, contaminants or other environmental matters. The provisions of this paragraph shall survive the Closing and delivery of the Deed (as hereinafter defined) or any expiration or termination of this Agreement.

7. **RISK OF LOSS, DAMAGE AND INSURANCE**.

a. All risk of loss to the Premises prior to the closing shall be borne by Seller. Seller shall keep the Premises fully insured against fire and other extended coverage risks until the closing.

b. In the event that, prior to the closing, the improvements which are part of the Premises are destroyed or, in the opinion of Buyer, substantially damaged, Buyer may either (i) terminate this Agreement and receive back any non-vested earnest money deposit, or (ii) accept the insurance proceeds payable by reason of such damage, destruction or taking and close this transaction notwithstanding the same. Seller agrees and hereby assigns any proceeds payable pursuant hereto to Buyer, and shall name Buyer as an additional insured as Buyer's interest may appear.

8. **INSPECTION/DUE DILIGENCE**. So long as Buyer is accompanied by Seller's Broker or another authorized agent of the Broker and upon reasonable advance notice, Buyer

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may enter into any part of the Premises at all reasonable times prior to the closing in order to inspect the Premises, conduct surveys, soil tests and engineering studies and to do such things as are reasonably necessary with respect to its acquisition, improvement or development of the Premises. Nothing in this paragraph shall limit the inspections necessary to complete due diligence and to meet any contingencies precedent to Buyer's obligation to close as set forth below. Except as otherwise set forth elsewhere in this Agreement, Buyer shall have one hundred twenty (120) days within which to complete general due diligence.

9. **POSSESSION OF THE PREMISES AND LEASES**. The Premises shall be delivered to the Buyer at the time of the closing free and clear of all tenancies or occupancies by any person or entity.

10. **REPRESENTATIONS AND WARRANTIES OF SELLER**. Seller represents and warrants to Buyer that the following are true as of the date of this Agreement and will be true as of the closing:

a. Seller has no knowledge, after reasonable investigation, that the Premises violates any applicable laws, ordinances, or regulations.

b. Seller has no knowledge, after reasonable investigation, that the Premises contains any special wastes, underground storage tanks urea-formaldehyde foam insulation, radon, asbestos containing materials, lead-based paint, waste oil, petroleum and any other hazardous, biomedical, radioactive or toxic, substances, materials or wastes. The terms used in the foregoing sentence shall include, without limitation, all substances, materials, etc., designated by such terms under any laws, ordinances or regulations, whether federal, state or local. Notwithstanding the foregoing, Seller believes there is or may have been an underground oil storage tank located in the front yard of the Premises, being further described in the Disclosure Form Delivered to Buyer.

c. There are no outstanding pending or threatened liens, claims, rights of first refusal, or encumbrances against the Premises.

d. All outstanding bills and/or accounts payable concerning the Premises are either paid or will be paid prior to or at the time of closing.

e. There are no outstanding claims, losses or demands against Seller by any tenant or other person respecting Seller's ownership, use and/or occupancy of the Premises.

f. There are no leases on the Premises.

g. No portion of the Premises is currently classified as Farm land or Tree Growth under applicable provisions of Title 36 M.R.S.A.

h. The Premises, is classified as Open Space the City of Portland and shall be withdrawn from such classification prior to or at closing at Seller's expense. Seller may use purchase money proceeds for this purpose.

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i. To the best of Seller's knowledge, there are rights of ingress and egress in perpetuity from the Premises to public highways or roads for both vehicular and pedestrian traffic and utilities.

j. Seller has provided Buyer with a copy of a survey made by Nadeau & Lodge, Inc., dated Feb. 21, 2003 entitled "Plan Depicting the Results of a Standard Boundary Survey Made for Onex Company [sic], Southerly Sideline of Westbrook Street, Portland, Maine" (the "Onex Plan"). Other than encroachments listed on the Onex Plan, there are no known boundary disputes or other encroachments affecting the Premises. For the avoidance of doubt, Buyer's knowledge of encroachments on the Onex Plan is not a waiver of Buyer's right to require reasonable curative boundary work as a condition hereof.

k. Seller has transacted business under the name "Onex Co." as registered with the Maine Secretary of State, and also as "Onex Company," as identified in a certain deed by which it took title (CCRD Book 14598, Page 346), and Seller certifies that that "Onex Co." and "Onex Company" as listed on said deed are one and the same.

l. Seller shall obtain authorization from its shareholders to enter into this Agreement, and to take all actions required hereunder, and further, that any notices given in advance of such meeting for the approval of this agreement shall be timely and duly given in accordance with the Bylaws, and any other governing documents, of the Seller.

11. **DEFAULT AND REMEDIES**. Upon default by either party, the non-defaulting party shall have all rights and remedies available to it in equity or at law, including Buyer's right to specific performance under this Agreement.

12. **CONDITIONS PRECEDENT TO BUYER'S OBLIGATION TO CLOSE**. The obligation of Buyer to close is subject to the satisfaction at or before the closing of all of the following conditions:

a. All representations and warranties of Seller contained in this Agreement shall be true as of the closing.

b. Buyer may, at its sole option, order its own survey of the Property, and any boundary encroachments, whether on Buyer's survey, or the Onex Plan, or otherwise, shall have been cured.

c. Buyer shall have determined within the timeframe set forth in Section 5 above that Seller can convey title in form and substance satisfactory to Buyer and Buyer's counsel.

d. Within 240 days after the Effective Date, Buyer shall have satisfactorily completed all inspections, testing, permit applications, or other requirements necessary to receive subdivision approval ("Necessary Investigations"), it being understood that each such Necessary Investigation constitutes its own condition precedent.

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e. Within 300 days after the Effective Date, Buyer shall have received final subdivision approval, granted in full and without any remaining contingencies to be fulfilled. In the event this condition is not met at the end of 300 days, and provided further that Buyer has diligently pursued the same, then Buyer may extend this contingency deadline by 60 days by giving Seller or its agents notice thereof, and paying to Seller an additional $5,000, which payment shall be in addition to the purchase price.

f. Within 60 days after final subdivision approval, Buyer shall have received financing for a mortgage loan in such amount and upon such terms and conditions as are satisfactory to Buyer.

g. Within the first 120 days after the Effective Date, Buyer shall have obtained an inspection of the Premises and determined them to be free of wetlands, endangered or threatened wildlife or plant habitats, coastal sand dunes, great ponds, rivers and streams and in compliance with all applicable laws, ordinances, and regulations. In the event the Premises or a portion thereof is determined to be in wetlands, etc. as described above, then so long as such condition does not materially or adversely impair the Buyer's development of the Premises then this condition shall be deemed satisfied.

h. Within 90 days after the Effective Date, Buyer shall have obtained a general building inspection of any structures on the Premises disclosing the Premises to be structurally sound (except for a leak in the roof, some rot in the exterior wood on the house, and some rotten wood in the stable, all as disclosed to the Buyer) and in good repair and all of the mechanical systems, including without limitation, plumbing, heating, electrical, drainage, water, sewer/septic to be in working order and repair and adequate to serve the premises, all to the satisfaction of the Buyer.

i. Within the first 90 days after the Effective Date, Buyer shall have obtained an environmental site assessment of the Premises disclosing the Premises to be free of urea-formaldehyde foam insulation, hazardous substances, underground storage tanks (other than as disclosed by the Buyer on Seller's Property Disclosure), asbestos containing materials, lead-based paint, radon and special wastes. The terms used in the foregoing sentence shall have those meanings ascribed to them under Federal, State and/or Local Law.

j. Within 60 days after final subdivision approval, Buyer shall have obtained an appraisal of the Premises with a valuation equal to or greater than the purchase price hereunder.

k. Prior to closing, any action by any officer, director, or shareholder of Seller, or any other party claiming via rights to, through, or associated with Seller challenging this Agreement or the proposed sale or subdivision development contemplated hereunder shall thereafter toll all deadlines set forth herein, which deadlines shall remain tolled until either final settlement, bonding off, or final adjudication of such matter, which, for the avoidance of doubt, includes the passage of any appeals period.

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l. Prior to closing, Seller shall have conducted necessary tests to locate the buried tank referenced in its disclosure, and shall have removed such tank at its sole expense in compliance with any applicable laws, evidence of which compliance is a condition precedent to closing.

13. **BROKERAGE**. Seller is responsible for the payment of all fees and commissions due any real estate brokers with respect to this transaction. Seller agrees to indem- nify and hold Buyer harmless from any and all claims made by real estate brokers with respect to this transaction. This indemnity shall include all costs and expenses including attorney's fees incurred by Buyer in defense against any such claim, and shall include claims made post-closing.

14. **ADJUSTMENTS, PRORATIONS AND CLOSING COSTS**.

a. Real estate taxes, assessments, rentals and utilities shall be prorated as of the closing.

b. The Maine real estate transfer tax shall be paid by Seller and Buyer in accordance with 36 M.R.S.A.§ 4641-A.

c. The recording fee for the deed of conveyance will be paid by Buyer.

d. A portion of the purchase price shall be withheld at the closing by Buyer if required by 36 M.R.S.A. §5250-A.

e. Utilities shall be prorated as of the closing date and Buyer shall reimburse Seller for any unused fuel oil or gas.

f. Seller shall pay any penalties due to the City of Portland which relate to Seller's removal of the Premises from any Open Space, Tree Growth, Farmland, or other such tax program set forth under Title 36 of the Maine Revised Statutes.

15. **CONFIDENTIALITY**. Seller and Buyer covenant and agree to keep confidential the terms of the transaction contemplated hereby and not to disclose to any person either the fact that discussions or negotiations are taking place (other than Buyer's lender or attorney) concerning the acquisition of the Property or the substance or status thereof, except as is necessary to perform obligations pursuant hereto.

16. **MISCELLANEOUS**. The parties further agree as follows:

a. Binding Agreement / Assignment. This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors, and assigns. Buyer reserves the right to assign this Agreement to an entity to be formed.

b. Joint & Several. Seller shall refer to each selling party as their interests

Onex Initials

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appear but each Seller shall be responsible for all warranties and representation on a joint and several basis.

c. Amendment. This Agreement shall not be changed in any respect except by written instrument signed by the parties hereto.

d. Governing Law / Jurisdiction. This Agreement and all rights and obligations hereunder, including matters of construction, validity, and performance, shall be governed by the laws of the State of Maine and parties recognize Maine as the courts of Cumberland County having sole forum having jurisdiction hereover.

e. Severability. If any term, condition, or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be held invalid or unenforceable according to the law, then the remaining terms, conditions, and provisions of his Agreement, or the application of any such invalid or unenforceable terms, condition or provision to persons or circumstances other than those to which it is held invalid or unenforceable shall not be affected thereby, and each term, condition, and provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

f. Headings. The descriptive headings of the sections of this Agreement have been inserted for the convenience and reference only and shall not control or affect the meaning or construction of any of the contents hereof.

g. Integration. This Agreement may be executed in multiple originals and embodies the entire understanding of the parties. All prior discussions and representations are merged herein.

h. Notice. Any demand or notice required or permitted hereunder, shall be effective if either: (i) hand-delivered to the addressee, or (ii) deposited in the mail, registered or certified, return receipt requested and postage prepaid, or delivered to a private express company addressed to the addressee: (A) at the address shown below, or (B) if such party has provided the other in writing with a change of address, at the last address so provided. Any notice or demand mailed as provided in this paragraph shall be deemed given and received on the earlier of: (i) the date received, or; (ii) the dated of delivery, refusal or non-delivery as indicated on the return receipt, if sent my mail or private express as provided above. All notices required to be given, or which may be given hereunder, shall be in writing and if mailed, shall be sent by mail to the party to be notified as follows:

Seller:	Onex Co. Attn: Kerrin Dorne. 68 Old Farm Road Newton, MA 02459 With a copy to: Alexandra E. Caulfield Drummond Woodsum 84 Marginal Way, Suite 600 Portland, Maine 04101-2480
Buyer:	Diversacorp, LLC Attn: Nate Libby 5 Stone Pony Cir. Saco, ME 04072 With Mandatory Copy To: Jason G. Howe, Esq. Bergen & Parkinson, LLC 62 Portland Road, Suite 25 Kennebunk, ME 04043

or to such other addresses as one party may from time to time hereafter designate by like notice to the other.

i. Gender and Number. All words denoting gender or number shall be construed to include any other gender or number as the context and facts require.

j. Survival / Merger. All representations of Seller survive closing unless extinguished in writing by agreement of the parties signed at closing. For the avoidance of doubt, acceptance of the Deed by Buyer does not merge the provisions of this Agreement or satisfies all obligations and representations of Seller.

k. Time. Time is of the essence in this Agreement.

l. Survey. Survey means a map of a staked survey of the Real Property and Improvements constituting the Property prepared by a surveyor who prepared one or both of the Existing Surveys (as defined herein), such Survey to comply with the ALTA/ACSM Survey Requirements 1999 for ALTA/ACSM land title surveys jointly established and adopted in 1999, by the American Land Title Association, American Congress on Surveying and Mapping, and the National Society of Professional Engineers, including optional items 1, 2, 3, 4, 6, 7, 8, 9, 19 and 11 of Table "A" thereof, which meets the accuracy standards (as adopted by ALTA and ACSM and in effect on the date of the Survey), or a state standard which is comparable to the foregoing ALTA/ACSM standard.

Onex Initials _____ Diversacorp _____

m. Professional Advice. Each party hereby acknowledges that they have read and understand this Agreement and have had an opportunity to obtain professional advice regarding the same.

n. Recording. Buyer reserves the right to record a memorandum of this agreement at the Cumberland County Registry of Deeds at its expense, and Seller agrees to sign a memorandum hereof.

o. Authority. Seller warrants and represents that it / they have full authority to execute this Agreement and perform all obligations contained herein. All such actions have been properly authorized by any required votes and the party signing on behalf of Seller is duly appointed to so act in said capacity to make this Agreement binding upon Seller.

p. Signatures/Counterparts. Facsimile or Electronic Signatures shall be deemed to be and treated as originals. This agreement may be signed in counterpart, the combination of which counterparts constitutes a binding final agreement.

q. Improvident Transfers. Seller warrants and represents that they have fully complied with the Improvident Transfer Act and that this Agreement is enforceable pursuant to the provisions thereof.

17. **AGREEMENT OF ESCROW AGENT**. In the event of any dispute regarding the disposition of the escrowed funds held by Escrow Agent, Escrow Agent shall have the right to deliver said funds to a court of competent jurisdiction and commence an interpleader action to determine the proper disposition of said funds. Seller and Buyer agree to reimburse Escrow Agent for all expenses incurred by Escrow Agent in the interpleader action, including, without limitation, attorney's fees. Seller and Buyer further agree to hold Escrow Agent harmless for any action taken in good faith pursuant to the terms of this Agreement.

(*Signatures Below*)

Onex Initials

Diversacorp

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of this 5 day of August 2016 ("Effective Date").

ONEX CO.
("Seller")

Witness Kevin Capen

By: _____

Print Name: Kerrin Dorne.
Its: Secretary
Thereunto Duly Authorized

DIVERSACORP, LLC
("Buyer")

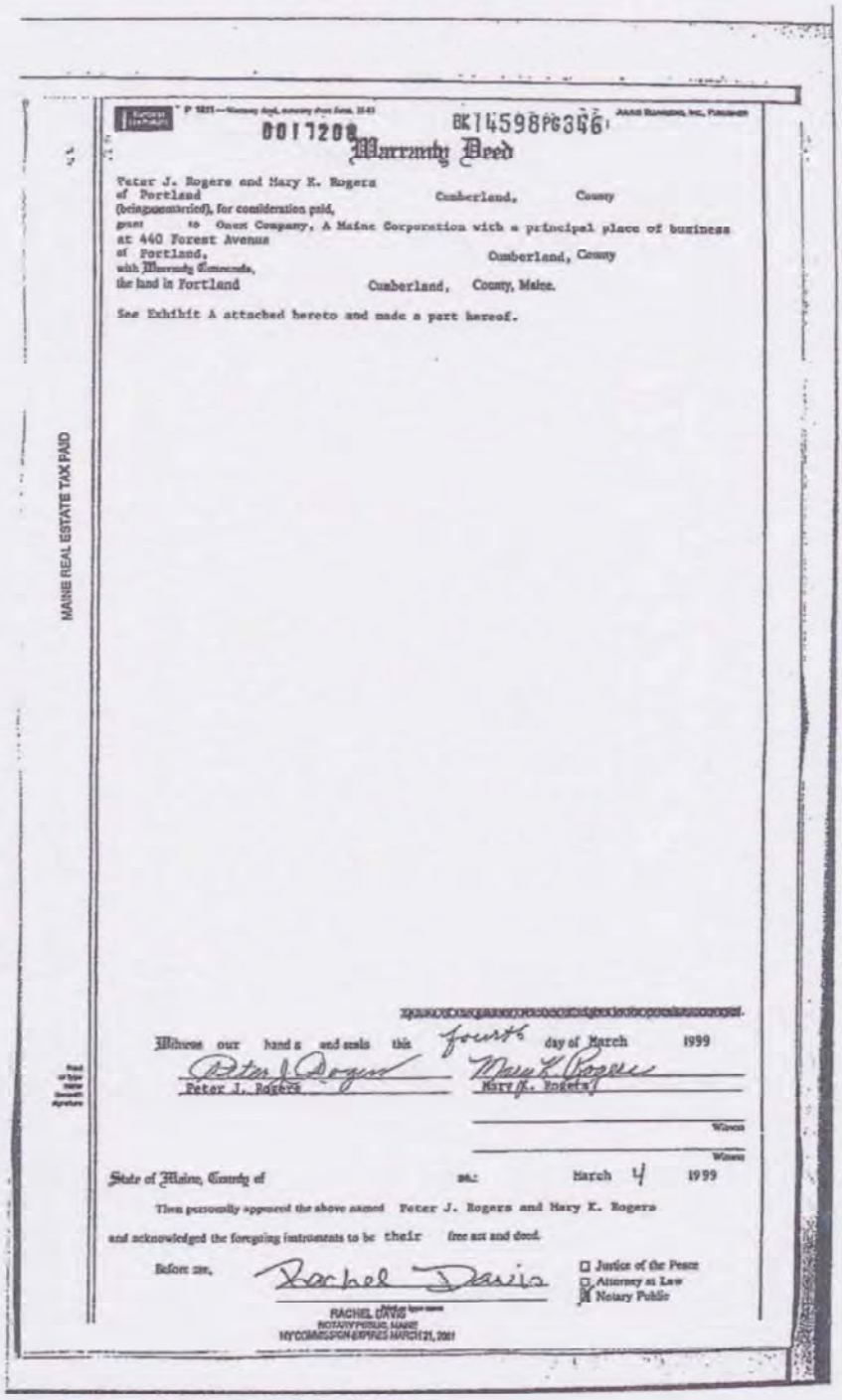
J. Collard
Witness

By: _____
Nate Libby, its Manager
Thereunto Duly Authorized

Nate Libby (President)

(Exhibit A Below)

EXHIBIT A



0017208 BK14598PG346

Warranty Deed

Peter J. Rogers and Mary K. Rogers
of Portland Cumberland, County
(being married), for consideration paid,
grant to Onex Company, A Maine Corporation with a principal place of business
at 440 Forest Avenue
of Portland, Cumberland, County
with Warranty Covenants,
the land in Portland Cumberland, County, Maine.

See Exhibit A attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

Witness our hand s and seals this fourth day of March 1999

Peter J. Rogers — Mary K. Rogers

Witness

Witness

State of Maine, County of ss: March 4 1999

Then personally appeared the above named Peter J. Rogers and Mary K. Rogers
and acknowledged the foregoing instruments to be their free act and deed.

Before me, Rachel Davis

☐ Justice of the Peace
☐ Attorney at Law
☒ Notary Public

RACHEL DAVIS
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES MARCH 21, 2001

Onex Initials _____ Diversacorp _____

BK 14598PG347

EXHIBIT A

A certain lot or parcel of land, together with the buildings thereon, situated in Portland, in the County of Cumberland and State of Maine, in that part of Portland which was formerly Deering, on the southerly side of the road leading from Stroudwater Village, so-called, to Westbrook formerly called Saccarappa; being all and the same property which was conveyed to Allura S. Castner by Rufus T. Boothby and Frank P. Tibbetts, et als., by their deeds of warranty dated March 11, 1899, as recorded in Cumberland County Registry of Deeds in Book 671, Pages 424 and 426, said property being bounded and described in said deeds as follows:

Northerly by said road, easterly by land now or formerly of N.H. Dole and land of the heirs of M. Quimby, southerly by the Stroudwater River and westerly by land now or formerly of Royal Burnham, containing forty-eight (48) acres, more or less, reference being made to said deeds and the record thereof for a more particular description of the premises.

Excepting from the above described premises those parcels of land conveyed by the grantor by the following conveyances: On June 7, 1938 to Carroll E. Hackett, recorded in Cumberland County Registry of Deeds in Book 1548, Page 418; on April 25, 1949 to Granville F. Allen et al., recorded in said Registry of Deeds in Book 1952, Page 354; on May 28, 1954 to Portland Water District recorded in said Registry of Deeds in Book 2198, Page 386; on July 14, 1965 to Frederick A. Butts et al., recorded in said Registry of Deeds in Book 2236, Page 405; on November 4, 1956 to Rosamond J. Allen, recorded in said Registry of Deeds in Book 2325, Page 368; on November 14, 1957 to Rosamond J. Allen, recorded in said Registry of Deeds in Book 2386, Page 205.

This conveyance is made subject to a right of way over the above described land taken by the Portland Pipe Line Corporation by condemnation proceedings and recorded in Cumberland County Registry of Deeds in Book 1655, Page 294 to which reference is hereby made.

This conveyance is also subject to an easement granted to the Portland Water District recorded in the Cumberland County Registry of Deeds in Book 1399, Page 462 to which reference is hereby made.

This conveyance is also made subject to an easement for a sewer pipe granted to Frederick A. Butts et al. in deed recorded in Cumberland County Registry of Deeds in Book 2236, Page 405.

Also excepting and reserving from the above described premises another certain lot or parcel of land adjoining and to the south of land of Lillian E. Hackett, formerly of Carroll E. Hackett mentioned above. Said lot or parcel of land being bounded and described as follows: Beginning at the southwest corner of said Hackett land; thence southerly projecting the line marking the western boundary of the said Hackett land and which projection would form a 90 degree angle with said Westbrook Street, one hundred (100) feet to an iron stake; thence at an angle of 90 degrees 46' easterly ninety-seven and sixty-two hundredths (97.62) feet to an iron stake; thence northerly one hundred (100) feet to a stake at the southeasterly corner of said Hackett land; thence westerly ninety-seven and sixty-two hundredths (97.62) feet along southern boundary of said Hackett land to the point of beginning.

Meaning and intending to convey and hereby conveying the same premises conveyed to the Grantors by deed of Ruby H. Young dated October 27, 1960, recorded in the Cumberland County Registry of Deeds in Book 2574, Page 161.

RECEIVED
RECORDED REGISTRY OF DEEDS
1999 MAR -9 PM 3:27
CUMBERLAND COUNTY
John B O'Brien

M.K.R.
P.J.R.

Deed for Lots: 246-A-6, 247-A-2, 245-B-5
After recording return to:
Jason G. Howe, Esq.
Bergen & Parkinson, LLC
62 Portland Road, Suite 25
Kennebunk, ME 04043

Space Above This Line For Recording Data

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **JUDITH A. CAMINITI**, f/k/a Judith C. Green, having a mailing address of 67 Goose Cove Road, Trenton, ME 04605, FOR CONSIDERATION PAID, hereby grants to **DIVERSACORP, LLC**, a Maine limited liability company whose mailing address is 5 Stone Pony Circle, Saco, Maine, with Warranty Covenants, a certain lot or parcel of land, together with any improvements thereon and all rights appurtenant thereto, commonly know and designated as 1714 Westbrook Street, Portland, Maine; being more particularly described as follows:

SEE EXHIBIT A ATTACHED HERETO AND
INCORPORATED HEREIN BY REFERENCE

IN WITNESS WHEREOF, Judith A. Caminiti, f/k/a Judith C. Green, has hereunder set her hand and seal as of this _____ day of February, 2017.

_____ _____
WITNESS Judith A. Caminiti

STATE OF MAINE
_____ County, ss. Date: _____

Personally appeared the above-named Judith A. Caminiti, being formerly known as Judith C. Green, and acknowledged the foregoing instrument to be her free act and deed.

Before me,

_____
Attorney at Law / Notary Public
Print: _____
[SEAL]

(*Exhibit A Below*)

EXHIBIT A
(1714 Westbrook St., Portland)

A certain lot or parcel of land, situated in Portland, Cumberland County, Maine and bounded and described as follows:

BEGINNING on the southeasterly side of Westbrook Street at a fir stump marked at the corner of land now or formerly of one Leavitt;

THENCE southeasterly by said Westbrook Street, ten (10) chains and sixty-three (63) links to land formerly of Solomon Conant, et als;

THENCE southerly by said Conant land twenty (20) chains eighty-seven (87) links to the Stroudwater River, across said river to land formerly of James Trickey, et als;

THENCE westerly by said River by said Trickey land and land formerly of George B. Leavitt to a stake;

THENCE by Leavitt land North 12° East (subject to variations since established) twenty-seven (27) chains and ninety-two (92) links to the first mentioned bounds, containing thirty (30) acres, more or less.

Excepting from the above-described premises those portions conveyed to Maine Turnpike Authority by Maurice S. Tomlinson, et al, by deed dated February 11, 1954, and recorded in the Cumberland County Registry of Deeds in Book 2166, Page 135; and by deed dated September 2, 1954, and recorded in said Registry of Deeds in Book 2166, Page 135.

Excepting from the above-described premises the parcel with a house thereon conveyed to Andrew D. Green and Judith C. Green by deed dated March 4, 1994, and recorded in the Cumberland County Registry of Deeds in Book 11319, Page 55.

Excepting from the above-described premises the 1 acre parcel conveyed to Andrew D. Green by deed dated December 20, 2004, and recorded in the Cumberland County Registry of Deeds in Book 22163, Page 81. Regarding this exception, further reference is made to a certain Agreement Concerning Marital Property recorded in said Registry in Book 22163, Page 80, and a certain Abstract of Divorce recorded in said Registry in Book 22735, Page 32.

ACORN ENGINEERING, INC.

E. Non-Conforming Lot Summary

Camelot Farm Zoning Map Amendment Application

Based on feedback from the Planning Board, the abutting and surrounding lots to Camelot Farms zoned as R-1 or R-2 were evaluated for conformance with the City zoning standards. The Camelot Farms property is currently zoned as R-1 Residential Zone abutting the Stroudwater neighborhood as zoned as R-2 Residential. Upon review of the City of Portland's Zoning Map Viewer, it is apparent that there are multiple properties within each zone that do not meet the zoning standards as set by Chapter 14 of the Code of Ordinances. Instead, these lots represent a more dense and narrower configuration that would comply with a R-3 zone as proposed within the Camelot Farms neighborhood. It was identified that there are fourteen (14) existing non-conforming lots within the R-1 zone and fourteen (14) within R-2. Non-conforming lots were defined as not meeting the minimum lot size, lot width, or street frontage; building setback requirements were omitted from the list.

A summary of the space and bulk standards per zone is as follows:

Zone	***Min Lot Size***	***Min Lot Width***	***Min Street Frontage***
R-1 Residential	15,000 sf	100 ft	75 ft
R-2 Residential	10,000 sf	80 ft	50 ft

A table of the identified parcels are as listed below:

	Address	***Chart, Block, Lot***	***Non-Conforming Attribute***
R-1: Residential Zone			
1	*1683 Westbrook St*	*249-A-1*	*Lot Size - 14,375 sf*
2	*1593 Westbrook St*	*248-B-9*	*Lot Size – 14,600 sf*
3	*16 Swan St*	*250-B-7*	*Lot Width – 65 ft*
4	*6 Pierce Ave*	*250-B-6*	*Lot Size – 9,025 sf*
5	*10 Pierce Ave*	*250-B-4*	*Lot Size – 9,500 sf*
6	*18 Pierce Ave*	*250-B-1*	*Lot Size – 10,671 sf*
7	*37 Swan St*	*250-C-5,6*	*Lot Size – 9,500 sf*

8	13 Swan St	250-C-1,2 256-B-4	Lot Size – 14,250 sf
9	*1567 Westbrook St*	*256-B-1,2,3*	*Lot Size – 14,139 sf*
10	1563 Westbrook St	256-B-5	Lot Width – 76 ft
11	*1557 Westbrook St*	*256-B-13*	*Lot Width – 76 ft*
12	*1549 Westbrook St*	*256-B-6*	*Lot Width – 76 ft*
13	*1543 Westbrook St*	*250-C-9*	*Lot Width – 76 ft*
14	*1533 Westbrook St*	*250-A-14*	*Lot Width – 51 ft*
R-2: Residential Zone			
1	1527 Westbrook St	250-C-13	Lot Width – 61 ft
2	3 Stroudwater Rd	227-C-1	Lot Size – 9901 sf
3	*1221 Westbrook St*	*213-E-7*	*Lot Size – 6,702 sf*
4	1193 Westbrook St	213-F-6	Lot Size – 8,400 sf
5	1161 Westbrook St	213-F-3	Lot Size – 8,675 sf
6	1157 Westbrook St	207-B-6	Lot Size – 4,198 sf
7	*50 Cobb Ave*	*210-B-33*	*Lot Size – 9,500 sf*
8	111 Cobb Ave	210-A-10,11	Lot Size – 9,609 sf
9	*9 Cobb Ave*	*213-A-4*	*Lot Size – 5,776 sf*
10	1 Cobb Ave	213-A-5	Lot Size – 6,412 sf
11	*1174 Westbrook St*	*213-A-8*	*Lot Size – 7618 sf*
12	*24 Garrison St*	*213-A-13*	*Lot Size – 7,043 sf*
13	*36 Garrison St*	*212-A-33*	*Lot Size – 9,600 sf*
14	67 Tide Mill Rd	212-A-51	Street Frontage – 42 ft

Omitting the lot with less than 50 feet of street frontage, all the existing lots listed above would conform to the standards set by the R-3 Residential Zone. Most of these lots also have the space and bulk characteristics of the proposed Camelot Farms conceptual layout. The current plan proposes 95 lots at an average area of 9,079 square feet with the smallest lot at 6,517 square feet and the largest at 24,357 square feet all with a minimum 50-foot street frontage and 65-foot width at center (assumed structure location). It is also assumed that homes are to be between 900 – 1800 square feet of building footprint. Under these specific characteristics, eighteen (18) existing lots within the R-1 and R-2 neighborhood would fit into Camelot Farms; specific lots are as italicized in the table above.

In all, the zone change from R-1 to R-3 for the residential section of Camelot Farms gives the flexibility for more narrow lots with lesser required street frontage that allows for efficient use of space and total road infrastructure. By studying the surrounding R-1 and R-2 neighborhoods, the proposed zone change is compatible with the existing neighborhood size and scale.

ACORN ENGINEERING, INC.

F. Architectural Design Examples

Camelot Farm Zoning Map Amendment Application

Camelot Farms is proposed to be comprised of homes that reflect classic New England facades and complement the existing styling and massing of the surrounding neighborhoods. The homes are to be modestly sized and orientated within the lot to encourage both interaction with the neighboring home as well as privacy in the form of open-air front porches also found in the existing lots within the Stroudwater Neighborhood. The homes are to be designed to be adaptable and expandable within the lot to allow for future renovation and additions for growing families or upsizing homeowners.

Provided below is a list of images with design elements and features that reflect the project goals:

Example Design and Massing to be Considered for Development:

Craftsman Home
2,250 Square Feet, 2-Floor, 4-Bedroom Floor Plan

Bungalow Craftsman Home
1,600 Square Feet, 2-Floor, 2-Bedroom Floor Plan

Craftsman Home
1,612 Square Feet, 2-Floor, 3 Bedroom Floor Plan

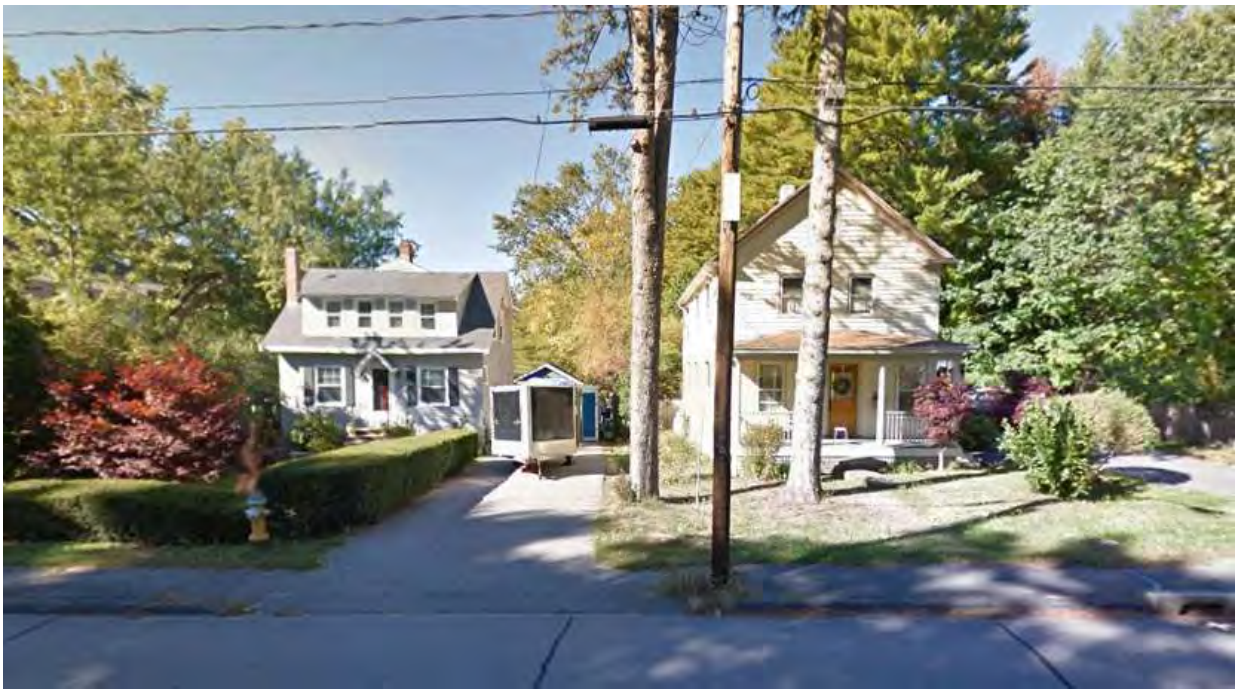
Traditional Home
2,533 Square Feet, 2-Floor, 3 Bedroom Floor Plan

Classic Cape Home
1,525 - 2,047 Square Feet, 2-Floor, 3 Bedroom Floor Plan
Eastern Village, Scarborough - As-Built Plans

Edenville Home
1,800 Square Feet, 2-Floor, 3 Bedroom Floor Plan
Eastern Village, Scarborough - As-Built Plans

This idea of more densely orientated homes with front porches and craftsman-like styling is reflected in the abutting areas as well. The below listed images are Google street views of existing properties that harmonize with the size, setbacks, and style proposed for the Camelot Farms homes.

Existing Homes Within the Surrounding Neighborhood:



Address: 1533 & 1527 Westbrook Street

Address: 10 & 18 Pierce Ave

Address: 44 & 40 Spar Ln

Address: 36 Partridge Cir

Address: 42 & 37 Swan Street

Address: 59 Kingsmark Ln

Address: 1646 Westbrook Street

Address: 1630 Westbrook Street

Camelot Farms (1700 Westbrook Street) Zoning Map Amendment Application

Neighborhood Meeting Certification

I, (Applicant/Consultant) hereby certify that a neighborhood meeting was held on **January 24th, 2017** at the **Stroudwater Baptist Church** at **6:00pm.**

I also certify that on **January 12th, 2017**, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

2-1-17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Neighborhood Meeting Sign-In Sheet
3. Neighborhood Meeting Minutes

Att. G2

Camelot Holdings, LLC

62 Portland Rd, Suite 25
Kennebunk, ME 04043
(207) 939-5432
michael.corbett.barton@gmail.com

January 6, 2017

Dear Neighbor,

On behalf of Camelot Holdings, LLC we are pleased to invite you to a neighborhood meeting to discuss our concept plans for the proposed Camelot site. One goal of the proposed plan is to create a modern take on the traditional neighborhoods that have historically made Portland a city which affords its residents the opportunity to live, work, grow, and enjoy. A second goal is to utilize the land in such a fashion as to conserve and provide access to the natural resources it has to offer. A third goal is to respect the context of existing housing in place along the Westbrook Street corridor while providing flexibility further inbound on the property for a variety of different housing options. It is believed that these and other goals can be achieved by modifying the existing land use from an R1 to an R3 zone. The proposed plan anticipates a 4-5 phase implementation of 20-30 housing units each expected to span several years. The project site provides a unique opportunity for the surrounding neighborhood and the city and we are eager to discuss the benefits it is staged to present for the residents and stakeholders.

Meeting Location:	Stroudwater Baptist Church, 1737 Congress St.
Meeting Date:	Tuesday, January 24, 2017
Meeting Time:	6 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at (207) 939-5432. We look forward to seeing you at the meeting.

Sincerely,

Michael Barton

ACORN ENGINEERING, INC.

Camelot Farms (1700 Westbrook Street)
Zoning Map Amendment Application

Neighborhood Meeting Minutes

January 24th, 2017 6:00pm
Stroudwater Baptist Church

Design Team Attendees:

Mike Barton	Developer/Presenter
Nate Libby	Developer
Will Savage	Civil Engineer/Presenter
Olivia Dawson	Civil Engineer

Presentation:

Mike Barton:

- Introduced the design team in attendance and elaborated how each of the members and companies are based in Portland
- Reviewed the timeline of the development:
  - Summer 2016 – Informal meetings and discussions with City Planning and initial outreach to Portland Trails and Stroudwater Village Association
  - September 2016 – Informal meeting with neighbors that addressed their initial concerns such as preserving land within the site, maintaining a landscaped buffer between Westbrook Street and the development, and proposing larger lots abutting the existing lots on Partridge Circle
  - September – December 2016 – Concept plan refinement and development
  - December 2016 – Preliminary zoning map amendment application submitted
  - January 17th, 2017 – First Workshop Meeting with the Planning Board
    - Planning Board requested a second workshop meeting
- Reviewed the development concept plans and how the proposed R-3 zoning map amendment meets the goals set by the Comprehensive Plan
  - Described the goal to provide single-family lots for first time home buyers and downsizing retirees
  - Reviewed the benefits of developing pocket neighborhoods to preserve shared-use green space
    - Emphasized continued conversations with Portland Trails in an effort to

create connectivity with the existing Fore River trail system across Westbrook Street and provide designated public use trails within the development
    - Discussed the potential for developing a Planned Residential Unit Development as allowed in the R-3 zone but emphasized that the decision to include the PRUD units is up for discussion with the abutting and surrounding neighbors
    - Mentioned the possibility of including an additional zone change later in the design process to allow for commercial amenities within the neighborhood such as a small convenience store if this was supported by the Stroudwater Neighborhood
        - Goal is to reduce traffic into Westbrook Street from the neighborhood by providing some goods and/or services within the site

- Reviewed examples of general massing and housing styles that the neighborhood could embody
    - Emphasized street presence with a porch and garage set back into the lot
    - Introduced the possibility of shared front yards or walking alleyways instead of traditional subdivision design with the house frontage to the road

Will Savage:

- Discussed the idea to design the neighborhood around conservation subdivision standards used and defined by municipalities other than Portland
    - Conservation subdivisions emphasize the grouping and arrangement of lots as to create green space pockets within the neighborhoods as well as a larger open, shared-use space
    - Benefits include a lesser construction footprint and a reduction in total roadway impervious surfaces

- Described that before any concept plan was developed, we conducted an existing conditions analysis including the following:
    - Approximately 45 acres of land that is relatively flat along Westbrook Street and has steep slopes down to the Stroudwater River within the rear of the site
    - Completed a wetlands inventory; identified that there are wetlands within the site
    - Land cover is primarily open grassland with limited forested areas and pockets within the center and at the river's edge
    - Identified the extent of the riparian areas into the site from the river edge as well as the general area of the Resource Protection Zone as defined by the City of Portland

- Discussed the concept design process from the current R-1 zoning to R-2 and R-3 while speaking to the concept drawings for the R-1 and R-3 zones
    - R-1 Zone: Developed a concept plan that included about 80 lots with little open space and significant impacts to slopes, forested area, wildlife corridors, and wetlands.
        - Would require extensive roadway, sewer, and stormwater infrastructure
        - Lots would be at least 150 ft deep/100 ft wide pushing the development 200 ft closer to the river
    - R-2 Zone: Estimated that the lot would support about 86 lots with slightly more open space but still significant impacts to slopes, forests, wetlands, etc.
        - Lots would be at least 125 ft deep/80 ft wide still pushing the development 100 ft towards the river
    - R-3 Zone: 96-lot concept plan is a modern take on a traditional neighborhood

  - Density allows for a conservation subdivision layout, flexibility with lot size (6,500-20,000 sf/lot), 43% open space with public access to the river, wetland avoidance, and less impacts to natural resources
  - Lots at least 100' deep/65' wide allow for a greater buffer (> 250 ft) between the development and the river
  - Overall reduction in development and public infrastructure footprint
- Further emphasized that the development will be designed to meet and/or exceed the Maine DEP's Chapter 500 Stormwater Rules

Questions & Answers:

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting.

Q: What kind of community amenities could be provided as part of the R-3 zone change and potential business zone change? Would that increase traffic into the site? Would there be parking provided for these amenities?

A (Mike): The idea behind the added business amenities, such as a local or small community convenience store, is to deter the residents from traveling outside the neighborhood and increasing the congestion within Westbrook Street. It is anticipated that additional parking would be provided for the business. However, it is possible that outside residents could utilize the store and enter the neighborhood. If we were to move forward with adding a small business element to the site, we would need to apply for an additional zone change for a portion of the parcel from R-3.

Q: Could you please elaborate on the application procedure and steps to achieve the proposed zone change.

A (Mike): There will need to be another Workshop Meeting, not yet scheduled, and then a Final Application Meeting with the Planning Board to approve the zone change. The application is then reviewed by the City Council for final approval. Then we will submit a plan for Site Plan approval that would include another Workshop meeting or series of Workshop meetings before final approval by the Planning Board.

Q: Could you elaborate on the proposed traffic speeds for Westbrook Street? It was addressed in the Workshop meeting that the street could support a faster limit.

A (Mike): We do not intend to change the speed limit on Westbrook Street.

Q: Are there any limitations on agricultural activity within the R-3 zone more specifically regarding the potential for a community garden?

A (Mike): We are not positive on the limitations stated within the R-3 zone description but we will review the description and get back to the community.

Q: Has the existing topography of the site been reviewed?

A (Will): The existing topography has been initially reviewed using public data and the concept plan takes the existing grades into consideration.

Q: How long will construction last?

A (Mike): Ideally, the project will be split in four different phases to be completed in five years. Each phase will include only a buildout of that section; therefore, the road will only be built to serve the lots of that phase and not built in entirety until project completion.

Q: Will the surrounding elementary/public schools have the capacity to serve a neighborhood of this size?

A (Mike): I believe that the nearby Hall School has the capacity for 400 students and the newly approved school has the capacity for 560 students. However, we are continuing the conversation with the City and related officials to ensure that this development will not be a burden on the surrounding school system.

Q: What affect will the proposed development have on the existing utilities within Westbrook Street?

A (Mike & Will): There are existing sewer and water mains within Westbrook Street; there is also a large water main that traverses across the site as part of an existing easement. Due to the downward slope towards the river, it is anticipated that we will need a pump station to bring the site-generated sewer waste back into Westbrook Street. The stormwater runoff generated by the site will be collected, treated, detained, and outletted into the 250 ft river buffer area. As part of the site plan application and design process the respective utilities will be contacted for an ability to serve letter verifying the proposed services to the site. If need be, we will improve the existing utilities in Westbrook Street to better serve the site and limit impacts to the surrounding neighborhood. It is our intent to design the homes in an energy efficient way with the use of heat pumps and potentially solar energy (the site and current orientation of the lots have valuable southern sun exposure).

Q: Is there any possibility of having less homes than 90-100 like currently proposed in the R-1 or R-2 zones while still being profitable?

A (Mike): This range must be maintained for the development to be profitable. If the R-3 zone was not achieved the project would not be moving forward.

Q: Will the project require blasting as part of construction?

A (Mike): Not that we know of.

Q: What are you proposing for treatment of the stormwater generated from the site development? Stroudwater River is already an urban-impaired waterbody; how will this development not pollute the river further?

A (Will): The stormwater runoff will be designed to meet and/or exceed the stormwater management requirements as set by the Maine DEP. It is proposed that the stormwater be first

treated for quality purposed in decentralized locations directly abutting the inner roadway such as tree boxes. The stormwater is to then be directed into a detention basin, that could double as a skating pond in the winter, to fulfill the flooding requirement set by the state department.

Q: Who owns the abutting parcel between the site and the Turnpike? Is it part of the Turnpike right of way?

A (Mike): We are exploring the ownership of the abutting parcel and will get back to you on the existing parcel and use.

Q: Is there any manufactured housing planned as part of the project?

A (Mike): None at this time.

Q: Would it be possible to provide a thickly landscaped buffer between the development and Westbrook Street to screen the homes from street view such as planting tall evergreens?

A (Mike): That is definitely an option and during the site plan process we would be open to discuss what the intent of the proposed buffer will be and if it can act as a natural screen for the development. I should note that the site does slope downwards away from the street view so it is likely that the new rooftops of the homes will not be as prevent as a view from Westbrook Street.

Q: Christian MilNeil's proposed alternative zoning plan was handed out during this meeting proposing a mix of R-5a and B-1b zone changes in additional to preserving a large section of green space. Was this option of using R-5a to create denser residential planning considered?

A (Mike): It was the design team's understanding that increasing the density of the residential units beyond what we are currently proposing would not be favorable for the abutting landowners. We do support the idea of implementing a small zone change to allow for a business to operate within the neighborhood (potentially a B-1b zone) in order to reduce car traffic and travel.

Q: Do you think that it is feasible to build and sell 96 homes within this neighborhood?

A (Mike): Based on initial assessments of the existing housing market for single family lots within Portland and the lack thereof, we feel that building and selling this many homes is a viable investment.

Q: What is the anticipated cost of the homes and is this affordable the target buyers? Do you believe that there are enough jobs within the area to support this anticipated cost? How does this apply to the new Inclusionary Zoning requirement?

A (Mike): It is anticipated that the homes will range in the $300K – 450K range depending on the lot location and size which typical for the greater Portland area for new homes. The site is in a great location in terms of proximity to the airport, UNUM, the Maine Mall, downtown Portland, and other employers in the area. The development will be subject to the standards and requirements set by the City's Inclusionary Zoning process and application. This includes setting aside at least 10% of all units to be deed restricted to the affordability standards as set by the City.

Q: Has the traffic sight of the proposed entrances been evaluated and reviewed? Will there be a traffic survey performed?

A (Mike): We have completed a Traffic Study and anticipate continued review on the traffic impacts during the site plan process.

Q: Will you be bringing in additional designers for the subdivision layout to the design team? Also, the City is selling other pieces of property potentially more valuable from a development standpoint; would you and your partner be open to a land swap?

A (Mike): It is not anticipated at this time to bring in additional design help. And we have not actively considered the land swap but will explore that possibility with the City.

Q: Will you be using local labor for the construction of the project?

A (Mike): Yes, most definitely.

Q: What is the accountability of this project and the developer if the zone change is approved?

A (Mike): We feel that this a positive zone change that will enhance the value and use of the existing parcel. By keeping the community and neighbors involved we are hoping to gain support and momentum for the project throughout the site plan process after the zone change application.

Q: There has been a big development boom in Portland and the surrounding areas. What makes this development compete with the anticipated flooding of units into the housing market?

A (Mike): These lots are single-family homes that differ from the majority of the products that are currently being developed or are entering the housing market. The units in which you mention are mostly, if not completely, attached residential 1-2 bedroom apartment or condo units. There is also a draw to live within the City of Portland city limits.

Q: What about the higher taxes in Portland versus the surrounding towns?

A (Mike): Based on recent reports and studies on the benefits of living close to where you work, the commute savings from a year of travelling to work could equate to what is paid more in taxes for living within the city.

Q: Would you support and encourage the neighbors to meet and review the proposed project amongst ourselves?

A (Mike): Most definitely. We would be open to even facilitate these meetings by setting up a location for the discussion to take place. The more feedback we receive from the abutting neighbors the better.

Q: Could you provide us with an example of an existing neighborhood within the R-3 zone in Portland? Will these new homes have the classic cookie-cutter design as past subdivisions? Will the home designs be reviewed before construction?

A (Mike & Olivia): The neighborhood by Ludlow Street and the Deering High School is within the R-3 zone. The homes will be constructed to a set design book outlining colors and features cohesive with the other homes including the porch element as mentioned earlier. These design features and example home facades will be reviewed as part of the Planning Board's decision during the site plan application process.

Q: Will there be public access to the river? Is it proposed to build a bridge to connect the neighborhood trails to the Stroudwater River Trail directly across from the river?

A (Mike): The proposed neighborhood trail will provide public access to the Stroudwater River but it is not anticipated that the project would include building a bridge; we will continue to collaborate with Portland Trails on how the trails are to be built and maintained.

Meeting concluded at approximately 8:00pm.

The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted as necessary.

Recorded by,

Olivia Dawson, E.I.
Design Engineer
Acorn Engineering, Inc.

odawson@acorn-engineering.com

Camelot Farms

Neighborhood Meeting Sign-In Sheet - January 24th, 2017

Please Print your Name and Address

1. Art McEvoy 89 Partridge Cir.
2. Gloria Haddon 1629 Westbrook St
3. Diane Dicenzo 54 Penrith Rd
4. Holly Hoffman 1619 Westbrook St
5. Bruce Harrington 1619 westbrook st.
6. Jackie Dion 1630 WESTBROOK St.
7. Derek Cargine 1630 Westbrook St
8. Dick Farnsworth 55 Old Mast Rd.
9. Andrew + Linda Gee 1714 Westbrook St.
10. BILL DOBROWOLSKI - 132 PARTRIDGE CIRCLE & 6 PARTRIDGE ROAD
11. PETER DASCANIO 18 PARTRIDGE RD
12. Carl [illegible] 85 Pinecrest Dr.
13. Joey Borrelle 61 Kellogg St. #2
14. Tom Minervino 60 Stubbed Rd.
15. Anita B Jones 33 Old Mast Rd.
16. John-Paul Bilodeau 1535 Westbrook St.
17. Joe + Carla McDonnell 1413 Westbrook St
18. Michael Paul 1603 Westbrook St.
19. Jennifer Borland 1473 Westbrook St.
20. Carolyn Healy 1832 Congress St
21. Joe Healy 1832 Congress
22. [illegible] 37 Old Mast Rd.

23. Angela Wheaton 30 Partridge Rd. Bath
24. Lisa McLaughlin 30 Partridge Rd
25. Marc Hodroff 48 Partridge Circle
26. John Hasken Pastor of Stroudwater Village Church (formerly Stroudwater Baptist)
27. John Kilbride 1543 Westbrook St
28. Julie Kilbride 1543 Westbrook St Portland Me.
29. James Everhart 1617 Westbrook St. Portland
30. Martha McEvoy 99 Partridge Circle
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Att. H

Ecological Habitat Assessment Report

1700 Westbrook Street, Portland Maine

Camelot Holdings, LLC

5 Stone Pony Circle
Saco, ME 04072

Prepared by:

Verdanterra, LLC
47 Richards Lane
Freeport, Maine 04032
www.verdanterra.com

March 15, 2017

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Figures

Figure 1. Camelot Farms - Project Location Map
Figure 2. Project Limits of Disturbance – Aerial Background
Figure 3. Project Limits of Disturbance – Topographic Background

Appendices

Appendix A. Verdanterra Resume
Appendix B. Site Visit Photodocumentation
Appendix C. Agency Correspondence

1. Introduction

On March 13, 2017, Verdanterra, LLC (Verdanterra) conducted an ecological assessment for the proposed Camelot Holdings, LLC (Camelot) residential development project at 1700 Westbrook Street, Portland, Maine (Project). On November 10, 2016, Maine Natural Areas Program (MNAP) provided a list of rare plants and natural communities that occur within the vicinity of the project area. MNAP has not documented rare plants or natural communities on the Project parcel. Wetland delineations were completed by Mark Hampton Associates, Inc. on November 21, 2016. Maine Department of Inland Fisheries and Wildlife (MDIFW) indicated that there are no Endangered, Threatened, or Special Concern species that occur on the property on December 2, 2016. This ecological assessment was prepared to evaluate Rare and Exemplary Botanical Features habitat and potential New England cottontail (*Sylvilagus transitionalis*) habitat in the Project Area.

This report describes the objectives, methodology, and results of the ecological assessment. The survey and subsequent report were completed by Gino Giumarro, a Wildlife Biologist Certified by the Wildlife Society. Gino has a Bachelor of Science degree in Wildlife Biology from the University of Massachusetts at Amherst and a Master of Science degree in Natural Resources Planning from the University of Vermont. Mr. Giumarro has been conducting wildlife habitat assessments professionally since 1996. A resume is included in Appendix A.

1.1. Regulatory Context

Endangered and threatened inland fish and wildlife species in Maine are listed either under Maine's Endangered Species Act (MESA; Title 12 M.R.S.A. Sections 7751 to 7759), the U.S. Endangered Species Act (ESA; Title 16 U.S. Code Sections 1531 to 1544), or both. Species listed under MESA receive state protection; species listed under ESA receive federal protection; and species listed under both receive state and federal protection. The presence of endangered or threatened species can have implications on defining other resources status protected under different legislation (e.g. Significant Wildlife Habitat or Wetlands of Special Significance).

The MDIFW holds management responsibility for inland fish and wildlife listed under MESA, and shares responsibility with the U.S. Fish and Wildlife Service (USFWS) for inland fish and wildlife listed under ESA. MDIFW indicated in their December 2, 2016 correspondence (Appendix C) that there are no known locations of Endangered, Threatened, or Special Concern species within the Project area that would be directly affected by your project. Additionally, MDIFW has not mapped any Essential or Significant Wildlife Habitats that would be affected directly by the Project. MDIFW further suggested maintaining buffers along sensitive fisheries. As planned (shown on the Site Plan Drawing Number C-10 – Acorn Engineering – 2/14/2017; Attachment C), the project maintains more than the suggested 100-foot vegetative buffer along the Stoudwater River.

On March 20, 2017, Verdanterra conducted an unofficial Information for Planning and Conservation (IPaC; part of the Environmental Conservation Online System[1]) analysis for the Project to obtain a draft list of potentially occurring federally protected threatened or endangered species and critical habitats managed by the USFWS. The USFWS also implements the regulations of the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. A formal request can be made to the USFWS should further endangered species coordination be required. For instance, Section 7 of the ESA requires Federal agencies (such as the U.S. Army Corps of Engineers for wetland permitting) request from the USFWS information on whether any species which is listed or proposed to be listed may be present

[1] The Environmental Conservation Online System (ECOS) is a gateway web site that provides access to data systems in the U.S. Fish and Wildlife Service (Service) and other government data sources. This central point of access assists Service personnel in managing data and information, and it provides public access to information from numerous Service databases. Available https://ecos.fws.gov/ipac/. Accessed March 20, 2017.

in the area of such proposed action (e.g. filing an application for a Section 404 of the Clean Water Act wetland fill permit).

The report indicated that northern long-eared bat (*Myotis septentrionalis*; threatened) has the potential to occur in the Project Area. There are no critical habitats for protected species in the Project Area, however there are a number of migratory birds of conservation concern protected under the Migratory Bird Treaty Act with the potential to occur in the Project Area. USFWS stresses the importance to avoid and minimize impacts to birds of conservation concern.

A wetland or waterbody permit is considered a federal action by the U.S. Army Corps of Engineers. As a threatened species, impacts to the northern long-eared bat would require a Section 7 Consultation between the U.S. Army Corps of Engineers and the USFWS. Under the Section 4(d) of the Endangered Species Act, the USFWS can issue regulations deemed "necessary and advisable to provide for the conservation of threatened species." It allows the USFWS to promulgate special rules for species listed as threatened (not endangered) that provide flexibility in implementing the Endangered Species Act. Federal actions that cause incidental take that is **not** prohibited under the 4(d) rule may still affect individual northern long-eared bats. Under Section 7 of the Endangered Species Act, a federal agency must consult with the Service if their action may affect a listed species, which includes effects to individuals. However, for the northern long-eared bat 4(d) rule, the USFWS has provided a framework to streamline Section 7 consultations when federal actions may affect the northern long-eared bat, but not cause prohibited take. The incidental take prohibition for known occupied maternity roosts trees applies only during the during the pup season (June 1 through July 31). Including the streamlined 4(d) rule compliance form with any necessary federal permitting is helpful to the permitting agency. This compliance includes the following determinations (among others).

- Does the Project occur within the White-Nosed Syndrome (WNS) zone?
- Is the USFWS aware of hibernacula or maternity roost trees within 0.25 miles of the Project?
- Would the Project cut trees within 150 feet of a known maternity roost tree?

Federal agencies may fulfill their project-specific Section 7 responsibilities by using the USFWS's framework. The notification would include a determination that the action would not cause prohibited incidental take. USFWS concurrence is not required, but the USFWS may advise the agency whether additional information indicates that project-level consultation is required. If the USFWS does not respond within 30 days, the action agency may consider its Section 7 responsibilities fulfilled with respect to the northern long-eared bat.

MNAP searched the Biological and Conservation Data System files and provided a response on November 10, 2016 for information on the presence of rare or unique botanical features documented from the vicinity of the Project. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. According to the information currently in MNAP's Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. There are, however, several of species of plants that are known to occur within 4 miles of the Project. Many of the plant species on this list are known to occur in very particular ecological communities.

1.2. New England Cottontail Habitat Requirements

The New England cottontail was listed as state endangered species in Maine in 2007. In 2010, Maine's New England cottontail population was estimated to be less than 200 rabbits. MDIFW determined the number of New England cottontail in Maine by conducting intensive winter surveys to locate occupied patches of habitat and estimating the number of rabbits per acre based on the size of the habitat patch.

The region-wide decline of New England cottontail has been attributed to habitat loss, and in particular, the loss of old field and shrubby habitat. New England cottontails need dense shrubby habitat to protect them from avian and terrestrial predators. Ideally, this dense cover should be interspersed with some grassy areas when the rabbits can find adequate food. Habitat blocks of at least 25 acres in size (ideally much larger) and close to additional patches of habitat are necessary for the species to survive[2].

New England cottontail depend more upon the structure of the vegetation (its form, height, and density) rather than specific species. In old fields, New England cottontail are commonly associated with juniper (*Juniperus spp.*), blackberry (*Rubus spp.*), spirea (*Spiraea spp*), dogwoods (*Cornus spp*), and a variety of young deciduous tree species (red maple [*Acer rubraum*], birch [*Betula spp.*], and aspen [*Populus spp.*])[2]. Old fields are also where New England cottontail are sometimes associated with exotics such as honeysuckle (*Lonicera spp.*), autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), and Japanese barberry (*Berberis thunbergii*)[2]. On wetter sites, alder (*Alnus spp.*), and willow (*Salix spp.*) are frequent dominants. Barbour and Litvaitis (1993) investigated selection of microhabitats in winter among New England cottontail preferred to use sites with >50,000 stem-cover units/ha (20,234 stem-cover units/acre)[3].

2. Methods

A Certified Wildlife Biologist[4] conducted a flora and fauna ecological assessment at the Project site. Prior to conducting the field survey, Verdanterra ecologists conducted a remote landscape analysis to better understand the ecological and regional context of the Project area. This landscape analysis approach to habitat evaluation considered a wide range of published literature, multi-year aerial photography, and wildlife biologist experience. Ecologists remotely characterized the ecological communities present on and adjacent to the Project area to guide a determination of landscape connectivity, with particular focus on identifying large habitat blocks or connecting corridors of habitat suitable for New England cottontail. The ecological community characterization was conducted in a GIS and considered landforms and land use as determined from aerial photographs, topography, wetlands and waterbodies, soil types, rare natural communities, and proximity of other habitats.

Verdanterra developed a list of habitats required for the rare and unique botanical features reported by MNAP to occur within 4 miles of the Project as well as for the New England cottontail. Remote sensing was used to preliminarily characterize the ecological habitat present in the Project Area. A field survey was conducted to verify these communities and to determine if the microhabitat requirements for individual plants occurs. This information was used to determine the likelihood of occurrence for these species at the Project. While many of the species could not be identified at this time of the year, it was feasible to identify potential habitat for these species. Should suitable habitat be identified for any of the species that were provided by MNAP, targeted species surveys would be recommended for the appropriate growing season phase (flowering or fruiting). Growing season surveys were not conducted. If identified in the field, the location of groups of rare plants identified will be recorded using a GPS (i.e. a GPS location of each individual plant will not be collected) with sub-meter accuracy and a MNAP rare species form will be completed.

Verdanterra ecologists conducted a field survey to support the remote landscape analysis. The on-site habitat assessment was based on a pre-determined list of habitat features developed for the site that are required for the

[2] Litvaitis, J.A., and W.J. Jakubas. 2004. New England Cottontail (Sylvilagus transitionalis) Assessment 2004. Unpublished report. 59pp.
[3] Barbour, M.S., and J.A. Litvaitis. 1993. Niche dimensions of New England cottontails in relation to habitat patch size. Oecologia 95:321-327.
[4] As certified by the Wildlife Society, Bethesda Maryland

species to occur. Ecologists also searched the area for signs of cottontail tracks, browse, or pellets. This list of habitat requirements is based on biologist knowledge, published papers and reports, and comparisons to reference habitats familiar to the ecologist. The quality of habitats was evaluated based on strength of species associations with particular natural communities, landscape position and connectivity, and other ecological metrics (e.g. canopy cover, ground cover, water depth, soils, plant species composition, distance from potential feeding and/or breeding locations, etc.). Natural community delineation and habitat assessment is not intended to determine presence/absence, but rather allow informed decisions to be made during the permitting process.

The wildlife biologist evaluated the overall habitat quality and position in the landscape to develop suggested conservation management strategies that could be implemented to avoid or minimize impacts to listed species. Photographs were taken to aid in the discussion of various habitat attributes or conditions that illustrate the findings of this assessment (Appendix B).

3. Results

A landscape analysis finds that the parcel is predominantly an active cattle pasture bordered to the west by Interstate 95, the south by the Stroudwater River, and mixed residential / forested land use to the north and east. The limits of disturbance of the Project are predominantly active cattle pasture with a south facing aspect that slopes down to the Stroudwater River. An east-west running electric transmission corridor occurs north of the site and an oil pipeline bisects the parcel north to south. Neither of these transmission corridors are significant wildlife pathways considering the barriers provided by Interstate 95, Stroudwater River, and the dense mixed residential / commercial development of Deering, Deer Hill, and Nasons Corners neighborhoods.

The field survey was conducted on March 13, 2017 and confirmed that land use was consistent with current aerial photography. The weather during the survey was sunny, 15° F and a light dusting of snow covered the ground early in the morning. There are several small groves of white pine (*Pinus strobus*) and various maple and oak trees that are part of the landscaping of the existing residential structure, however the majority of the area within the limits of disturbance is herbaceous in nature. There is a forested fence line on the western part of the parcel and several palustrine emergent wetland drainages. The wooded fence line is composed of several white pine, northern red oak (*Quercus rubra*), and black cherry (*Prunus serotina*). The pasture has been maintained through cattle grazing and occasional mowing. Cropped grasses observed include Kentucky bluegrass (*Poa pratensis*), timothy (*Phleum pratense*), and smooth bromegrass (*Bromus inermis*); intermixed with hawksweed (*Hieracium* spp.), Queen Anne's lace (*Daucus carota*), milkweed (*Asclepias syriaca*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and goldendrod (*Solidago spp*). Shrub sprouts in the meadow include raspberry, quaking aspen, and multiflora rose (*Rosa multiflora*). Wetland areas are comprised of cattail (*Typha spp.*), rushes, sedges, common reed (*Phragmites australis*), steeplebush (*Spirea tomentosa*), speckled alder (*Alnus incana*), and American pussy willow (*Salix discolor*). There was evidence of past earth disturbance on site including the pipeline right of way, access roads, and old structure foundations throughout much of the site.

A steep slope occurs at the southern limit of disturbance that has several white pine and black cherry interspersed with shrubs such as multiflora rose, red maple, and hawthorn (*Crataegus spp.*). The shrubs remain in small clusters with little to no vegetation underneath due to cattle grazing. Much of this sideslope will not be within the limits of disturbance.

3.1. Rare or Unique Botanical Features Evaluation

MNAP indicated that there are 22 rare or unique botanical features that occur within 4 miles of the Project. Most of the species on this list (Table 1) are only found in ecological communities not present in the Project Area (e.g. rocky summits, tidal wetlands, dry barrens, forested wetlands, etc.). Habitat requirements for two of these species generally includes open wetland communities. Creeping spike-moss (*Selaginella apoda*; state endangered) and hollow Joe-pye weed (*Eutrochium fistulosum*; state special concern) generally occur in open herbaceous wetlands, roadside ditches, and old fields.

State endangered species creeping spike-moss is at the northern extent of its range and has been historically identified (1924) within 4 miles of the Project and in 10 other southern Maine towns. This plant is unlikely to occur in the Project Area due to the disturbances associated with cattle grazing and occasional vegetation management. State special concern species hollow Joe-pye weed can tolerate occasional disturbances caused by mowing, but generally is not found in highly grazed pastures. The vegetative cover was thin throughout the site and plants from the last growing season can often be found standing or laying over during the winter. No dead stalks were identified that resembled hollow Joe-pye weed.

Areas within the Project Area that are unmaintained (e.g. steep slopes, around trees, fence lines) are dominated by small dense patches of invasive shrubs. While this assessment was conducted outside of the growing season, it is unlikely that rare or unique botanical features occur within the Project Area.

Table 1. Rare and Exemplary Botanical Features within 4 Miles of 1700 Westbrook Street

Common Name	State Status	State Rank	Global Rank	Last Observed	Occurrence Number	Habitat Requirement	Habitat in Project Area?
Allegheny vine	E	S1	G4	10/1860	9	Rocky summits and outcrops (non-forested, upland), Dry barrens (partly forested, upland)	No
American sea-blite	T	S2	G5	9/12/1932	5	Tidal wetland (non-forested, wetland)	No
	T	S2	G5	8/15/2011	17		
beach plum	E	S1	G4	5/19/1933	10	Rocky coastal (non-forested, upland)	No
broad beech fern	SC	S2	G5	8/1872	15	Hardwood to mixed forest (forest, upland)	No
creeping spike-moss	E	S2	G5	8/20/1924	3	Open wetland, not coastal nor rivershore (non-forested, wetland), Old field/roadside (non-forested, wetland or upland)	Potential
	E	S2	G5	8/21/1924	8		
dioecious sedge	SC	S3	G4	7/14/1936	7	Non-tidal rivershore (non-forested, seasonally wet), open wetland, not coastal nor rivershore (non-forested, wetland)	No
ebony spleenwort	SC	S2	G5	6/6/1910	10	Rocky summits and outcrops (non-forested, upland), Hardwood to mixed forest (forest, upland)	No
Engelmann's spikerush	PE	SH	G4G5Q	8/31/1916	2	Open wetland, not coastal nor rivershore (non-forested, wetland); wet sand, peat, mud	No
fern-leaved false foxglove	SC	S3	G5	9/2/1902	13	Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)	No
great blue lobelia	PE	SX	G5	9/1/1905	3	Forested wetland, Non-tidal rivershore (non-forested, seasonally wet)	No
hollow joe-pye weed	SC	S2	G5?	6/18/2014	24	Open wetland, not coastal nor rivershore (non-forested, wetland), old field/roadside (non-forested, wetland or upland)	Potential
	SC	S2	G5?	10/22/2007	18		
horned pondweed	SC	S2	G5	9/13/1913	9	Tidal wetland (non-forested, wetland)	No
	SC	S2	G5	6/13/1972	3		
marsh milkwort	PE	SH	G5T4	8/18/1903	1	Dry barrens (partly forested, upland), Open wetland, not coastal nor rivershore (non-forested, wetland)	No
Missouri rockcress	T	S1	G5?Q	6/11/1905	5	Rocky summits and outcrops (non-forested, upland), Hardwood to mixed forest (forest, upland)	No
mountain honeysuckle	E	S2	G5	7/16/2015	16	Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)	No
	E	S2	G5	7/7/2015	17		
Parker's pipewort	SC	S3	G3	8/20/1924	8	Tidal wetland (non-forested, wetland)	No
pitch pine bog	<null>	S2	G3G5	7/31/2012	16	Forested wetland, coastal non-tidal wetland (non-forested, wetland)	No
tidal marsh estuary ecosystem	<null>	S3	GNR	8/25/2011	8	Tidal wetland (non-forested, wetland)	No
variable sedge	E	S1	G3	3/25/1905	8	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)	No
	E	S1	G3	6/29/1911	9		
Vasey's pondweed	SC	S2	G4	8/4/1901	7	Open water (non-forested, wetland)	No
water-plantain spearwort	PE	SH	G4	8/1862	3	Open water (non-forested, wetland)	No
wild leek	SC	S3	G5	5/10/2006	19	Hardwood to mixed forest (forest, upland), Forested wetland	No

Table 1 Notes

STATE RARITY RANKS

S1	Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
S2	Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
S3	Rare in Maine (20-100 occurrences).
S4	Apparently secure in Maine.
S5	Demonstrably secure in Maine.
SU	Under consideration for assigning rarity status; more information needed on threats or distribution.
SNR	Not yet ranked.
SNA	Rank not applicable.
S#?	Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).
NOTE:	State Rarity Ranks are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1	Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
G2	Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
G3	Globally rare (20-100 occurrences).
G4	Apparently secure globally.
G5	Demonstrably secure globally.
GNR	Not yet ranked.
NOTE:	Global Ranks are determined by NatureServe.

STATE LEGAL STATUS

NOTE:	State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's Endangered and Threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.
E	ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
T	THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC	SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
PE	Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

3.2. Wildlife Habitat Evaluation

A number of wildlife were observed during the field visit (Table 2) typical for the season in this habitat. The light snow provided some opportunity to track on the otherwise frozen ground, but it was not so deep that scat, burrows, trails, or other wildlife signs were not visible. Several regular paths used by coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and striped skunk (*Mephitis mephitis*) were observed. Scat, tracks, and venting frost from a red fox den were observed on the site. A variety of winter resident and early spring migrant birds were observed in the Project Area.

Table 2. Wildlife Observed at 1700 Westbrook Street (3/13/2017)

Common Name	Scientific name
Birds	
downy woodpecker	*Picoides pubescens*
northern cardinal	*Cardinalis cardinalis*
pileated woodpecker	*Dryocopus pileatus*
black-capped chickadee	*Poecile atricapillus*
red-winged blackbird	*Agelaius phoeniceus*
American crow	*Corvus brachyrhynchos*
blue jay	*Cyanocitta cristata*
herring gull	*Larus argentatus*
red-tailed hawk	*Buteo jamaicensis*
American crow	*Corvus brachyrhynchos*
Mammals	
red fox	*Vulpes vulpes*
Eastern coyote	*Canis latrans*
striped skunk	*Mephitis mephitis*

A thorough evaluation of the sideslope dominated by invasive shrubs did not show signs of cottontail use such as scat, tracks, or sign of browse. The multiflora rose, hawthorn, and other shrubs are separated by cattle paths, thereby separating most of the shrubs from each other. The areas under shrubs were free of vegetation due to heavy browse and foot traffic by cattle. The cattle use the area as shelter from the sun, making this area unsuitable for New England cottontail. The patch of shrubby habitat is too small, lacks the proper vegetative structure, lacks the preferred stem density, and is largely unconnected to other areas of suitable New England cottontail habitat.

It is unlikely that the USFWS has hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the Project based on other work conducted by Verdanterra in the area. There was nothing observed in the field visit to suggest otherwise. Therefore, we believe the 4(d) rule for the northern long-eared bat could be applied.

If there is a federal nexus for the project (e.g., federal permits required to construct), no tree clearing should occur on any portion of the Project Area until consultation under Section 7 of the Endangered Species Act, between the USFWS and the federal action agency, is completed. The applicant can prepare the 4(d) notification form and submit it with their wetland permit for use by the U.S. Army Corps during the Section 7 consultation.

4. Conclusions and Recommendations

The results of the landscape analysis and subsequent field assessment found that rare or unique botanical features previously documented in the area by MNAP are unlikely to occur within the limits of disturbance of the Project. Many of the habitats required do not occur on the Project site. The herbaceous wetlands present on site are impacted by decades (at least since 1984) of cattle grazing and occasional vegetation management, making them unsuitable for any of these rare or unique botanical features. No further evaluation of plant or protected natural communities are recommended at the Project.

Several species of wildlife or their signs were observed within the Project area. While several areas of dense shrubs exist on the edges of the limits of disturbance, none of these areas are suitable to support populations of New England cottontail. The islands of invasive shrubs lack the density, aerial coverage, or connectivity to support a population of New England cottontail.

There are trees of size and quality to act as potential northern long-eared bat at the Project, however, any tree cutting required would qualify under the 4(d) rules as incidental take. While there are no specific cutting restrictions for northern long-eared bats, providing this information along with any required federal permits will hopefully speed up the consultation between the U.S. Army Corps of Engineers and the USFWS. Additionally, there are not likely to be significant adverse impacts to birds of conservation concern listed as occurring within Cumberland County, Maine.

Figures

Figure 1. Camelot Farms - Project Location Map

Figure 2. Project Limits of Disturbance – Aerial Background

Figure 3. Project Limits of Disturbance – Topographic Background

VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 17, 2017

REVISION	00
CREATOR	AS 03/16/2017
REVIEWED	GG 03/16/2017

Page 01 of 01

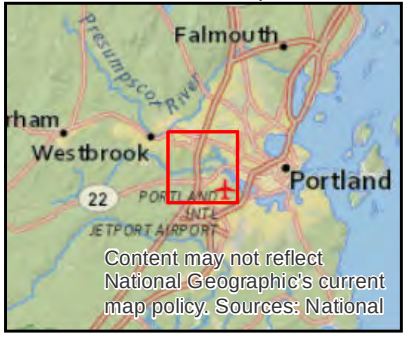
Legend

- Project Location

0 1,000 2,000 Feet

Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 1.
Project Location
Camelot Farms
1700 Westbrook Street, Portland ME



Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.

VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 17, 2017

REVISION	00
CREATOR	AS 03/17/2017
REVIEWED	GG 03/17/2017

Page 01 of 01

Legend

- Limit of Disturbance
- Shoreland Protection Zone
- Wetland Areas

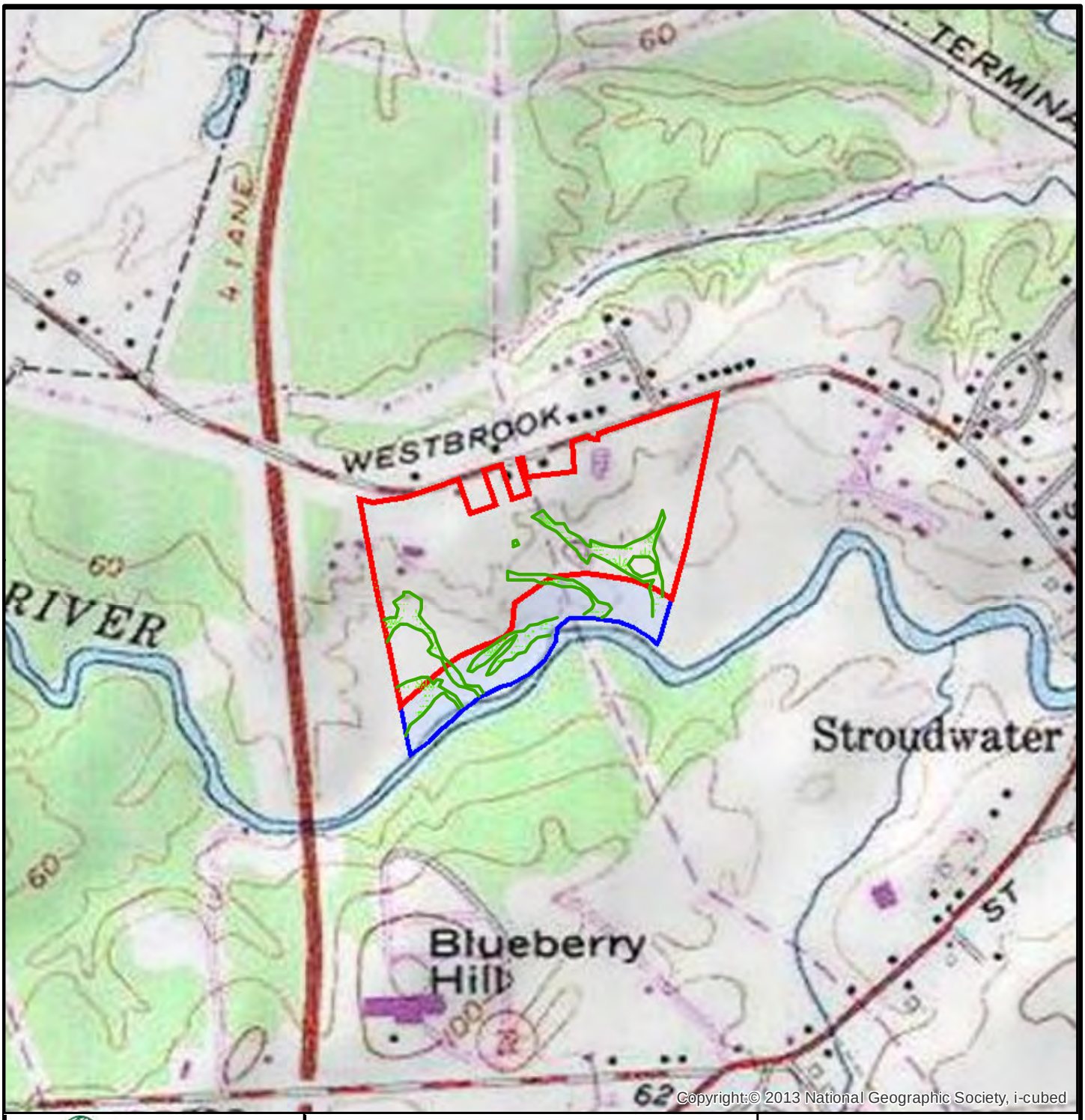
0 150 300 Feet

Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 2.
Project Limits of Disturbance (Aerial)
Camelot Farms
1700 Westbrook Street, Portland ME

Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.



VERDANTERRA

Map Details

Location

Cumberland County, Maine

Last Modified: March 27, 2017

REVISION	00
CREATOR	AS 03/17/2017
REVIEWED	GG 03/17/2017

Page 01 of 01

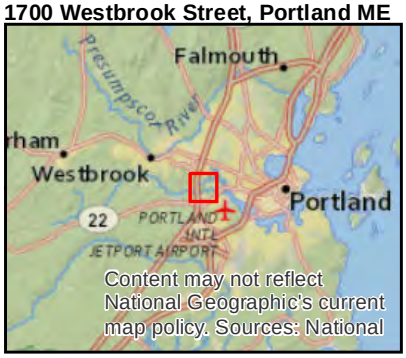
Legend

- Limit of Disturbance
- Shoreland Protection Zone
- Wetland Areas

0 300 600 Feet

Data Sources include: USGS, VT
Orthophotography: USGS Topographic Quad

Figure 3.
Project Limits of Disturbance (Topo)
Camelot Farms
1700 Westbrook Street, Portland ME



Map Location in Red

The information on this map has been compiled by staff from a variety of sources and is subject to change without notice. Verdanterra makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information.

Appendix A. Verdanterra Resume

Gino Giumarro

Director of Ecological Services

Gino is a Certified Wildlife Biologist and Director of Ecological Services that leads our team of biologists who complete natural resources assessment and permitting, pipeline/transmission line assessment and permitting, wind power assessments, regional natural resources planning, wildlife management planning, and permitting. He has specialty expertise with bird and bat surveys, with a focus on rare species surveys and consultations under the Endangered Species Act.

Gino oversees FERC license applications, RTE surveys, ecological community characterizations, biological assessments, Section 7 consultations, Clean Water Act permitting, and document preparation in accordance with the NEPA.

Gino's client experience includes a wide array of federal, state, local, and private clients. He is certified by the US Army Center for Health Promotion and Preventative Medicine in the Evaluation of Environmental Noise and is a Qualified Airport Biologist as recognized by the FAA.

REPRESENTATIVE PROJECT EXPERIENCE

RANGER SOLAR INDUSTRIAL SCALE SOLAR FACILITIES
Project Manager and Lead Ecologist

Gino is the Project Manager and Lead Ecologist for Ranger Solar's development of five utility scale solar facilities throughout New England. Each of the sites were surveyed for vernal pools, wetlands and waterbodies, and rare vernal pool dependent species. Resources were characterized according to applicable state and federal standards and definitions.

NORWOTTUCK RAILTRAIL REHABILITATION PROJECT, MA
Senior Ecologist

Provided oversight natural community, general wildlife, and rare species habitat assessments within the 11- mile rail trail corridor. Evaluated habitat conditions for 19 state-listed rare wildlife and plant species documented by the NHESP and provided impact minimization recommendations to the engineer to comply with MESA. Evaluated current beaver damage to the rail trail corridor and reviewed beaver management planning in accordance with MWPA and MESA performance standards.

EDUCATION

MS, Natural Resources Planning, University of Vermont, Burlington, Vermont

BS, Wildlife Biology, University of Massachusetts, Amherst, Massachusetts

TRAINING

Airport Wildlife Hazard Management Workshop (meets requirements of 14 CFR 139 and FAA Circ 150/5200-36), Embry-Riddle Aeronautical University, Daytona Beach, Florida, 2010

Qualified Airport Wildlife Biologist, Federal Aviation Administration

Certified Wildlife Biologist, The Wildlife Society

VERDANTERRA

Gino Giumarro

Director of Ecological Services

SPOTTED TURTLE HABITAT ASSESSMENT AND SURVEYS, MA
Senior Ecologist

Conducted an assessment of suitable habitat conditions and visual surveys for spotted turtles at the site of a proposed major commercial and residential development. Assisted with the development of wildlife crossing structure and exclusion barrier design and placement. Coordinated project planning and mitigation design with local and state agencies in compliance with MESA.

REGIONAL BLANDING'S TURTLE RAPID HABITAT ASSESSMENT, NH
Senior Ecologist

Conducted and managed landscape analysis, habitat assessment, and field survey of Blanding's turtle habitat modeling results in southern and central New Hampshire. Developed regional study plan in coordination with the New Hampshire Fish and Game Department to assess modeling results of 15 sites (>1500 acres). Results evaluated suitable habitat conditions, new observations of Blanding's turtles, and conservation planning and management recommendations.

KINDER MORGAN PARKWAY PIPELINE PROJECT
Principal Scientist

The Parkway Pipeline Project (PWP) proposes to construct a new 136-mile, 16-inch diameter liquid products pipeline originating at Valero Energy Corporation's St. Charles Refinery in Norco, Louisiana and terminating at Kinder Morgan's pipeline terminal in Collins, Mississippi. The purpose of the project is to transport refined petroleum products from Norco to Collins, where these products can be further distributed to the southeastern United States. Mr. Giumarro assisted with permitting and routing studies for this project.

NEXUS GAS TRANSMISSION PROJECT
Project Manager

Gino managed wetland and waterbody surveys and delineations on an approximate 250 mile proposed pipeline corridor crossing portions of Ohio and Michigan. Daily data collection and reporting included USACE wetland data forms, Ohio Rapid Assessment Method (ORAM), stream assessments (HHEI/QHEI), and GPS survey within the proposed pipeline right-of-way.

NATURAL RESOURCE SERVICES
Senior Ecologist and Project Manager

Conducted assessment and surveys of numerous project sites throughout New England to identify suitable habitat conditions for a variety of rare, threatened, and endangered species; or rare communities; wetlands; and vernal pools. Determinations were provided to assist with project planning and permit applications in compliance with applicable local, state, and federal natural resource regulations.

OTHER REPRESENTATVE PROJECTS

Sandpiper Pipeline Project (Minnesota)

Downeast LNG Export Terminal (Maine)

TransCanada Pipeline Groundbed Anode Replacement (Michigan)

Blue Racer Midstream Natrium Residue Pipeline (Ohio/West Virginia)

Blue Racer Midstream Carlisle Dos Looping Project (Ohio)

Access Midstream Rare Bat Surveys (Ohio)

National Park Service Cape Cod NS Hunting EIS (Massachusetts)

Wind Farm Development Surveys and Risk Assessments (New York, New Hampshire, Vermont, Maine, Virginia, West Virginia, and Pennsylvania)

Mount Rushmore National Memorial Air Tour Management Plan Environmental Assessment (South Dakota)

NASA Wallops Island Flight Facility Bat Evaluation, Wallops Island (Virginia)

Appendix B. Site Visit Photodocumentation

Photo 1 – Property access off 1700 Westbrook Street, Portland, Maine

Photo 2 – Wet ditch paralleling Westbrook Street

Photo 3 – Shrub and treeline at the western edge of the limits of disturbance; north to south

Photo 4 – Narrow treeline surrounded by pasture does not connect other dense shrub habitat

Photo 5 – Narrow treeline on the western edge of the limits of distrurbance

Photo 6 – The meadow has thin grass, herb, and raspberry cover; many signs of grazing

Photo 7 – Forested edge near Stroudwater River is free of dense shrub cover

Photo 8 – Open floodplain forest adjacent to Stroudwater River

Photo 9 – Numerous fox tracks were observed

Photo 10 – Small patches of multiflora rose occur in areas that cannot be mowed

Photo 11 – Black cherry, multiflora rose and speckled alder occur along wetland / toe of slope

Photo 12 – Shrubby areas are kept open by cattle grazing

Photo 13 – Cattle paths occur under the canopy and within shrub areas

Photo 14 – Cattle path on sideslope south of Stroudwater River

Photo 15 – Numerous signs of past land uses such as this access road and an oil pipeline

Photo 16 – Fox den

Photo 17 – Thin cover of goldenrod, grasses, thistle, hawksweed; raspberry

Photo 18 – No understory in the small grove of white pine adjacent to Westbrook Street

Photo 19 – Vegetative cover is typical of cattle pastures in southern Maine

Photo 20 – Emergent wetland seep adjacent to a slope has allowed multiflora rose to grow in isolated places in the pasture

Appendix C. Agency Correspondence

1. Site Plan Drawing Number C-10 – Acorn Engineering – 2/14/2017
2. Maine Natural Areas Program Letter – 11/10/2016
3. Maine Division of Inland Fisheries and Wildlife Letter – 12/2/2016
4. United States Fish and Wildlife Service IPaC Analysis – 3/20/2017
5. Maine Historic Preservation Commission Letter – 12/9/2016

R-3
ZONE CHANGE CONCEPT PLAN

GENERAL NOTES:

1. PLAN REFERENCES:
   1.1. MAINE OFFICE OF GIS FOR AERIAL AND CONTOUR DATA
   1.2. CITY OF PORTLAND GIS FOR PARCEL AND ZONING DATA
   1.3. PRELIMINARY BOUNDARY SURVEY DATED 11/16/2016 COMPLETED BY TITCOMB ASSOCIATES.
   1.4. WETLAND DELINEATION BY MARK HAMPTON ASSOCIATES DATED 11/18/2016
2. AREA DEPICTED FOR THE SHORELAND OVERLAY ZONE IS APPROXIMATE BASED ON PORTLAND GIS DATA.
3. IN ANTICIPATION OF BEING BUILT INTO PHASES, TURNAROUND CAPABILITIES WILL BE MAINTAINED IN THE CENTER OF THE DEVELOPMENT. THE TURNAROUND WILL BE A MINIMUM 30' LONG AS MEASURED FROM THE PROPOSED ROW PER TECHNICAL STANDARD AND WILL BE REMOVED AT PROJECT COMPLETION.

SPACE AND BULK STANDARDS		
ZONE:	R-1 (EX.)	R-3 (PROP.)
MINIMUM LOT SIZE	15,000 SF	6,500 SF
MINIMUM STREET FRONTAGE	75'	50'
FRONT YARD	25'	25'
REAR YARD – PRINCIPAL	25'	25'
REAR YARD – ACCESSORY	5'	5'
SIDE YARD	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	15'
MAXIMUM LOT COVERAGE	20%	35%
MINIMUM LOT WIDTH*	100'	65'
MAXIMUM BUILDING HEIGHT	35'	35'
MAXIMUM ACCESSORY HEIGHT	18'	18'

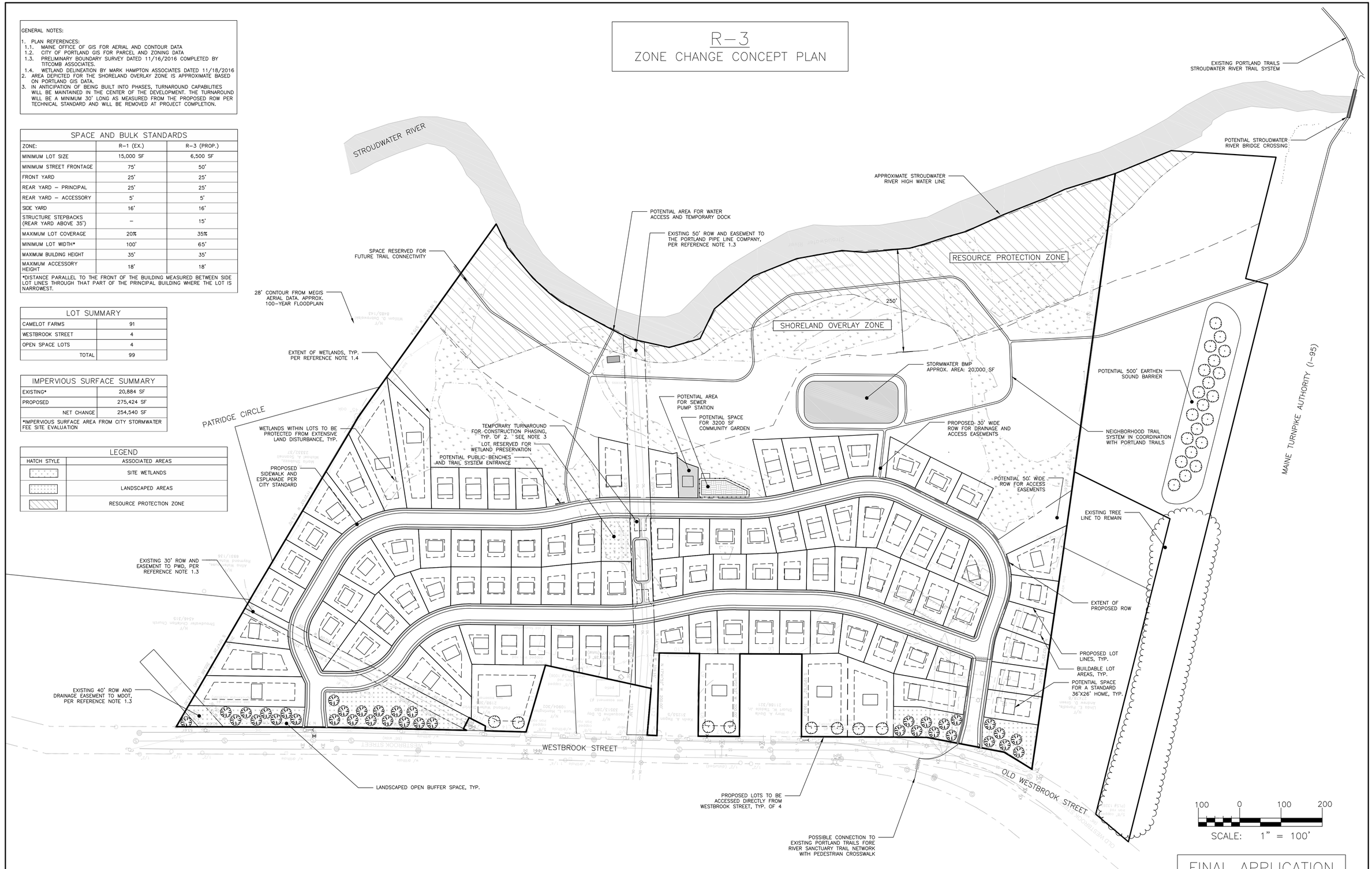
*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.

LOT SUMMARY	
CAMELOT FARMS	91
WESTBROOK STREET	4
OPEN SPACE LOTS	4
TOTAL	99

IMPERVIOUS SURFACE SUMMARY	
EXISTING*	20,884 SF
PROPOSED	275,424 SF
NET CHANGE	254,540 SF

*IMPERVIOUS SURFACE AREA FROM CITY STORMWATER FEE SITE EVALUATION

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	SITE WETLANDS
	LANDSCAPED AREAS
	RESOURCE PROTECTION ZONE



FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRE-APP	WHS	10/27/16
PRELIM APP	WHS	12/9/16
FINAL APP	WHS	2/14/17

DRAWING NAME: SITE PLAN – R-3 CONCEPT
PROJECT NAME: CAMELOT VILLAGE
CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

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

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
2-14-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-10

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

November 10, 2016

Olivia Dawson
Acorn Engineering
PO Box 3372
Portland, ME 04104

Via email: odawson@acorn-engineering.com

Re: Rare and exemplary botanical features in proximity to: Camelot Farms Subdivision, Portland, Maine

Dear Ms. Dawson:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received November 10, 2016 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Don Cameron | Ecologist | Maine Natural Areas Program
207-287-8041 | don.s.cameron@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Allegheny Vine						
	E	S1	G4	1860-10	9	Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)
American Sea-blite						
	T	S2	G5	1932-09-12	5	Tidal wetland (non-forested, wetland)
	T	S2	G5	2011-08-15	17	Tidal wetland (non-forested, wetland)
Beach Plum						
	E	S1	G4	1933-05-19	10	Rocky coastal (non-forested, upland)
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Creeping Spike-moss						
	E	S2	G5	1924-08-20	3	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	E	S2	G5	1924-08-21	8	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Dioecious Sedge						
	SC	S3	G4	1936-07-14	7	Non-tidal rivershore (non-forested, seasonally wet),Open wetland, not coastal nor rivershore (non-forested, wetland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Engelmann's Spikerush						
	PE	SH	G4G5Q	1916-08-31	2	Open wetland, not coastal nor rivershore (non-forested, wetland)
Fern-leaved False Foxglove						
	SC	S3	G5	1902-09-02	13	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Great Blue Lobelia						

Rare and Exemplary Botanical Features within 4 miles of
Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	PE	SX	G5	1905-09	3	Forested wetland,Non-tidal rivershore (non-forested, seasonally wet)
Hollow Joe-pye Weed						
	SC	S2	G5?	2014-06-18	24	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
	SC	S2	G5?	2007-10-22	18	Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland)
Horned Pondweed						
	SC	S2	G5	1913-09-13	9	Tidal wetland (non-forested, wetland)
	SC	S2	G5	1972-06-13	3	Tidal wetland (non-forested, wetland)
Marsh Milkwort						
	PE	SH	G5T4	1903-08-18	1	Dry barrens (partly forested, upland),Open wetland, not coastal nor rivershore (non-forested, wetland)
Missouri Rockcress						
	T	S1	G5?Q	1905-06-11	5	Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)
Mountain Honeysuckle						
	E	S2	G5	2015-07-16	16	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S2	G5	2015-07-07	17	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Parker's Pipewort						
	SC	S3	G3	1924-08-20	8	Tidal wetland (non-forested, wetland)
Pitch Pine Bog						
	<null>	S2	G3G5	2012-07-31	16	Forested wetland,Coastal non-tidal wetland (non-forested, wetland)
Tidal Marsh Estuary Ecosystem						
	<null>	S3	GNR	2011-08-25	8	Tidal wetland (non-forested, wetland)
Variable Sedge						

Rare and Exemplary Botanical Features within 4 miles of

Project: Camelot Farms Subdivision, Portland, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
	E	S1	G3	1911	8	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
	E	S1	G3	1911-06-29	9	Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)
Water-plantain Spearwort						
	PE	SH	G4	1862-08	3	Open water (non-forested, wetland)
Wild Leek						
	SC	S3	G5	2006-05-10	19	Hardwood to mixed forest (forest, upland),Forested wetland

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

S3 Rare in Maine (20-100 occurrences).

S4 Apparently secure in Maine.

S5 Demonstrably secure in Maine.

SU Under consideration for assigning rarity status; more information needed on threats or distribution.

SNR Not yet ranked.

SNA Rank not applicable.

S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.

G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

G3 Globally rare (20-100 occurrences).

G4 Apparently secure globally.

G5 Demonstrably secure globally.

GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.

T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

December 2, 2016

Olivia Dawson
Acorn Engineering, Inc.
158 Danforth Street
Portland, ME 04102

RE: Information Request - Camelot Farms subdivision, Portland

Dear Olivia:

Per your request received November 10, 2016, 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 *Camelot Farms subdivision project* in Portland. For purposes of this review, we are assuming that the development will occur primarily within maintained fields and tree clearing will not be necessary. If tree clearing is ultimately proposed, please contact our Department for further guidance

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be directly affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats that would be directly affected by your project.

Fisheries Habitat

Without details, it is difficult to know what impacts your project may have on the Stroudwater River. That being said, MDIFW makes the following general recommendations as they pertain to work around rivers and streams.

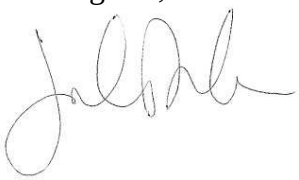
Maintaining buffers along coldwater fisheries is critical to the protection of water temperatures, water quality, and inputs of coarse woody debris necessary to support conditions required by brook trout. We generally recommend that a 100-foot undisturbed vegetated buffer be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work or work within 100 feet of streams occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and

Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

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,



John Maclaine
Biologist

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

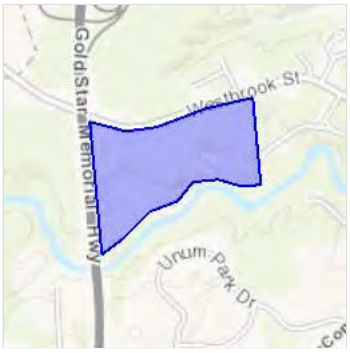
Project information

NAME

Camelot Farms

LOCATION

Cumberland County, Maine



DESCRIPTION

Residential development

Not for consultation

Local office

Maine Ecological Services Field Office

(207) 469-7300
(207) 902-1588

MAILING ADDRESS

P. O. Box A
East Orland, ME 04431

PHYSICAL ADDRESS

306 Hatchery Road
East Orland, ME 04431

http://www.fws.gov/mainefieldoffice/index.html

Endangered species

This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.

Section 7 of the Endangered Species Act **requires** Federal agencies to *"request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action"* for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Review section in IPaC or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by creating a project and making a request from the Regulatory Review section.

Listed species[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis **No critical habitat** has been designated for this species. http://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

Not for consultation

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location, not a list of every bird species you may find in this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus http://ecos.fws.gov/ecp/species/6582	On Land: Breeding
American Oystercatcher Haematopus palliatus http://ecos.fws.gov/ecp/species/8935	On Land: Breeding
Bald Eagle Haliaeetus leucocephalus http://ecos.fws.gov/ecp/species/1626	On Land: Year-round
Bay-breasted Warbler Dendroica castanea	On Land: Breeding
Black-billed Cuckoo Coccyzus erythropthalmus http://ecos.fws.gov/ecp/species/9399	On Land: Breeding

Blue-winged Warbler Vermivora pinus	On Land: Breeding
Canada Warbler Wilsonia canadensis	On Land: Breeding
Great Cormorant Phalacrocorax carbo	On Land: Wintering
Hudsonian Godwit Limosa haemastica	At Sea: Migrating
Least Bittern Ixobrychus exilis http://ecos.fws.gov/ecp/species/6175	On Land: Breeding
Nelson's Sparrow Ammodramus nelsoni	On Land: Breeding
Olive-sided Flycatcher Contopus cooperi http://ecos.fws.gov/ecp/species/3914	On Land: Breeding
Peregrine Falcon Falco peregrinus http://ecos.fws.gov/ecp/species/8831	On Land: Breeding
Pied-billed Grebe Podilymbus podiceps	On Land: Breeding
Prairie Warbler Dendroica discolor	On Land: Breeding
Purple Sandpiper Calidris maritima	On Land: Wintering
Saltmarsh Sparrow Ammodramus caudacutus	On Land: Breeding
Short-eared Owl Asio flammeus http://ecos.fws.gov/ecp/species/9295	On Land: Wintering
Snowy Egret Egretta thula	On Land: Breeding
Upland Sandpiper Bartramia longicauda http://ecos.fws.gov/ecp/species/9294	On Land: Breeding
Willow Flycatcher Empidonax traillii http://ecos.fws.gov/ecp/species/3482	On Land: Breeding
Wood Thrush Hylocichla mustelina	On Land: Breeding

Not for consultation

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details

about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Not for consultation

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Not for consultation

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

December 9, 2016

Olivia Dawson, E.I.
Acorn Engineering, Inc.
P.O. Box 3372
Portland, ME 04104

Project: MHPC# 1678-16 - Camelot Holdings, Inc., 1700 Westbrook Street; redevelop existing farm with single family homes

Town: Portland, ME

Dear Ms. Dawson:

In response to your recent request, I have reviewed the information received November 16, 2016 to initiate consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

In order to complete our review, we are requesting the following information:

1. Submit photos (keyed to a topographic map) of any buildings that are fifty years or older that are on or adjacent to the project site. If no such buildings exist, please indicate this in writing.

2. An archeological Phase I survey for prehistoric archaeological sites is necessary for all land on this project area below the 40 foot contour or within 100 yards of the Stroudwater River. A list of approved archaeologists is enclosed. Please note that we must review the proposal/scope of work for this survey that you choose. Please contact Dr. Arthur Spiess, Senior Archaeologist arthur.spiess@maine.gov with any questions.

Once this information is received, we will forward a response regarding the results of our evaluation.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

Enc.

PHONE: (207) 287-2132

FAX: (207) 287-2335

AGENCY INFORMATION

- About Us
- National Register of Historic Places
- Project Review
  - Architectural & Archaeological Consultants
    - Architectural Consultants
    - Historic Archaeologists
    - Pre-Historic Archaeologists
  - Architectural Survey Guidelines
  - Architectural Survey Forms
  - Archaeological Survey Guidelines
  - Required Materials
  - Topographic Quad Maps
  - Map/Photo Examples
- Tax Incentives
- Grants
- Restoration Resources
- Archaeology
- Architectural Survey
- Certified Local Government (CLG) Program
- Preservation Planning
- Laws & Regulations
- Historic Preservation Easements
- Office of the State Historian
- Biographical Dictionary of Architects in Maine

Home > Project Review > Architectural & Archaeological Consultants > Prehistoric Archaeologists

Prehistoric Archaeologists

Prehistoric Archeologists Approved List: Review and Compliance Consulting/Contracting (Active)

LEVEL I

Mr. Michael Brigham
P.O. Box 274
New Vineyard, ME 04956-0274
Email: brigham@nearchaeology.com

James A Clark
TRC/Northeast Cultural Resources
71 Oak Street
Ellsworth, ME 04605
Phone: 207-667-4055
Email: clark.ja@gmail.com

Ms Edna Feighner
5 Thomas Street, Apt 3
Concord, NH 03301
Phone: 603-228-8091
Email: Edna.Feighner@dcr.nh.gov

Ms. Sarah Haugh
Tetra Tech
451 Presumpscot Street
Portland, ME 04103
Phone: 207-879-9496 x238
Email: sarah.haugh@tetratech.com

Mark Penney
The Louis Berger Group Inc.
20 Corporate Woods Blvd.
Albany, NY 12211-2370
Phone: 518-432-9545
Email: mpenney@louisberger.com

Mary Lynne Rainey
RGA Cultural Resource Consultants
1376 Kingstown Road
Wakefield, RI 02879
Phone: 401-487-1636
Email: marylynne.rainey@verizon.net

Jacob Tumelaire
Independent Archaeological Consulting
801 Islington Street
Suite 31
Portsmouth, NH 03801
Phone: 603-430-2970
Email: jtumelaire@iac-llc.net

Mr. Brian Valimont
New England Archaeology Co. LLC
128R Main Street
Plaistow, NH 03865
Phone: 603-560-8720
Email: Newarch1@comcast.net

LEVEL II

Geraldine Baldwin
4 Dickson Lane
Bedford Corners, NY 10549
Phone: 914-271-0897
Email: GeraldineBaldwin@aol.com

Robert N. Bartone
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, ME 04938
Phone: 207-860-4032
Fax: 207-860-4031
Email: bartone@nearchaeology.com

Dr. William R. Belcher
U.S. Army CILHI
310 Worchester Avenue, Bldg 45
Hickam AFB, HI 96853-5530
Email: wbelcher@msn.com

Dr. Bruce J. Bourque
Maine State Museum
83 State House Station
Augusta, ME 04333-0083
Phone: 207-287-3909
Email: bbourque@abacus.bates.edu

Dr. Victoria Bunker
P.O. Box 16
New Durham, NH 03809-0016
Phone: 603-776-4306
Email: vbi@worldpath.net

Dr. Ellen Cowie
Northeast Archaeology Research Center
382 Fairbanks Road
Farmington, ME 04938
Phone: 207-860-4032
Fax: 207-860-4031
Email: cowie@nearchaeology.com

Dr. Christopher Donta
HRA Gray and Pape, LLC
60 Valley Street., Suite 103
Providence, RI 02909
Phone: 401-279-990
Email: cdonta@graypape.com

Dr. Dianna Doucette
Public Archaeology Laboratory
26 Main Street
Pawtucket, RI 02860
Phone: 401-728-8780
Email: ddoucette@palinc.com

Dr. Stuart A. Eldridge
Power Engineers, Inc.
303 US Route 1, Suite 2A
Freeport, ME 04032
Phone: 207-869-1261
Email: Stuart.Eldridge@powereng.com
Website: http://www.powereng.com

Jacob Freedman
SEARCH, Inc.
55 Melville Avenue
Boston, MA 02124
Phone: 207-266-7709
Email: jacob@searchinc.com

Website: www.searchinc.com

Dr. Robert Goodby
Monadnock Archaeological Consulting
16 Fox Hill Road
Stoddard, NH 03464
Phone: 603-446-2366
Email: rgoodby@monadarch.com
Website: http://www.monadarch.com

Dr. Nathan Hamilton
Department of Geography & Anthropology
University of Southern Maine
Gorham, ME 04038
Phone: 207-780-5324
Email: casco@usm.maine.edu

Karen Mack
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth, ME 04605
Phone: 207-667-4055
Fax: 207-667-0485
Email: kemack@trcsolutions.com

Edward Moore
TRC/Northeast Cultural Resources
71 Oak Street
Ellsworth, ME 04605
Fax: 207-667-0485

David Putnam
47 Hilltop Road
Chapman, ME 04757
Phone: 207-762-6078
Email: putnamd@umpi.edu

Dr. Richard Will
TRC/Northeast Cultural Resources
71 Oak St
Ellsworth, ME 04605
Phone: 207-667-4055
Fax: 207-667-0485
Email: rwill@trcsolutions.com

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Att. I

Camelot Holdings, LLC

March 30, 2017

Planning and Urban Development Department
Attn: Shukria Weir
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

Subject: Housing Attainability Summary – R1 vs. R3 –Camelot Farm Neighborhood

Dear Shukria,

The following is a summary of the differences in development approach when looking at the current land use designation of R1 as compared to the proposed land use designation of R3 with Open Space.

R1 Concept – 45 Acre Parcel

- 84 Home Lots – 1.8 dwelling units per acre
- 100% Privately Held without open space
- Lots along the river would have private direct access to the resource.
- 25% more road/infrastructure to access home lots
- More intense earthwork activities across the site
- Maximum lot coverage permits larger house footprints (3,000 sft +/- minimum)
- It is estimated that the housing sizes/types will be within 150%-200% of the Workforce Housing Unit price point.

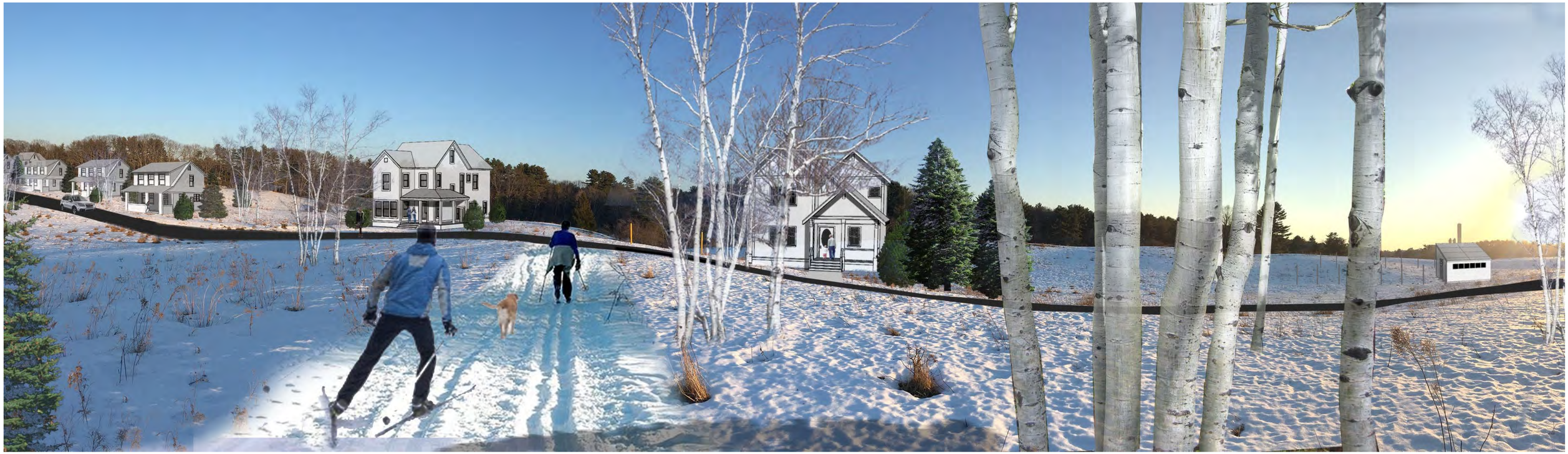
R3 Concept – 45 Acre Parcel

- 95 Home Lots – 3.8 dwelling units per acre
- Approximately 55% Privately Held, 45 % Open Space with Public Access and buffer spaces
- River Access would be open to the public
- More efficient road/infrastructure access to house lots
- Less disturbed earthwork activity across the site resulting in better preservation of the existing conditions near the resource
- Maximum lot coverage permits more compact/efficient house footprints (2,000 sft +/- minimum)
- It is estimated that the housing sizes/types will be within 90%-120% of the Workforce Housing Unit price point.

In addition to items identified within other application materials regarding compliance with the City comprehensive plan, the lack of this housing product offer, and providing public access to a currently privately held parcel, we feel that the combination of R3 or R5A with open space would provide the best opportunity to collectively create a traditional neighborhood with a modern feel from which the pride derived would be mutually beneficial.

Sincerely,

Michael Barton

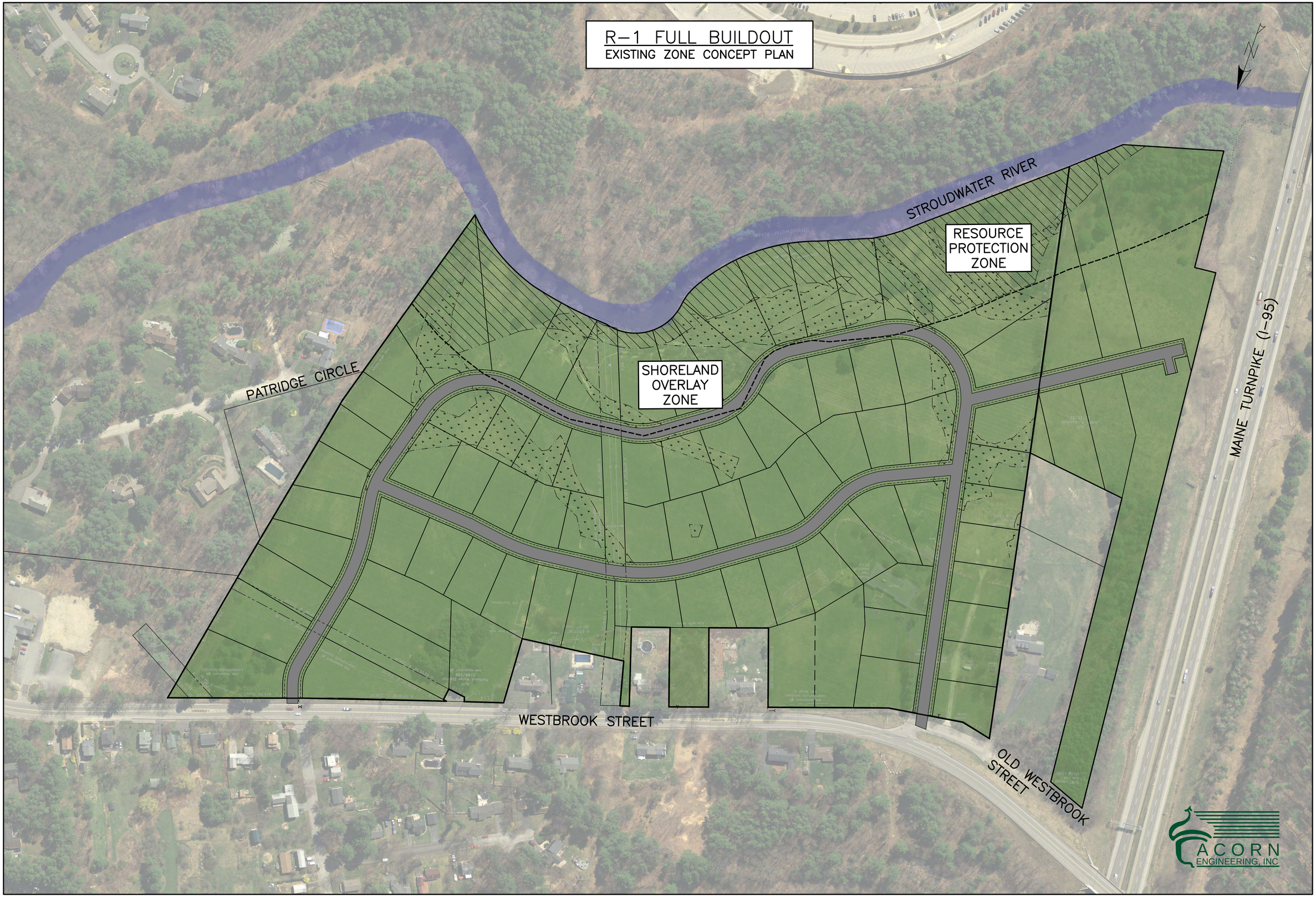


CAMELOT FARMS

April 6th, 2017

Camelot Holdings, LLC

R-1 FULL BUILDOUT
EXISTING ZONE CONCEPT PLAN



ISSUED FOR	BY DATE
PRELIM APP	WHS 12/9/16
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 3/28/17

DRAWING NAME: SITE PLAN – R-1 FULL BUILDOUT CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

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

ACORN ENGINEERING, INC.
158 DANFORTH ST PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

DRAWING NO.

R-2 FULL BUILDOUT
ZONE CHANGE CONCEPT PLAN

ISSUED FOR	BY	DATE
FINAL APP	WHS	2/14/17
WORKSHOP III	WHS	3/29/17

DRAWING NAME: SITE PLAN – R-2 FULL BUILDOUT CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

N

ACORN ENGINEERING, INC.

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

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

DRAWING NO.

ACORN ENGINEERING, INC

R-3 FULL BUILDOUT
ZONE CHANGE CONCEPT PLAN

STROUDWATER RIVER

RESOURCE PROTECTION ZONE

PRUD LOT (15 UNITS)

SHORELAND OVERLAY ZONE

PATRIDGE CIRCLE

MAINE TURNPIKE (I-95)

WESTBROOK STREET

OLD WESTBROOK STREET

ACORN ENGINEERING, INC

ISSUED FOR	BY	DATE
FINAL APP	WHS	2/14/17
WORKSHOP III	WHS	3/29/17

DRAWING NAME: SITE PLAN – R-3 FULL BUILDOUT CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN BY ANY OTHER PARTY, WITHOUT THE PRIOR WRITTEN CONSENT OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

DRAWING NO.

R–5a OPEN SPACE
ZONE CHANGE CONCEPT PLAN

STROUDWATER RIVER

RESOURCE PROTECTION ZONE

SHORELAND OVERLAY ZONE

3–FAMILY LOTS (3 UNITS)

PRUD LOTS (14 UNITS)

DUPLEX LOTS (2 UNITS)

MULTI–UNIT LOTS (14 UNITS)

PATRIDGE CIRCLE

MAINE TURNPIKE (I–95)

WESTBROOK STREET

OLD WESTBROOK STREET

ACORN ENGINEERING, INC

ISSUED FOR	BY	DATE
WORKSHOP III	WHS	3/27/17

DRAWING NAME: SITE PLAN – R–5a OPEN SPACE CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

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DRAWN BY:	OJD
CHECKED BY:	WHS

DRAWING NO.

R-3 OPEN SPACE
ZONE CHANGE CONCEPT PLAN

STROUDWATER RIVER

RESOURCE PROTECTION ZONE

SHORELAND OVERLAY ZONE

PRUD LOT (13 UNITS)

PATRIDGE CIRCLE

WESTBROOK STREET

OLD WESTBROOK STREET

MAINE TURNPIKE (I-95)

ACORN ENGINEERING, INC

ISSUED FOR	BY DATE
PRELIM APP	WHS 12/9/16
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 3/29/17

DRAWING NAME: SITE PLAN – AERIAL R-3 OPEN SPACE CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
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DRAWING NO.

EASEMENTS MAP
R–3 ZONE CHANGE

WESTBROOK ST

WESTBROOK ST

WESTBROOK ST

PARTRIDGE CIR

PARTRIDGE

R–3

ROS

RPZ

RIVERSIDE

STEP ONE:
ACCESS EASEMENT OVER
1714 WESTBROOK STREET

STEP TWO:
OPEN SPACE EASEMENT OVER
1700 WESTBROOK STREET

ACORN
ENGINEERING, INC

PARCEL MAP
R-3 CONCEPT LOT DIVISION

RAND RD
TECHNOLOGY PARK DR
PIERCE AVE
SWAN ST
WESTBROOK ST
SPAR LN
KINGSMARK LN
STROUDWATER RD
ROUNDABOUT LN
PENRITH RD
PARTRIDGE CIR
WINDING WAY
STARBIRD RD
CAPISIC ST
Capisic Pond Park
MACHIGONNE
HASTINGS ST
COLONIAL CT
COLONIAL RD
WOLCOTT ST
BANCROFT ST
POMEROY ST
ROCKLAND
RIVERVIEW ST
FROST ST
RABBIT RUN
CONGRESS ST
CLIFF ST
HOBART ST
FENWAY
WALDO ST
GARRISON ST
GARRISON ST EXT
OLD MAST RD
TIDE MILL RD
COBB AVE
YELLOWBIRD
RIVER'S EDGE DR
UNUM PARK DR

ACORN ENGINEERING, INC

ZONING MAP
R-3 ZONE CHANGE

I-M
RAND RD
TECHNOLOGY PARK DR
RPZ
C-24
WINDING WA
STARBIRD RD
CAPISIC ST
Capisic Pond Park
R-OS
MACHIGONNE
HASTINGS ST
COLONIAL CT
COLONIAL RD
WOLCOTT ST
BANCROFT ST
POMEROY ST
RIVERVIEW ST
R-3
FLEETWOOD
ROCKLAND
R-1
SPAR LN
KINGSMARK LN
STROUDWATER RD
PIERCE AVE
SIMAN ST
WESTBROOK ST
ROUNDABOUT LN
R-2
PENRITH RD
R-P
C-7
FROST ST
RABBIT RUN
PARTRIDGE CIR
B-1
CONGRESS ST
R-3
C-14
ALDO ST
R-5
CLIFF ST
HOBART ST
FENWAY
ROS
I-L
RIVER'S EDGE
C-8
GARRISON ST
GARRISON ST EXT
OLD MAST RD
TIDE MILL RD
COBB AVE
O-P
A-B
YELLOWBIRD

ACORN ENGINEERING, INC

Home Construction Data

Stroudwater Neighborhood
1940-2022 (Anticipated Completion Date)

Pre-1940: Approx 60 Homes	Baseline for percentage increase calculations
1940 – 1980: Approx 120 Homes	100% increase (doubling) over 40-year time span
1980 – 2005: Approx 240 Homes	100% increase (doubling) over 25-year time span
2005* – 2022: Approx 335 Homes	40% increase over 18-year time span
**Between 2005-2013 (last year of available data), 0 new homes were built within the neighborhood*	

Census Source Data: http://www.city-data.com

Representative Neighborhood Density

Stroudwater vs. Camelot Farm

	Kingsmark, River's Edge, Tide Mill, Old Mast Neighborhoods	**Camelot Farms**
Zone	R-2/R-3	R-3/ROS
House Lots	83 Lots	95 Lots
Total Neighborhood Area	52 Acres*	54 Acres**
Acres per House Lot	0.62	0.57

** Includes approximately 6 acres of open space at River's Edge Development only. Other neighborhoods are 100% privately held.*

*** Includes approximately 12 acres of R.O.S. zoned area and additional 14 acres of Open Space.*

Housing Attainability Summary

R-1 Concept - 45-Acre Parcel	R-3 Concept – 45 Acre Parcel
84 House Lots (1.8 Dwelling Units per Acre)	95 Home Lots (3.8 Dwelling Units per Acre)
100% Privately Held without Open Space	Approx 55% Privately Held, 45% Open Space with Public Access and Buffer Space
Private Access to Stroudwater River	Public Access to Stroudwater River
Approx 25% More Infrastructure & Roadways to Access Lots	More Efficient Use of Infrastructure & Roadways
More Intense Earthwork Activities Across the Site	Less Disruptive Earthwork Activities (Better Preservation of Existing Natural Resources)
Maximum Lot Coverage Permits Larger House Footprints (± 3,000 sf)	Maximum Lot Coverage Permits More Compact/Efficient House Footprints (± 2,000 sf)
Estimated Housing Size/Types will be within 150-200% of Workforce Housing Unit price point	Estimated Housing Size/Types will be within 90-120% of Workforce Housing Unit price point

Swan St

Architectural Design Examples

Craftsman Home

2,250 Square Feet, 2-Floor, 4-Bedroom Floor Plan

Bungalow Craftsman Home

1,600 Square Feet, 2-Floor, 2-Bedroom Floor Plan

Traditional Home

2,533 Square Feet, 2-Floor, 3 Bedroom Floor Plan

Craftsman Home

1,612 Square Feet, 2-Floor, 3 Bedroom Floor Plan

Local Design Examples

Classic Cape Home

1,525 - 2,047 Square Feet, 2-Floor, 3 Bedroom Floor Plan

Village Green, Cumberland - As-Built Plans

Edenville Home

1,800 Square Feet, 2-Floor, 3 Bedroom Floor Plan

Eastern Village, Scarborough - As-Built Plans

Abutting Neighborhood Design Examples

1533 & 1527 Westbrook Street

1,668 Square Feet, 1.5-Floor, 3-Bedroom Floor Plan

1,584 Square Feet, 2-Floor, 3-Bedroom Floor Plan

59 Kingsmark Lane

2,228 Square Feet, 1-Floor, 3-Bedroom Floor Plan

10 & 18 Pierce Ave

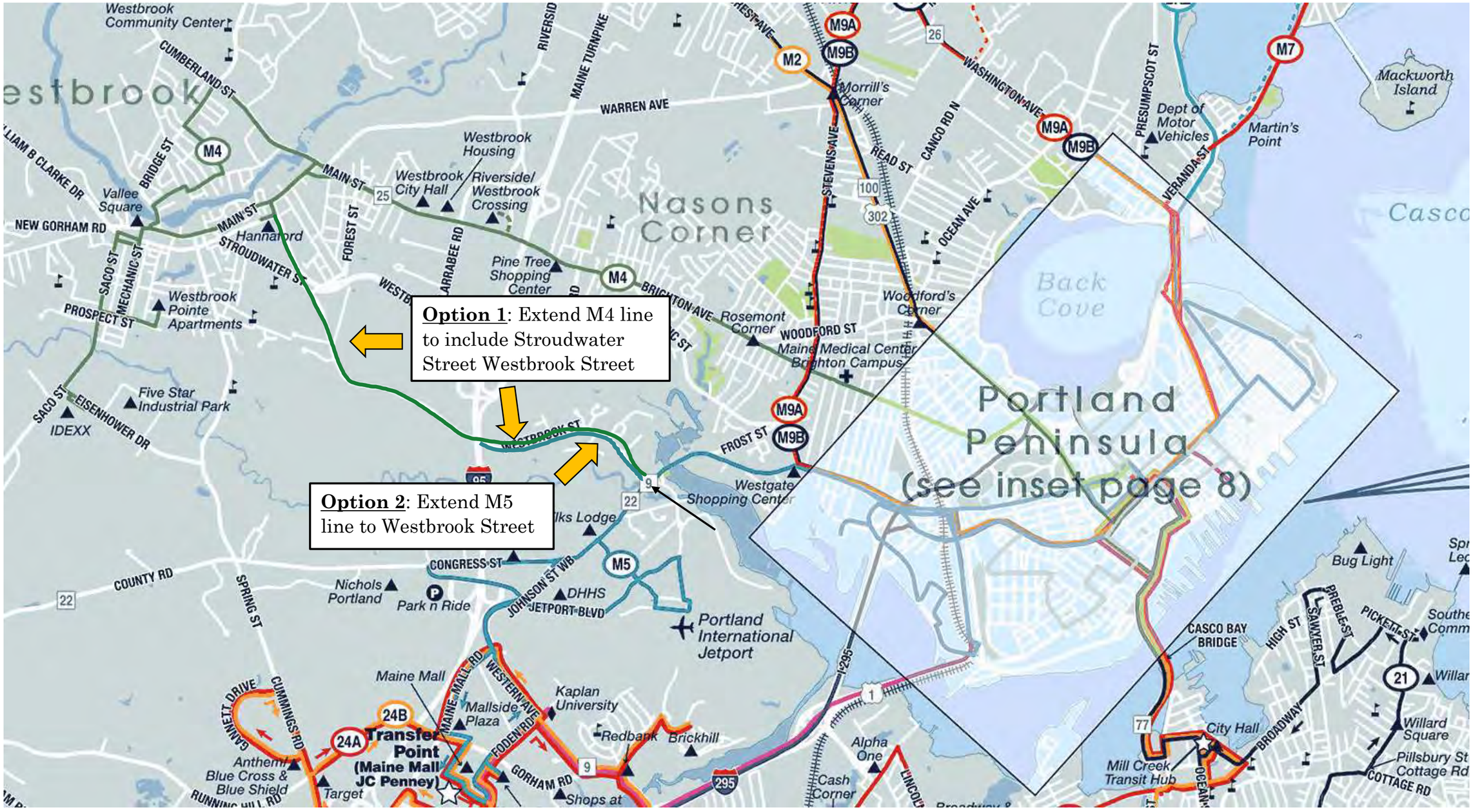
1,104 Square Feet, 1-Floor, 3 Bedroom Floor Plan

1,200 Square Feet, 1-Floor, 3 Bedroom Floor Plan

1646 Westbrook Street

1,365 Square Feet, 1.5-Floor, 3 Bedroom Floor Plan

Potential Metro Bus Transit System Expansion



Potential Portland Trails System Expansion

Cumberland Mills
Deer Hill
Main St
Westbrook Arterial
Forest St
St. Hyacinthe Cemetery
Woodlawn Cemetery
Brighton
Rand
Sagamore Village
Nasons Corner
Evergreen Cemetery
Ludlow St
Hall School
Capisic Brook
Deering
Baxter Woods
Baxter Burial Site
Lincoln Middle School
Longfellow Elementary School
Presumpscot Park
Deering High School
Rosemont
Tewell Falls
Fore River Sanctuary
Capisic Pond Park
Capisic St
Brighton Ave
Woodford St
Deering Highlands
Brighton Corner
Oakdale
Falmouth St
USM Bedford St
Dougherty Athletic Field
Libbytown
Stroudwater
Westbrook St
Congress St
Frost St
Section closed in winter
Portland
South Portland
Johnson St
Portland International Jetport
Portland Transportation Center Bus/Train Station
Greyhound Bus Station
Maine Medical Center
Mercy Hospital
Mercy Hosp.
West End
Western Promenade
Western Cemetery
Harborview Park
Casco Bay Bridge
West Commercial
Danforth St
Fore River Parkway
FORE
BACK COVE
PORTLAND HARBOR
Tukey's Bridge
East Deering
Payson Park
Woodfords
Woodfords Corner
Deering Oaks
Eastern Cemetery
Casco Bay Ferry Termin
Read St
Walton St
Forest Ave
Stevens Ave
Ocean Ave
Baxter Blvd
Mackworth St
Vannah Ave
Deering Ave
Preble St Ext
Marginal Way
Franklin
Commercial St
Park Ave
High St
State
Brackett St
Veranda St
Sherwood
Washington
Congress
Cumberland
Portland High School
Portland Observatory
Maine State Pier
Old Port
Pine St
Danforth
Bedford
Cedar
Spring
Pleasant
Free
Union
Fore
Exchange
Middle
Pearl
Federal
Market
Temple
Oxford
Chestnut
Pine
Adams
Eastern
Promenade
Fort Sumter
Cumberland
Congress
Portland Observatory
Maine Narrow Gauge Railroad
Portland Pier
Deering Highlands
Ashmont St
Prospect St
Revere St
Lincoln St
Coyle St
Concord St
Pleasant St
Hartley St
Codman St
Parsons Rd
Austin St
Carlyle Rd
Glockler Rd
Bay St
Front St
Albion St
Herbert St
Murray St
Rosedale
Canco
Ocean Avenue Elementary School
Chevrus High School
Catherine McAuley High School
UNE
College
Waverly
Woodford Vale
Brighton Ave
Elizabeth Rd
Bradley St
Caleb St
Colgate St
Edwards St
Scott St
Douglas
St James Street
Hobart St
Jewett
Saint John St
Valley St
Vaughan St
Waynflete School
Maine Narrow Gauge Railroad
Future Veterans Bridge alignment & trail to South Portland
Energy East
Jetport Access Road
Jetport Terminal
Brookfield School
Nasson Academy
Powell Ave
Hillcrest
Elwood
Rand
Rockland
Stroudwater
Riverside
Riverside Dr
Bluebird
Hawkins Drive
Westbrook
Warren Avenue
Centennial
Riverbank
Canco
Murray St
Rosedale
Herbert St
Albion St
Front St
Bay St
Glockler Rd
Carlyle Rd
Austin St
Parsons Rd
Codman St
Concord St
Pleasant St
Hartley St
Revere St
Lincoln St
Coyle St
Ashmont St
Prospect St
Elizabeth Rd
Scott St
Caleb St
Colgate St
Edwards St
Bradley St
Hobart St
Jewett
Riverside Dr
Hawkins Drive
Bluebird

(Public Access Easement – 1700 Westbrook)

KNOW ALL PERSONS BY THESE PRESENTS, that **DIVERSACORP, LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of 5 Stone Pony Circle, Saco, Maine (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the **PORTLAND TRAILS**, a Maine non-profit corporation having a mailing address of 305 Commercial Street, Portland, Maine, its successors and assigns, (the "Grantee" or the "PT"), a non-exclusive public access easement for the purpose described below, over portions of Grantor's property at 1700 Westbrook Street, in Portland, Maine, more particularly described as "Proposed 30' Public Access Easement" in Exhibit A attached hereto ("Easement Area"), said actual traveled paths or surfaces to be as depicted in the drawing attached hereto as Exhibit B and made a part hereof ("Pathway").

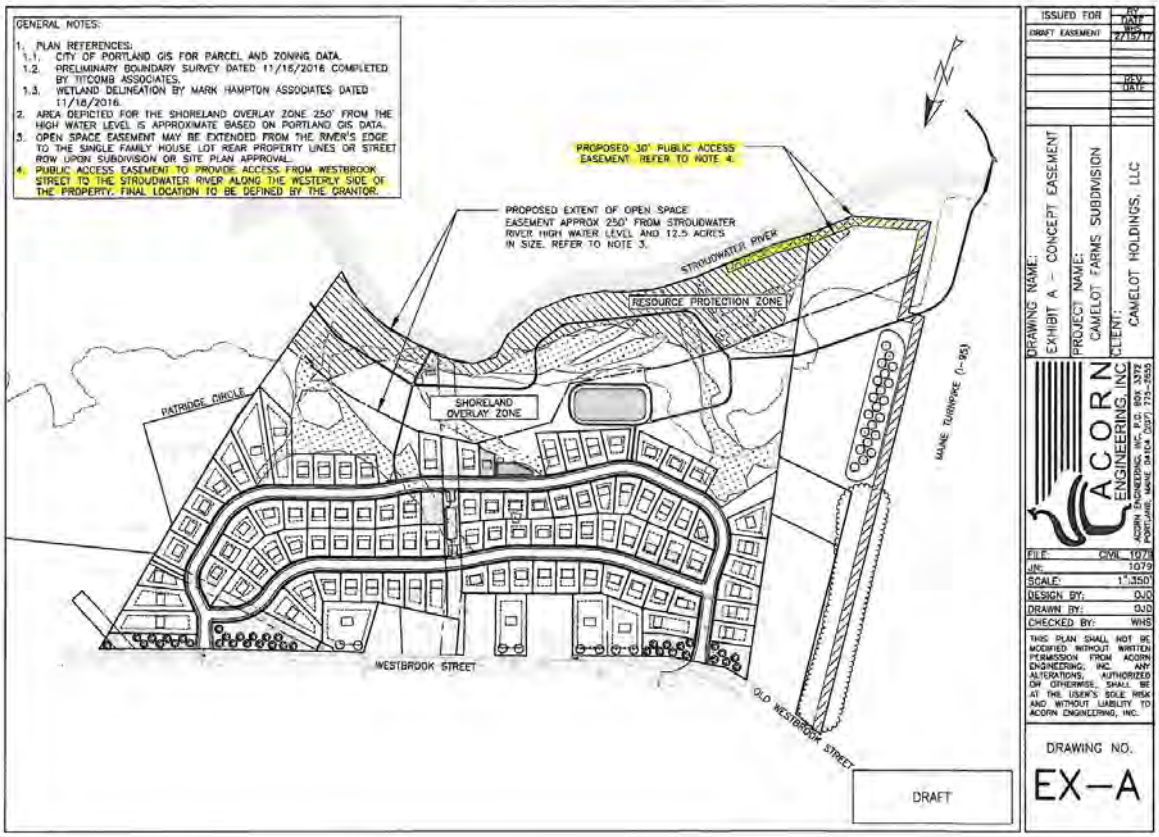
The purpose of the public access easement granted herein is to provide physical public access via the Pathway to the shore of the Stroudwater River for pedestrians within the Easement Area, which Pathway may be improved by Grantee at Grantee's sole and exclusive expense, including, without limitation, Grantee or its assigns installing an ADA compliant access way for pedestrians, provided that impermeable surfaces shall be only when absolutely necessary. Maintenance, repair and snow removal responsibilities within the Easement Area and Pathway shall belong solely to the Grantee, its successors and assigns. Land within the Easement or Pathway area may be disturbed, graded, regarded, seeded, or otherwise managed by Grantor for all purposes necessary for development of the Camelot Farm lot located generally at 1700 Westbrook Street, Portland, Maine, or in any fashion otherwise permitted by land-use and zoning laws, but in all cases, the disturbance shall be in form and scope which is the least intrusive as commercially reasonable, and shall be repaired, restored, or replanted, as applicable by Grantor. It is the intent of this easement to tie into a similar easement situated at 1714 Westbrook Road, recorded of near or even date herewith.

This easement is given for recreational use and the Grantor and Grantee claim the rights and protections against liability in accordance with Title 14 MRS §159-A to the maximum extent permitted by law.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, _____, the Grantor has caused this instrument to be executed by _____, its _____ thereunto duly authorized, this ____ day of _____, 2017.

(*Exhibit A Appears Below*)



ISSUED FOR	BY DATE
DRAFT EASEMENT	WHS 7/15/17
	REV. DATE

DRAWING NAME: EXHIBIT A – CONCEPT EASEMENT
PROJECT NAME: CAMELOT FARMS SUBDIVISION
CLIENT: CAMELOT HOLDINGS, LLC

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

FILE:	CIVIL 1079
JN:	1079
SCALE:	1"=350'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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

DRAWING NO.
EX–A

(Public Access Easement – 1714 Westbrook)

KNOW ALL PERSONS BY THESE PRESENTS, that **DIVERSACORP, LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of 5 Stone Pony Circle, Saco, Maine (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the **PORTLAND TRAILS**, a Maine non-profit corporation having a mailing address of 305 Commercial Street, Portland, Maine, its successors and assigns, (the "Grantee" or the "PT"), a non-exclusive public access easement for the purpose described below, over portions of Grantor's property at 1714 Westbrook Street, in Portland, Maine, more particularly described as "Proposed 30' Public Access Easement" in Exhibit A attached hereto ("Easement Area"), said actual traveled paths or surfaces to be as depicted in the drawing attached hereto as Exhibit B and made a part hereof ("Pathway").

The purpose of the public access easement granted herein is to provide physical public access via the Pathway to the shore of the Stroudwater River for pedestrians within the Easement Area, which Pathway may be improved by Grantee at Grantee's sole and exclusive expense, including, without limitation, Grantee or its assigns installing an ADA compliant access way for pedestrians, provided that impermeable surfaces shall be only when absolutely necessary. Maintenance, repair and snow removal responsibilities within the Easement Area and Pathway shall belong solely to the Grantee, its successors and assigns. Land within the Easement or Pathway area may be disturbed, graded, regarded, seeded, or otherwise managed by Grantor for all purposes necessary for development of the Camelot Farm lot located generally at 1700 Westbrook Street, Portland, Maine, or in any fashion otherwise permitted by land-use and zoning laws, but in all cases, the disturbance shall be in form and scope which is the least intrusive as commercially reasonable, and shall be repaired, restored, or replanted, as applicable by Grantor. It is the intent of this easement to tie into a similar easement situated at 1700 Westbrook Road, recorded of near or even date herewith.

This easement is given for recreational use and the Grantor and Grantee claim the rights and protections against liability in accordance with Title 14 MRS §159-A to the maximum extent permitted by law.

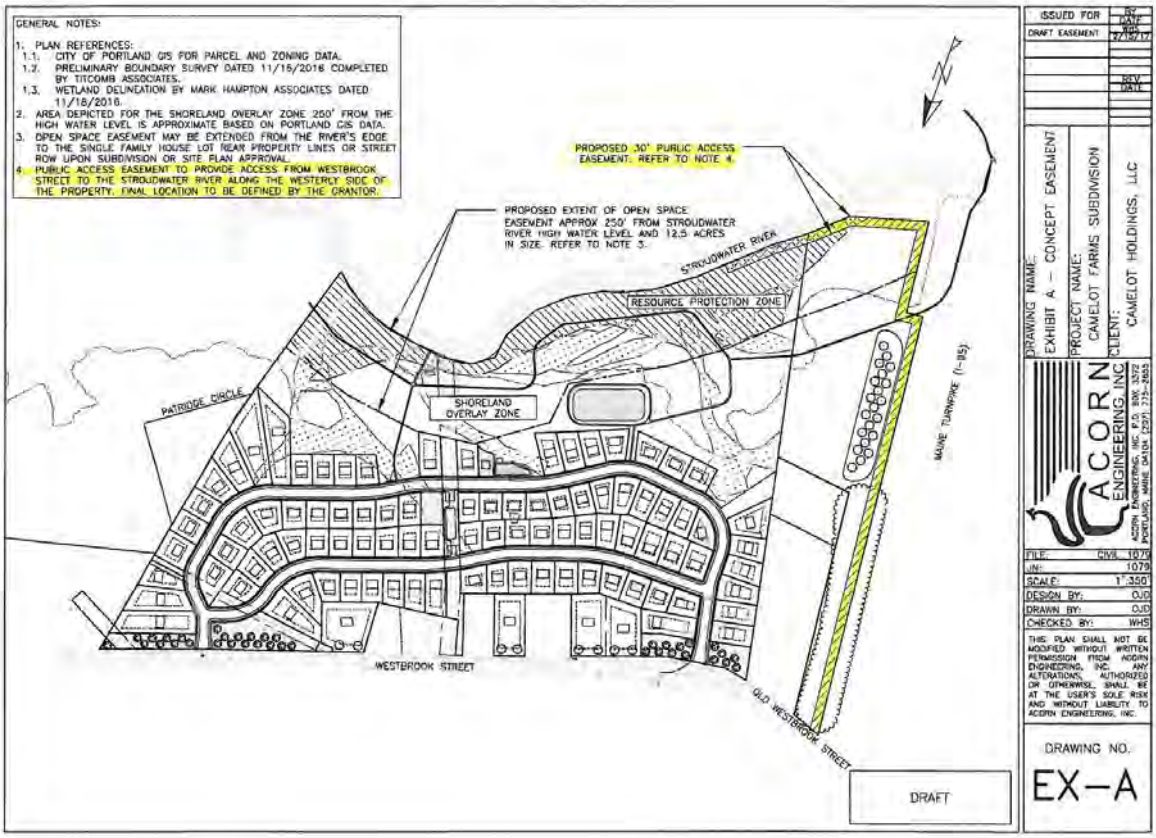
TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, _____, the Grantor has caused this instrument to be executed by _____, its _____ thereunto duly authorized, this ____ day of _____, 2017.

(*Exhibit A Appears Below*)

DRAFT

NOTE THAT THIS EXHIBIT WILL BE REDRAWN BY ACORN



(Draft Open Space Easement – One for Each Parcel – 1700)

KNOW ALL PERSONS BY THESE PRESENTS, that **DIVERSACORP, LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of 5 Stone Pony Circle, Saco, Maine (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the **CITY OF PORTLAND**, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine (the "Grantee" or the "City"), a non-exclusive open space easement for the purpose described below, over portions of Grantor's property at or about 1700 Westbrook Street, in Portland, Maine, said easement area being the greater of: (a) the area shown falling within the bounds of the ROS zone as depicted on Exhibit A, or; (b) the Open Space as so defined on any subdivision plan recorded by Grantor or any affiliate or subsidiary thereof, or any successor in title thereto, for development of 1700 Westbrook Street (in the case of (a) or (b) the "Easement Area". For the avoidance of doubt, the Easement shall initially encumber the ROS zone in Exhibit A, and shall automatically extend to encumber the subdivision "Open Space" contemplated in (b) above immediately upon filing said subdivision plan. Grantee shall not be obligated to take any further action in order for this Easement to extend beyond the ROS zone.

The purpose of the open space easement granted herein is to provide a meaningful areas of undeveloped open space along the Stroudwater River corridor. Land within the Easement area may be disturbed, graded, regarded, seeded, or otherwise managed by Grantor for all purposes necessary for development of the Camelot Farm lot located generally at 1700 Westbrook Street, Portland, Maine, or in any fashion otherwise permitted by land-use and zoning laws, but in all cases, the disturbance shall be in form and scope which is the least intrusive as commercially reasonable. This easement is not a conservation easement. Neither Grantor nor Grantee has any obligation to maintain the Easement Area, except as Grantor may be required to repair or replant areas disturbed during development. The parties agree that this Easement shall in no way impair any restrictions or requirements imposed by local ordinance, state statute, or federal law, as the same relate to activities within the Easement Area. Nothing in this easement shall prevent the pipeline company having prior rights through the Easement Area from exercising its rights to the pipeline. Nothing in this open space easement shall inhibit the public access easement granted prior hereto to Portland Trails for access to and from said Stroudwater River.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, _____, the Grantor has caused this instrument to be executed by _____, its _____ thereunto duly authorized, this ____ day of _____, 2017.

(*Exhibit A Appears Below*)

DRAFT

Exhibit A

** THIS WILL BE A REVISED DRAWING SHOWING THE AREA WITHIN THE NEW ROS ZONE **

DRAFT

(Draft Open Space Easement – One for Each Parcel – 1700 / 1714)

KNOW ALL PERSONS BY THESE PRESENTS, that **DIVERSACORP, LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of 5 Stone Pony Circle, Saco, Maine (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the **CITY OF PORTLAND**, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine (the "Grantee" or the "City"), a non-exclusive open space easement for the purpose described below, over portions of Grantor's property at or about 1714 Westbrook Street, in Portland, Maine, said easement area being the greater of either: (a) the area shown falling within the bounds of the ROS zone as depicted on Exhibit A, or; (b) the Open Space as so defined on any subdivision plan recorded by Grantor or any affiliate or subsidiary thereof, or any successor in title thereto, for development of 1700 Westbrook Street (in the case of (a) or (b) the "Easement Area". For the avoidance of doubt, the Easement shall initially encumber the ROS zone in Exhibit A, and shall automatically extend to encumber the subdivision "Open Space" contemplated in (b) above immediately upon filing said subdivision plan. Grantee shall not be obligated to take any further action in order for this Easement to extend beyond the ROS zone.

The purpose of the open space easement granted herein is to provide a meaningful areas of undeveloped open space along the Stroudwater River corridor. Land within the Easement area may be disturbed, graded, regarded, seeded, or otherwise managed by Grantor for all purposes necessary for development of the Camelot Farm lot located generally at 1700 Westbrook Street, Portland, Maine, or in any fashion otherwise permitted by land-use and zoning laws, but in all cases, the disturbance shall be in form and scope which is the least intrusive as commercially reasonable. This easement is not a conservation easement. Neither Grantor nor Grantee has any obligation to maintain the Easement Area, except as Grantor may be required to repair or replant areas disturbed during development. The parties agree that this Easement shall in no way impair any restrictions or requirements imposed by local ordinance, state statute, or federal law, as the same relate to activities within the Easement Area. Nothing in this easement shall prevent the pipeline company having prior rights through the Easement Area from exercising its rights to the pipeline. Nothing in this open space easement shall inhibit the public access easement granted prior hereto to Portland Trails for access to and from said Stroudwater River.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, _____, the Grantor has caused this instrument to be executed by _____, its _____ thereunto duly authorized, this ____ day of _____, 2017.

(*Exhibit A Appears Below*)

DRAFT

Exhibit A

** THIS WILL BE A REVISED DRAWING SHOWING THE AREA WITHIN THE NEW ROS ZONE **

DRAFT

Att. L

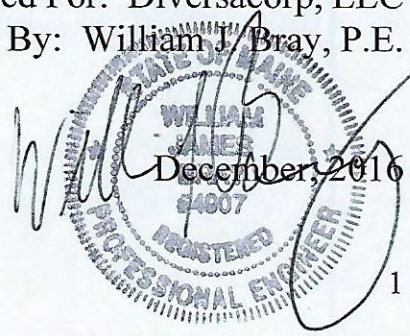
TRAFFIC IMPACT STUDY

FOR

PROPOSED

CAMELOT VILLAGE
Residential Subdivision

Prepared For: Diversacorp, LLC
Prepared By: William J. Bray, P.E.



December, 2016

INTRODUCTION

Diversacorp, LLC is proposing a residential subdivision on the existing Camelot Farms property located on outer Westbrook Street in the City of Portland. The present development plan proposes 96 single-family house lots on the 45-acre parcel of land. Access to the proposed subdivision will be provided with construction of two proposed roadways that will be offered for public street acceptance. The most easterly street connection will intersect Westbrook Street directly opposite existing Swan Street and the second street access intersects Westbrook Street approximately 1,600 feet westerly.

The purpose of this study is to examine existing traffic conditions in the general vicinity of the proposed project, estimate the total number of site trips generated by the project, and make a determination as to whether the existing transportation system can safely accommodate the added traffic demand generated by the project.

EXISTING CONDITIONS

Existing Traffic: Manual turning movement counts were conducted at the following intersections on the dates noted in 2016:

1. Swan Street @ Westbrook Street - Thursday, October 20, 2016
2. Congress Street @ Westbrook Street - Thursday, October 27, 2016

All entering traffic at both intersections was recorded in 15-minute intervals between the hours of 7:00 and 9:00 AM and between 3:00 and 6:00 PM (Copies of the field data summary sheets are attached).

Traffic data collected during the month of October requires an adjustment to reflect "*peak*" travel conditions during the summer months of July and August. MaineDOT provides factors for adjusting traffic data collected during other periods of time. MaineDOT utilizes highway classifications of I, II, or III for all State and Local roadways. Group I roadways are defined as urban roadways or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Group II roadways or arterial roads are those that see a combination of commuter and recreational traffic and; therefore, experience moderate fluctuations during the year. Group III roads or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuations. MaineDOT has designated both Westbrook and Congress Streets Group I roadways, which require the collected traffic data to be adjusted by a factor of approximately 1.08. Figure 1 illustratively depicts the estimated 2016 AM and PM design hour traffic conditions at both study intersections.

TRAFFIC ACCIDENTS

Existing Safety Trends: The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2013 through 2015) crash data for the section of Westbrook Street (Congress Street to Westbrook City Line), a distance of 1.27 miles. Their report is summarized in Table 1, as follows, and attached as an appendix to the report:

Table 1
2013 -2015 Traffic Accident Summary
(Westbrook Street)

Location	Total Crashes	Critical Rate Factor
1. Westbrook Street @ Stroudwater Road	1	0.29
2. Westbrook Street @ Penrith Road	1	0.28
3. Westbrook Street @ Congress Street	30	0.92
4. Westbrook Street btw. Swan Street and Westbrook City Line	5	0.33
5. Westbrook Street btw. Swan Street and Buttonwood Ln.	2	0.31
6. Westbrook Street btw. Penrith Rd. and Congress Street	7	1.06

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents***
- ***A Critical Rate Factor greater than 1.00***

As the data in the table presents, the incidence of traffic crashes occurring on the reviewed section of Westbrook Street does not meet MaineDOT's threshold criteria for identification of a high crash location.

SITE TRAFFIC

Site Trip Generation: Trip generation for the residential subdivision was determined based upon trip tables presented in the ninth edition of the Institute of Transportation Engineers "**TRIP GENERATION**" handbook. The ITE publication provides numerous land-use categories and the average volume of trips that are generated by each category. The following trip rates were used to calculate the trip generation of the proposed project:

Land Use #210 – Single-Unit Detached Housing
AM Peak Hour = 0.75 trips per dwelling unit
PM Peak Hour = 1.00 trips per dwelling unit

Accordingly, the proposed 96-lot residential subdivision can be expected to generate approximately 72 vehicle trips during the "*morning*" peak hour and an additional 96 trips in the "*evening*" peak hour.

Site Trip Distribution: The Institute of Transportation Engineers "**TRIP GENERATION**" handbook provides the following directional distribution rates for a single-family home during both noted peak hour time periods:

Land Use #210 – Single-Unit Detached Housing
AM Peak = 25% enter/75% exit
PM Peak = 63% enter/37% exit

Eighteen (18) trips in the AM peak hour and sixty (60) trips in the PM peak hour will enter the subdivision and the remaining trips (54 trips AM peak hour and 36 trips PM peak hour) will exit the subdivision.

Site Trip Composition: Trips generated by the proposed residential subdivision are assumed to be "*new*" or "*primary*" trips.

Site Trip Assignment: A travel model that replicates existing traffic patterns recorded for Swan Street were used in assigning vehicle trips generated by the proposed residential subdivision to the Westbrook Street corridor. The directional assignment percentages applied are presented as follows:

AM Peak Hour = 80% east/20% west
PM Peak Hour = 85% east/15% west

Figure 2 is a line diagram that depicts the assignment of the site generated traffic for both "*peak*" time periods.

FUTURE TRAFFIC

Annual Growth: The Traffic Impact Study has been prepared based upon a projected build-out year of 2022. MaineDOT's historical traffic data for the sections of both Westbrook and Congress Streets in the Stroudwater neighborhood would suggest the appropriateness of zero growth in annual traffic for the corridor. However, to ensure a conservative assessment of traffic impact, the 2016 design hour traffic volumes were increased by an annual growth rate of 1% per year to approximate future 2022 design hour traffic conditions. Figure 3 presents the estimated 2022 design hour traffic forecasts for the study intersections.

Other Development Traffic: Traffic generated by projects that have been approved by the Local Planning Board and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. Peak hour trips generated by the following projects were appropriately considered in developing an estimate of Other Development trips:

1. *The Dirigo Plaza Project*
2. *Northland Enterprises, LLC Office Development*
3. *Portland International Jetport Future Expansion*
4. *JCA Community Center*

Figure 4 provides an assignment of the trips generated by the noted projects through the study intersections.

2022 Pre-Development Traffic: 2022 Pre-Development traffic forecasts were prepared for the study intersections by combining the estimated 2022 design hour traffic forecasts depicted on Figure 3 with the Other Development trips presented on Figure 4. Figure 5 presents the 2022 pre-development traffic forecasts for the study intersections.

2022 Post-Development Traffic: 2022 Post-Development traffic forecasts were prepared for the study intersections by combining the 2022 Pre-Development travel forecasts illustrated on Figure 5 with the estimated site generated trips highlighted on Figure 2. Figure 6 presents the estimated 2022 Post-Development Traffic forecasts for the study intersections.

MOBILITY ANALYSIS

Capacity analyses of both 2022 Pre- and Post-Development traffic conditions were performed utilizing the Synchro and SimTraffic computer models. Levels of Service rankings are similar to the academic grading system, where an "A" is very good with little delay and "F" represents very poor conditions.

The following table summarizes the relationship between delay and Level of Service for a signalized intersection:

Level of Service Criteria for Signalized Intersections

Level of Service	Total Control Delay (sec/veh)
A	Up to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Existing intersection geometry, traffic signal phasing, and timing improvements most recently completed by the City, were used in conducting the level of service assessment for the forecast 2022 Pre-Development travel condition. 2022 Post-Development conditions were assessed, again, based upon existing intersection geometry and recent traffic signal phasing improvements and optimization of signal timings currently operating at the intersection. The results of the separate capacity analyses are presented in the following table 2:

Table 2
Signalized Intersection Level of Service Summary
Congress Street @ Westbrook Street
(2022 Pre- and Post-Development Travel Conditions)

	2022 Pre-Development				2022 Post-Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection/Approach	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
Congress Street @ Westbrook Street								
- Congress Street NB								
Left-Turn	36 sec.	D	45 sec.	D	41 sec.	D	52 sec.	D
Through Movement	26 sec.	C	46 sec.	D	30 sec.	C	43 sec.	D
Right-Turn	19 sec.	B	28 sec.	C	44 sec.	D	28 sec.	C
- Congress Street SB								
Through Movement	78 sec.	E	58 sec.	E	50 sec.	D	36 sec.	D
Right-Turn	75 sec.	E	66 sec.	E	42 sec.	D	41 sec.	D
- Westbrook Street EB								
Left-Turn	105 sec.	F	78 sec.	E	107 sec.	F	93 sec.	F
Through Movement	92 sec.	F	53 sec.	D	131 sec.	F	56 sec.	E
Right-Turn	86 sec.	F	21 sec.	C	89 sec.	F	16 sec.	B
- Westbrook Street WB								
Left-Turn	63 sec.	E	66 sec.	E	99 sec.	F	76 sec.	E
Through Movement	71 sec.	E	90 sec.	F	71 sec.	E	75 sec.	E
Right-Turn	n/a		47 sec.	D	22 sec.	C	49 sec.	D
Overall Intersection	**71 sec.**	**E**	**80 sec.**	**E**	**57 sec.**	**E**	**56 sec.**	**E**

The Congress Street/Westbrook Street intersection is projected to operate overall at Level of Service E travel conditions under both 2022 Pre-and Post-development travel conditions. Overall intersection delay values in excess of 70 seconds are expected under the forecast 2022 Pre-development travel condition. Traffic signal timing optimization improvements applied in completing the 2022 Post-Development level of service assessment demonstrate the overall benefits of future timing adjustments at the intersection.

The following table summarizes the relationship between delay and Level of Service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Total Control Delay (sec/veh)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The following table 3 summarizes the relationship between delay and Level of Service for an unsignalized intersection:

Table 3
Level of Service Summary
2022 Pre and Post-Development Conditions

	2022 Pre-Development				2022 Post-Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection/Approach	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
1. Westbrook Street/Swan Street (3-way intersection)								
- Westbrook Street EB	1 sec.	A	1 sec.	A	n/a	n/a	n/a	n/a
- Westbrook Street WB	1 sec.	A	1 sec.	A	n/a	n/a	n/a	n/a
- Swan Street	7 sec.	A	8 sec.	A	n/a	n/a	n/a	n/a
- **Overall Intersection.**	**1 sec.**	**A**	**1 sec.**	A	n/a	n/a	n/a	n/a
2. Westbrook Street/Subdivision East Access/Swan Street								
- Westbrook Street EB	n/a	n/a	n/a	n/a	3 sec.	A	1 sec.	A
- Westbrook Street WB	n/a	n/a	n/a	n/a	1 sec.	A	1 sec.	A
- Swan Street SB	n/a	n/a	n/a	n/a	8 sec.	A	13 sec.	B
- Subdivision East Access	n/a	n/a	n/a	n/a	7 sec.	A	5 sec.	A
- **Overall Intersection**	n/a	n/a	n/a	n/a	**2 sec.**	A	**1 sec.**	A
3. Westbrook Street/Subdivision West Access								
- Westbrook Street EB	n/a	n/a	n/a	n/a	1 sec.	A	1 sec.	A
- Westbrook Street WB	n/a	n/a	n/a	n/a	1 sec.	A	3 sec.	A
- Subdivision West Access	n/a	n/a	n/a	n/a	8 sec.	A	4 sec.	A
- **Overall Intersection**	n/a	n/a	n/a	n/a	**1 sec.**	A	**2 sec.**	A

Each of the three unsignalized study intersections highlighted in the preceding table are expected to operate at the "*best*" level of service (Level of Service A) experiencing very minimal overall intersection delay.

VEHICLE SIGHT DISTANCE

The Maine Department of Transportation's Highway Entrance and Driveway Rules, require the following sight distances 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

Sightline measurements were conducted at both proposed subdivision road intersections with Westbrook Street and compared with required sight distance standards promulgated by the Maine Department of Transportation. Westbrook Street is posted at 35mph across the full frontage of the proposed residential subdivision, requiring a minimum unobstructed sightline of 305 feet. Sightline measurements in excess of 400 feet were measured from the proposed centerline of both subdivision street connections with Westbrook Street.

AUXILIARY LANE WARRANT ANALYSIS

The Maine Department of Transportation has published a warrant for auxiliary left-turn lanes in their December 2004 Highway Design Manual. The warrants are predicated upon the volume of two-way traffic traveling on the designated highway and the volume of left-turning vehicles. Figure 8-19 (Posted Speed Limit of 40 mph) from MaineDOT's referenced design manual was used in conducting the analysis (A copy of the chart with the superimposed traffic values is attached as an appendix to the report). An analysis was completed to determine if predicted "*build*" left-turn entry volumes to both proposed subdivision streets from the westbound approach of Westbrook Street meet MaineDOT's design guidelines for a dedicated left-turn lane. The traffic values applied in conducting the analyses and the results are presented in the following table 4:

Table 4
Left-Turn Warrant Assessment
Westbrook Street at Subdivision Entrance(s)

Lane Warrant Values	Easterly Subdivision Entrance		Westerly Subdivision Entrance	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Va (Advancing Volume)	241	738	238	703
Vo (Opposing Volume)	728	283	711	272
Left-Turn Percentage	3%	4%	3%	3%
Warrant Status	Warrant Not Met	Warrant Not Met	Warrant Not Met	Warrant Not Met

The analysis suggests that a left-turn treatment at either proposed subdivision entrance isn't required based upon projected 2022 Post-Development travel conditions.

SUMMARY

1. The proposed 96-lot residential subdivision can be expected to generate a total of 72 vehicle trips during the AM peak hour and 96 trips in the afternoon peak hour. Eighteen (18) trips in the AM peak hour and sixty (60) trips in the PM peak hour will enter the subdivision and the remaining trips (54 trips AM peak hour and 36 trips PM peak hour) will exit the subdivision.

2. The three-year (2013 through 2015) roadway safety audit completed for the 1.27-mile section of Westbrook Street (Westbrook City Line to Congress Street) shows the frequency of reported traffic crashes at each reviewed street intersection and road section is below MaineDOT's criteria for identification of a High Crash Location.

3. The Congress Street/Westbrook Street signalized intersection is projected to operate overall at Level of Service E under forecast 2022 Pre- and Post-development traffic conditions. Expected vehicle delay values in excess of 70 seconds will occur in both peak hour time periods under Pre-development traffic loadings. The projected 2022 Post-development travel condition was tested incorporating optimized traffic signal timing changes to the intersection operation. The analysis demonstrates that an improvement in overall intersection delay can be achieved with minor adjustments in traffic signal timing. Overall vehicle delay is reduced to less than 60 seconds in both peak hour time periods, and the intersection can be expected to operate near Level of Service D travel conditions.

4. Traffic operations at both proposed street intersections with Westbrook Street will operate at the "*best*" level of service (Level of Service A) under forecast 2022 Post-development travel conditions.

5. The Maine Department of Transportation has published a warrant for auxiliary left-turn lanes in their December 2004 Highway Design Manual. The warrants are predicated upon the volume of two-way traffic traveling on the designated highway and the volume of left-turning vehicles. 2022 Post-development traffic projections at both proposed street entrance intersections with Westbrook Street were evaluated based upon MaineDOT standards and it was found that projected left-turn volumes at both street entrance intersections do not satisfy MaineDOT warrants for left-turn treatment.

6. Sightline measurements recorded at the centerline of both proposed subdivision street intersections at Westbrook Street exceed MaineDOT's non-mobility highway standard of 305 feet for a posted speed limit of 35mph.

Portland: Westbrook & Swan
Thursday October 20, 2016
Sunny with some clouds
Count By: Dawn-Marie Fahey

File Name : Portland Westbrook & Swan AM 102016
Site Code : 00102016
Start Date : 10/20/2016
Page No : 5

	Swan From North			Westbrook Street From East			Westbrook Street From West			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	**2**	**3**	**1**	**49**	**50**	**162**	**1**	**163**	**216**
07:30 AM	1	2	3	1	44	45	123	0	123	171
07:45 AM	1	2	3	1	40	41	161	0	161	205
08:00 AM	0	1	1	1	42	43	137	0	137	181
Total Volume	3	7	10	4	175	179	583	1	584	773
% App. Total	30	70		2.2	97.8		99.8	0.2		
PHF	.750	.875	.833	1.00	.893	.895	.900	.250	.896	.895

X 1.08

3 7 4 189 630 1

30% 70%

3 7 80%

4

20% 1

101
1.01
101
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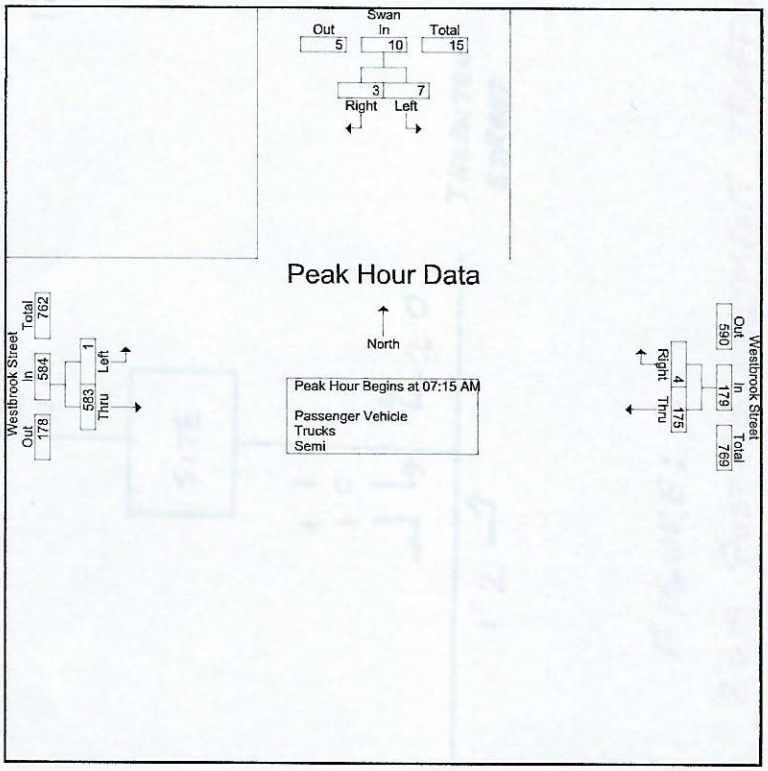
101
1 0 2 0 1

Portland: Westbrook & Swan
Thursday October 20, 2016
Sunny with some clouds
Count By: Dawn-Marie Fahey

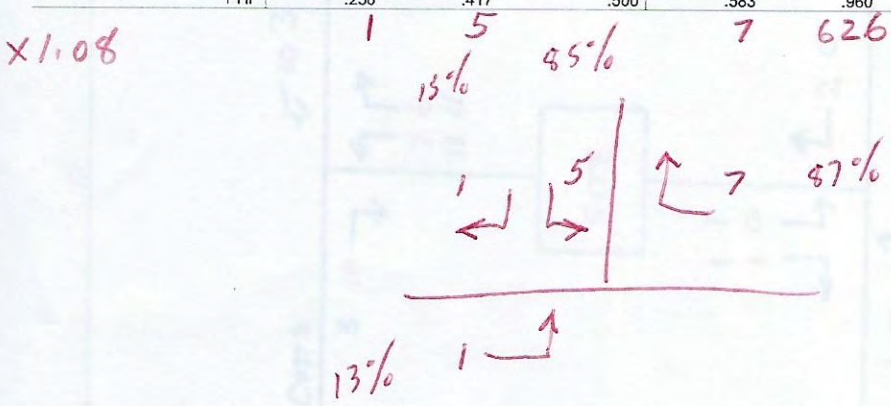
File Name : Portland Westbrook & Swan AM 102016
Site Code : 00102016
Start Date : 10/20/2016
Page No : 6



Portland: Westbrook & Swan
Thursday October 20, 2016
Cloudy
Count By: Dawn-Marie Fahey

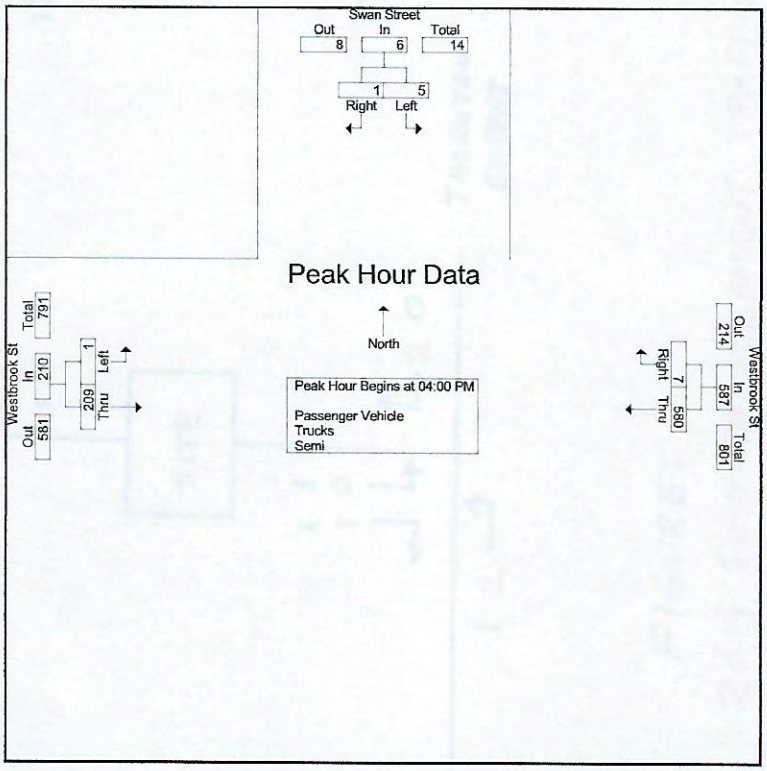
File Name : Portland Westbrook & Swan PM 102016
Site Code : 01102016
Start Date : 10/20/2016
Page No : 5

	Swan Street From North			Westbrook St From East			Westbrook St From West			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	**3**	**3**	**3**	138	141	56	0	56	200
04:15 PM	0	1	1	3	150	**153**	**57**	0	**57**	**211**
04:30 PM	0	1	1	1	**151**	152	52	0	52	205
04:45 PM	**1**	0	1	0	141	141	44	**1**	45	187
Total Volume	1	5	6	7	580	587	209	1	210	803
% App. Total	16.7	83.3		1.2	98.8		99.5	0.5		
PHF	.250	.417	.500	.583	.960	.959	.917	.250	.921	.951



Portland: Westbrook & Swan
Thursday October 20, 2016
Cloudy
Count By: Dawn-Marie Fahey

File Name : Portland Westbrook & Swan PM 102016
Site Code : 01102016
Start Date : 10/20/2016
Page No : 6



Portland Westbrook & Congress
Thursday October 27, 2016
Cloudy
Count By: Dawn-Marie & Patrick

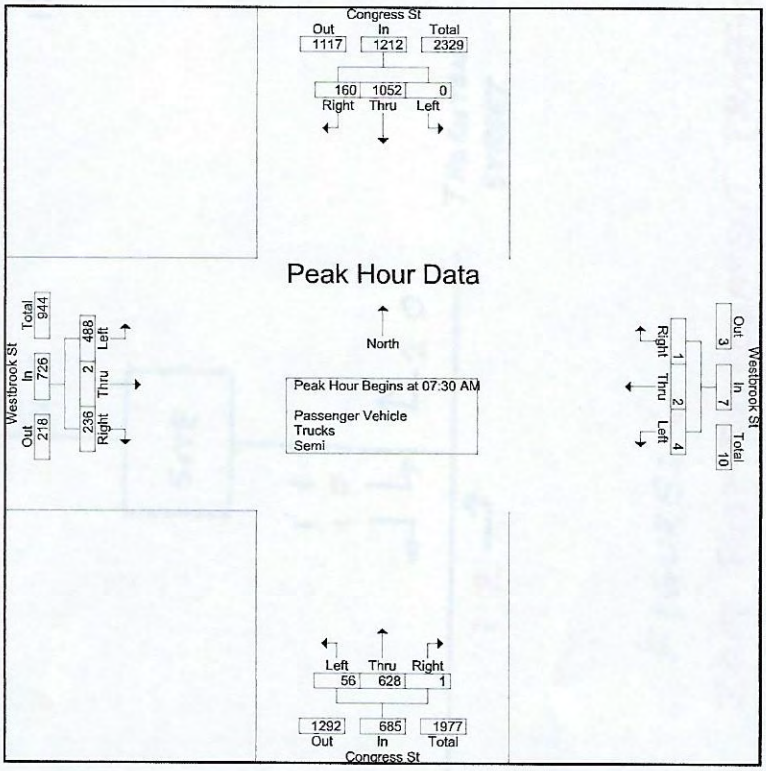
File Name : Portland Westbrook & Congress Merge 7-9 102716
Site Code : 00192716
Start Date : 10/27/2016
Page No : 5

	Congress St From North				Westbrook St From East				Congress St From South				Westbrook St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**53**	270	0	323	0	0	1	1	0	166	15	181	54	0	111	165	**670**
07:45 AM	32	**297**	0	**329**	0	**2**	**2**	**4**	0	136	11	147	62	**2**	120	184	664
08:00 AM	34	249	0	283	0	0	0	0	0	142	12	154	**74**	0	125	**199**	636
08:15 AM	41	236	0	277	**1**	0	1	2	**1**	**184**	**18**	**203**	46	0	**132**	178	660
Total Volume	160	1052	0	1212	1	2	4	7	1	628	56	685	236	2	488	726	2630
% App. Total	13.2	86.8	0		14.3	28.6	57.1		0.1	91.7	8.2		32.5	0.3	67.2		
PHF	.755	.886	.000	.921	.250	.250	.500	.438	.250	.853	.778	.844	.797	.250	.924	.912	.981

X 1.08 173 1136 0 1 2 4 1 678 60 255 2 527

Portland Westbrook & Congress
Thursday October 27, 2016
Cloudy
Count By: Dawn-Marie & Patrick

File Name : Portland Westbrook & Congress Merge 7-9 102716
Site Code : 00192716
Start Date : 10/27/2016
Page No : 6



Portland Westbrook & Congress PM
Thursday October 27, 2016
Rain
Count By: Dawn-Marie & Patrick

File Name : Portland Westbrook & Congress Merge PM 102716
Site Code : 01102716
Start Date : 10/27/2016
Page No : 5

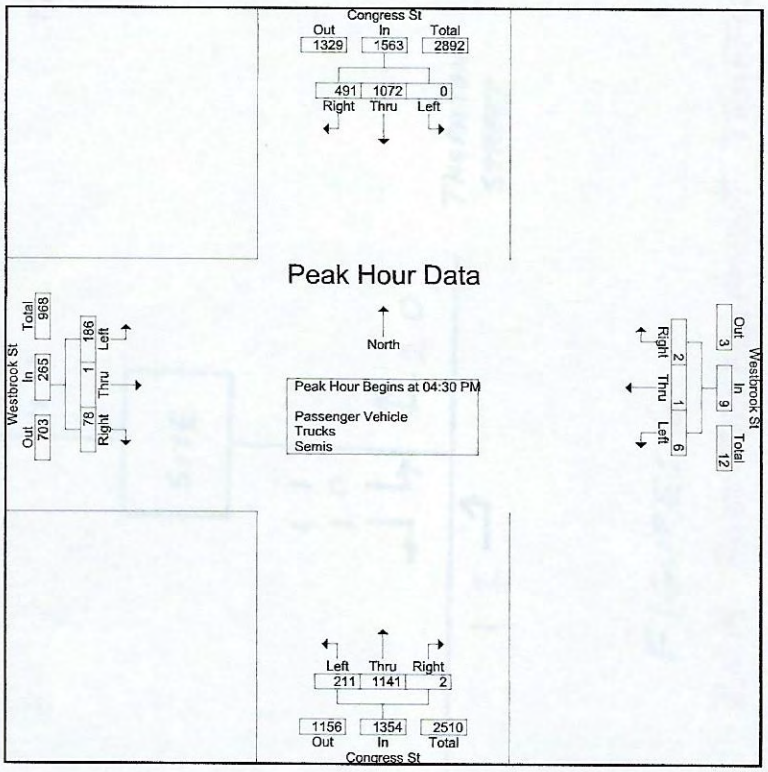
	Congress St From North				Westbrook St From East				Congress St From South				Westbrook St From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	118	**313**	0	**431**	0	0	**3**	3	0	295	**63**	**358**	**22**	**1**	**53**	**76**	**868**
04:45 PM	117	252	0	369	**1**	0	1	2	0	**303**	54	357	16	0	40	56	784
05:00 PM	**131**	263	0	394	0	0	0	0	**1**	278	50	329	18	0	51	69	792
05:15 PM	125	244	0	369	1	1	2	**4**	1	265	44	310	22	0	42	64	747
Total Volume	491	1072	0	1563	2	1	6	9	2	1141	211	1354	78	1	186	265	3191
% App. Total	31.4	68.6	0		22.2	11.1	66.7		0.1	84.3	15.6		29.4	0.4	70.2		
PHF	.937	.856	.000	.907	.500	.250	.500	.563	.500	.941	.837	.946	.886	.250	.877	.872	.919

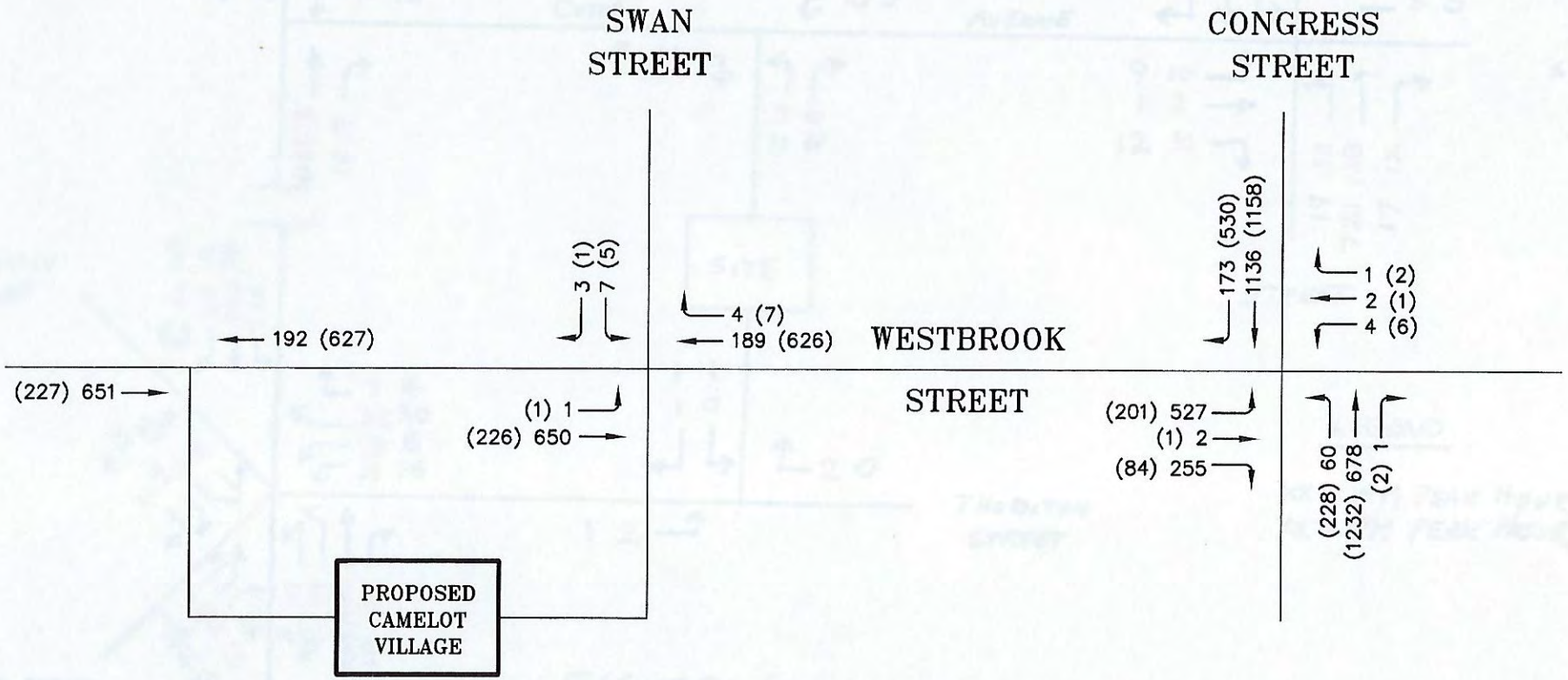
530 1158 2 1 6 2 1232 228 84 1 201

Seasonal
Adjustment = 1.08

Portland Westbrook & Congress PM
Thursday October 27, 2016
Rain
Count By: Dawn-Marie & Patrick

File Name : Portland Westbrook & Congress Merge PM 102716
Site Code : 01102716
Start Date : 10/27/2016
Page No : 6





LEGEND

XX = AM PEAK HOUR

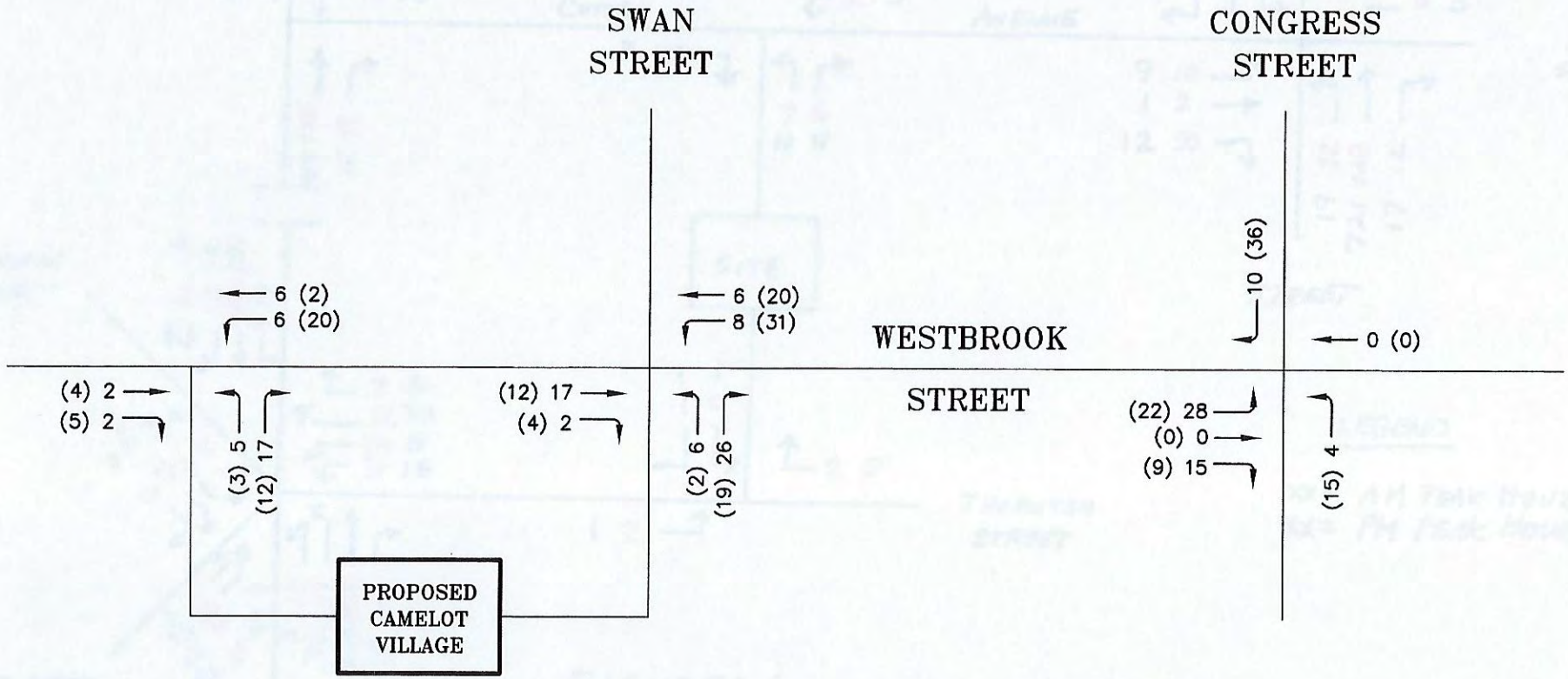
(XX) = PM PEAK HOUR

2016 DESIGN HOUR TRAFFIC

FIGURE 1

E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\CAMELOT VILLAGE\PLANSET\CAMELOT VILLAGE.DWG

Project Name and Location: CAMELOT VILLAGE, PORTLAND, MAINE	TRAFFIC SOLUTIONS
DATE: DECEMBER, 2016 — FIGURE: 1	235 BANCROFT STREET, PORTLAND, MAINE 04102-1730



LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

SITE TRIP ASSIGNMENT

FIGURE 2

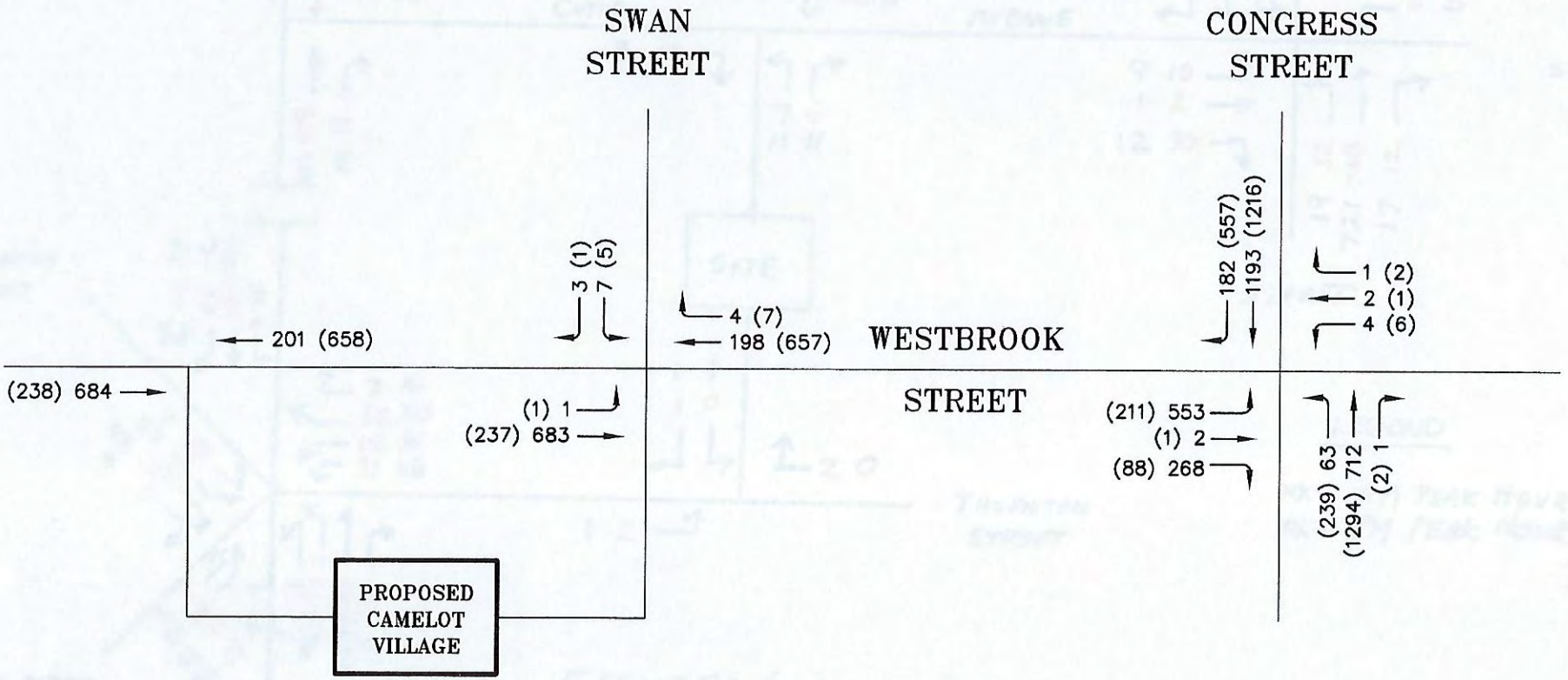
E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\CAMELOT VILLAGE\PLANSET\CAMELOT VILLAGE.DWG

Project Name and Location
CAMELOT VILLAGE
PORTLAND, MAINE

DATE: DECEMBER, 2016

FIGURE: 2

TRAFFIC SOLUTIONS
235 BANCROFT STREET, PORTLAND, MAINE 04102-1730



LEGEND

XX = AM PEAK HOUR

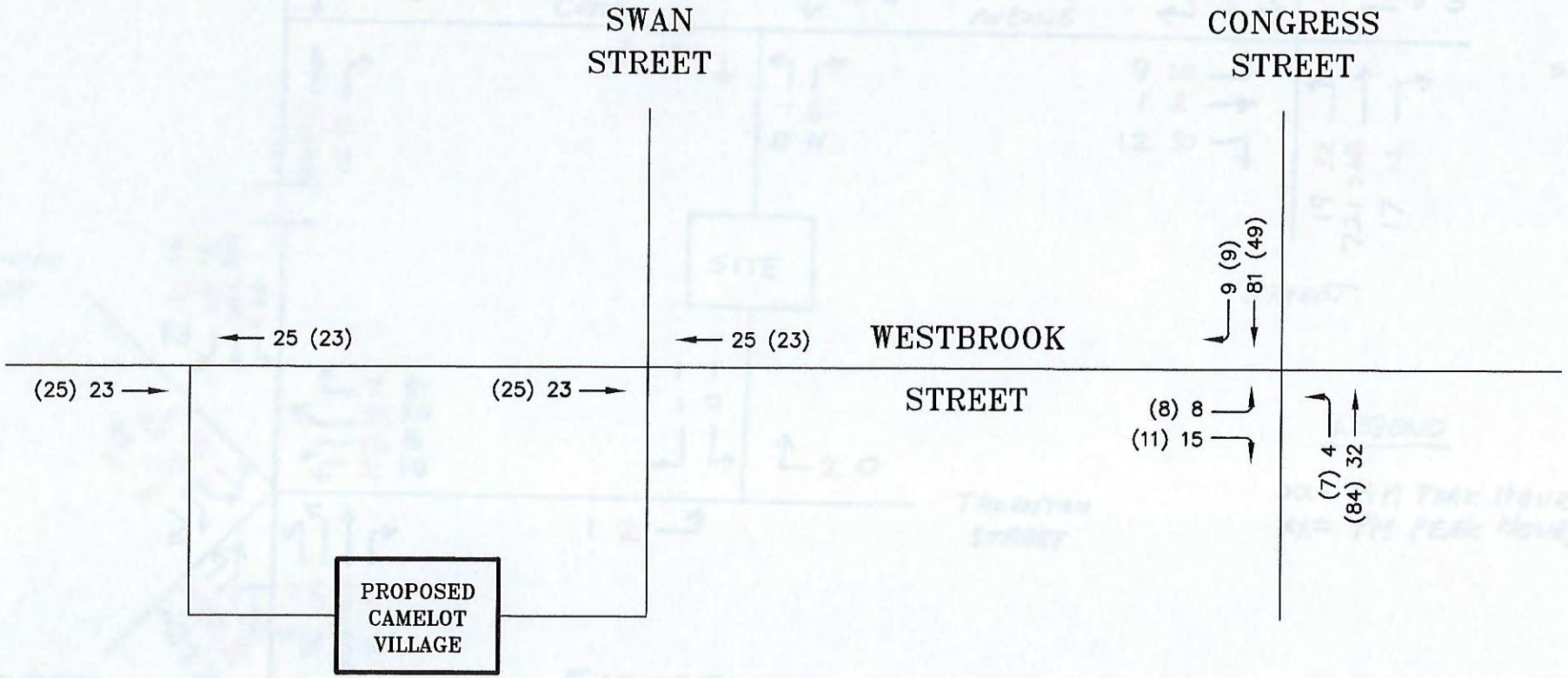
(XX) = PM PEAK HOUR

2022 DESIGN HOUR TRAFFIC

FIGURE 3

E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\CAMELOT VILLAGE\PLANSET\CAMELOT VILLAGE.DWG

Project Name and Location: CAMELOT VILLAGE, PORTLAND, MAINE	TRAFFIC SOLUTIONS
DATE: DECEMBER, 2016 — FIGURE: 3	235 BANCROFT STREET, PORTLAND, MAINE 04102-1730



LEGEND

XX = AM PEAK HOUR

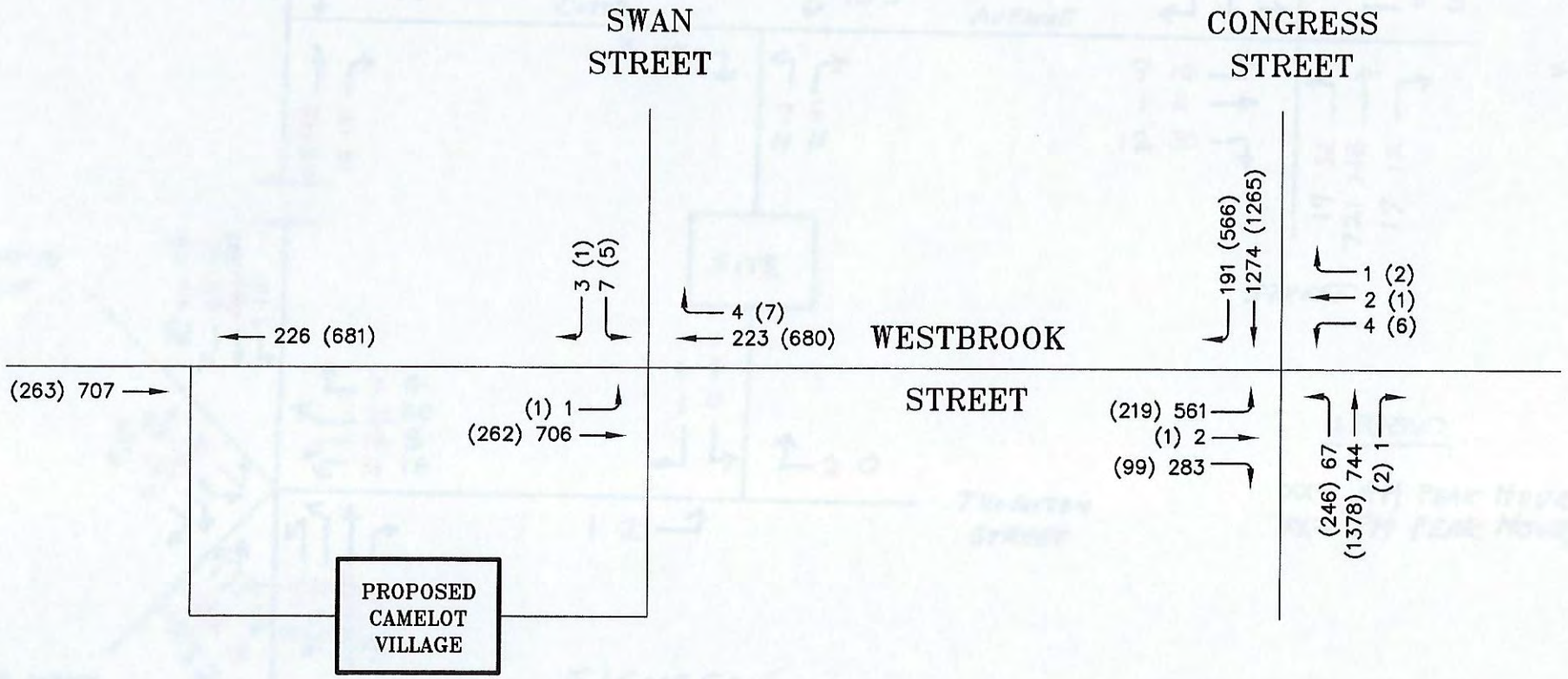
(XX) = PM PEAK HOUR

OTHER DEVELOPMENT TRAFFIC

FIGURE 4

E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\CAMELOT VILLAGE\PLANSET\CAMELOT VILLAGE.DWG

Project Name and Location CAMELOT VILLAGE PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: DECEMBER, 2016	FIGURE: 4



LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

2022 PRE-DEVELOPMENT TRAFFIC

FIGURE 5

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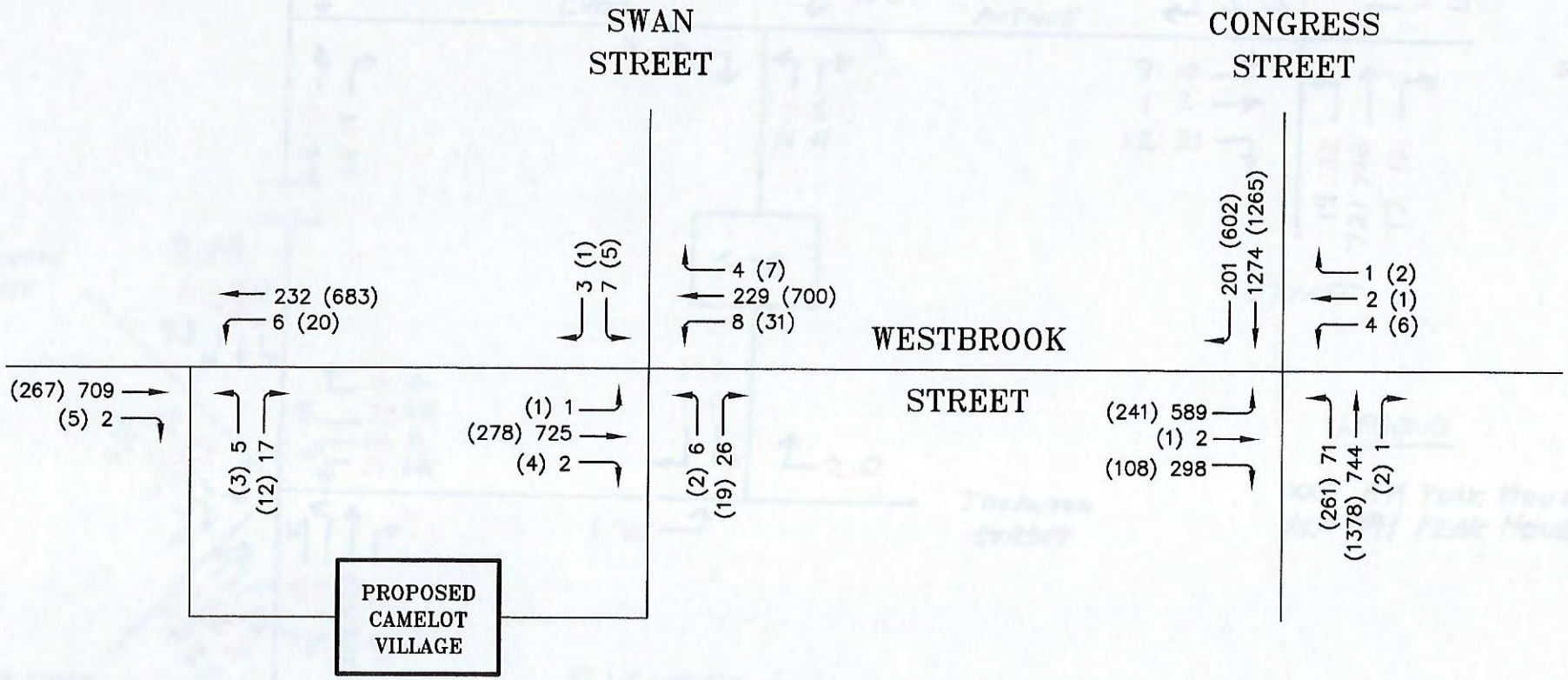
Project Name and Location: CAMELOT VILLAGE, PORTLAND, MAINE	TRAFFIC SOLUTIONS
DATE: DECEMBER, 2016	FIGURE: 5
	235 BANCROFT STREET, PORTLAND, MAINE 04102-1730



LEGEND

XX = AM PEAK HOUR

(XX) = PM PEAK HOUR

2022 POST-DEVELOPMENT TRAFFIC

FIGURE 6

E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\CAMELOT VILLAGE\PLANSET\CAMELOT VILLAGE.DWG

Project Name and Location: CAMELOT VILLAGE, PORTLAND, MAINE	TRAFFIC SOLUTIONS
DATE: DECEMBER, 2016	FIGURE: 6
	235 BANCROFT STREET, PORTLAND, MAINE 04102-1730

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3038	2966	2983	3062	2973	3005
Vehs Exited	3010	2955	2989	3006	2959	2985
Starting Vehs	63	69	72	41	68	62
Ending Vehs	91	80	66	97	82	85
Travel Distance (mi)	843	827	833	846	827	835
Travel Time (hr)	126.2	153.9	130.1	96.7	106.7	122.7
Total Delay (hr)	97.4	125.6	101.7	67.8	78.4	94.2
Total Stops	2762	2762	2620	2680	2548	2675
Fuel Used (gal)	55.0	61.0	55.6	48.2	49.8	53.9

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3038	2966	2983	3062	2973	3005
Vehs Exited	3010	2955	2989	3006	2959	2985
Starting Vehs	63	69	72	41	68	62
Ending Vehs	91	80	66	97	82	85
Travel Distance (mi)	843	827	833	846	827	835
Travel Time (hr)	126.2	153.9	130.1	96.7	106.7	122.7
Total Delay (hr)	97.4	125.6	101.7	67.8	78.4	94.2
Total Stops	2762	2762	2620	2680	2548	2675
Fuel Used (gal)	55.0	61.0	55.6	48.2	49.8	53.9

3: Congress & Westbrook/Westrook Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	183.2	251.3	177.3	0.1	0.1	0.1	0.3	0.6	0.4	0.7	0.8	50.4
Total Del/Veh (s)	107.2	130.7	89.0	98.6	71.3	22.7	40.7	29.6	44.2	50.4	42.0	57.4

Total Network Performance

Denied Del/Veh (s)	50.4
Total Del/Veh (s)	59.5

Intersection: 3: Congress & Westbrook/Westrook

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	T	TR
Maximum Queue (ft)	742	175	40	304	656	715	713
Average Queue (ft)	692	145	7	53	373	500	466
95th Queue (ft)	807	230	29	170	587	730	692
Link Distance (ft)	695		635	699	699	717	717
Upstream Blk Time (%)	55			0	0	2	2
Queuing Penalty (veh)	0			0	0	0	0
Storage Bay Dist (ft)		150					
Storage Blk Time (%)	58	3					
Queuing Penalty (veh)	164	14					

Network Summary

Network wide Queuing Penalty: 178

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1028	993	971	1040	984	1004
Vehs Exited	1027	1002	969	1046	986	1006
Starting Vehs	12	16	13	25	16	15
Ending Vehs	13	7	15	19	14	12
Travel Distance (mi)	436	423	413	439	416	425
Travel Time (hr)	16.0	15.4	15.1	16.2	15.2	15.6
Total Delay (hr)	1.2	1.1	1.1	1.2	1.1	1.1
Total Stops	70	80	72	81	67	76
Fuel Used (gal)	12.9	12.5	12.3	13.2	12.2	12.6

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1028	993	971	1040	984	1004
Vehs Exited	1027	1002	969	1046	986	1006
Starting Vehs	12	16	13	25	16	15
Ending Vehs	13	7	15	19	14	12
Travel Distance (mi)	436	423	413	439	416	425
Travel Time (hr)	16.0	15.4	15.1	16.2	15.2	15.6
Total Delay (hr)	1.2	1.1	1.1	1.2	1.1	1.1
Total Stops	70	80	72	81	67	76
Fuel Used (gal)	12.9	12.5	12.3	13.2	12.2	12.6

3: Site Drive 2 & Westbrook St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	0.1	0.1	0.1
Total Del/Veh (s)	2.6	0.4	6.6	8.4	2.3

7: Site Drive 1 & Westbrook St Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.6	0.0	0.1	0.4
Total Del/Veh (s)	0.5	1.0	7.5	0.8

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.5

Intersection: 3: Site Drive 2 & Westbrook St

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	51	59	36
Average Queue (ft)	4	23	9
95th Queue (ft)	25	52	32
Link Distance (ft)	252	172	171
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Site Drive 1 & Westbrook St

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	42	49
Average Queue (ft)	5	15
95th Queue (ft)	26	42
Link Distance (ft)	1609	187
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	3	4	5	7	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3022	2960	3004	2971	3086	3008
Vehs Exited	2978	2943	2939	2961	3055	2975
Starting Vehs	65	56	48	68	67	60
Ending Vehs	109	73	113	78	98	93
Travel Distance (mi)	835	822	825	827	855	833
Travel Time (hr)	151.4	143.3	137.0	105.6	138.6	135.2
Total Delay (hr)	122.9	115.2	108.8	77.3	109.3	106.7
Total Stops	3316	2909	3243	2823	3020	3062
Fuel Used (gal)	61.2	58.4	57.2	49.6	58.2	56.9

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	3	4	5	7	Avg
Vehs Entered	3022	2960	3004	2971	3086	3008
Vehs Exited	2978	2943	2939	2961	3055	2975
Starting Vehs	65	56	48	68	67	60
Ending Vehs	109	73	113	78	98	93
Travel Distance (mi)	835	822	825	827	855	833
Travel Time (hr)	151.4	143.3	137.0	105.6	138.6	135.2
Total Delay (hr)	122.9	115.2	108.8	77.3	109.3	106.7
Total Stops	3316	2909	3243	2823	3020	3062
Fuel Used (gal)	61.2	58.4	57.2	49.6	58.2	56.9

3: Congress & Westbrook/Westrook Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	160.4	143.0	158.5	0.1	0.1		0.3	0.7	1.2	20.9	21.0	53.4
Total Del/Veh (s)	104.8	92.3	85.9	62.6	70.9		35.8	25.6	19.4	78.3	74.9	69.1

Total Network Performance

Denied Del/Veh (s)	53.4
Total Del/Veh (s)	71.2

Intersection: 3: Congress & Westbrook/Westrook

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	T	TR
Maximum Queue (ft)	734	175	36	110	629	741	724
Average Queue (ft)	677	154	7	42	325	594	576
95th Queue (ft)	839	226	28	86	524	859	856
Link Distance (ft)	695		635	699	699	717	717
Upstream Blk Time (%)	53				0	24	27
Queuing Penalty (veh)	0				0	0	0
Storage Bay Dist (ft)		150					
Storage Blk Time (%)	56	3					
Queuing Penalty (veh)	158	20					

Network Summary

Network wide Queuing Penalty: 178

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:55	6:55	6:55	6:55	6:55	6:55
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1005	1004	936	906	902	950
Vehs Exited	1002	1006	936	904	904	950
Starting Vehs	5	8	9	3	8	6
Ending Vehs	8	6	9	5	6	6
Travel Distance (mi)	210	211	197	189	189	199
Travel Time (hr)	7.5	7.6	7.0	6.7	6.8	7.1
Total Delay (hr)	0.5	0.5	0.4	0.3	0.4	0.4
Total Stops	12	8	6	12	6	9
Fuel Used (gal)	6.4	6.4	5.9	5.7	5.8	6.0

Interval #0 Information Seeding

Start Time	6:55
End Time	7:00
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1005	1004	936	906	902	950
Vehs Exited	1002	1006	936	904	904	950
Starting Vehs	5	8	9	3	8	6
Ending Vehs	8	6	9	5	6	6
Travel Distance (mi)	210	211	197	189	189	199
Travel Time (hr)	7.5	7.6	7.0	6.7	6.8	7.1
Total Delay (hr)	0.5	0.5	0.4	0.3	0.4	0.4
Total Stops	12	8	6	12	6	9
Fuel Used (gal)	6.4	6.4	5.9	5.7	5.8	6.0

3: Westbrook St & Swan Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.6	0.2	0.1	0.5
Total Del/Veh (s)	0.9	0.1	7.3	0.7

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	1.1

Intersection: 3: Westbrook St & Swan

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	170
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	6	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3605	3578	3602	3521	3629	3588
Vehs Exited	3579	3554	3595	3499	3625	3570
Starting Vehs	61	65	85	65	81	72
Ending Vehs	87	89	92	87	85	88
Travel Distance (mi)	1002	995	1005	980	1012	999
Travel Time (hr)	182.0	192.7	148.5	171.6	183.1	175.6
Total Delay (hr)	147.5	158.5	114.0	137.9	148.4	141.2
Total Stops	3762	3714	3440	3537	3797	3649
Fuel Used (gal)	73.7	76.0	65.6	70.3	74.7	72.1

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	6	Avg
Vehs Entered	3605	3578	3602	3521	3629	3588
Vehs Exited	3579	3554	3595	3499	3625	3570
Starting Vehs	61	65	85	65	81	72
Ending Vehs	87	89	92	87	85	88
Travel Distance (mi)	1002	995	1005	980	1012	999
Travel Time (hr)	182.0	192.7	148.5	171.6	183.1	175.6
Total Delay (hr)	147.5	158.5	114.0	137.9	148.4	141.2
Total Stops	3762	3714	3440	3537	3797	3649
Fuel Used (gal)	73.7	76.0	65.6	70.3	74.7	72.1

3: Congress & Westbrook/Westrook Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.6	0.3	3.6	0.1	0.1	0.1	169.8	167.2	102.7	14.2	15.0	79.5
Total Del/Veh (s)	77.5	53.0	20.5	66.2	89.7	46.6	45.1	46.2	28.0	58.4	65.6	54.6

Total Network Performance

Denied Del/Veh (s)	79.5
Total Del/Veh (s)	57.0

Intersection: 3: Congress & Westbrook/Westrook

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	T	TR
Maximum Queue (ft)	432	175	40	725	743	757	767
Average Queue (ft)	231	91	12	701	714	656	677
95th Queue (ft)	383	204	37	824	760	857	857
Link Distance (ft)	695		635	699	699	717	717
Upstream Blk Time (%)				22	52	14	29
Queuing Penalty (veh)				0	0	0	0
Storage Bay Dist (ft)		150					
Storage Blk Time (%)	31	0					
Queuing Penalty (veh)	31	0					

Network Summary

Network wide Queuing Penalty: 31

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	927	991	981	947	893	947
Vehs Exited	929	991	980	950	890	947
Starting Vehs	7	3	4	9	5	5
Ending Vehs	5	3	5	6	8	5
Travel Distance (mi)	195	207	205	198	186	198
Travel Time (hr)	7.0	7.4	7.4	7.1	6.6	7.1
Total Delay (hr)	0.4	0.4	0.5	0.4	0.3	0.4
Total Stops	10	3	5	5	9	6
Fuel Used (gal)	5.9	6.3	6.3	6.0	5.6	6.0

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	927	991	981	947	893	947
Vehs Exited	929	991	980	950	890	947
Starting Vehs	7	3	4	9	5	5
Ending Vehs	5	3	5	6	8	5
Travel Distance (mi)	195	207	205	198	186	198
Travel Time (hr)	7.0	7.4	7.4	7.1	6.6	7.1
Total Delay (hr)	0.4	0.4	0.5	0.4	0.3	0.4
Total Stops	10	3	5	5	9	6
Fuel Used (gal)	5.9	6.3	6.3	6.0	5.6	6.0

3: Westbrook St & Swan Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.2	0.5	0.1	0.5
Total Del/Veh (s)	0.3	0.4	8.3	0.4

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	1.1

Intersection: 3: Westbrook St & Swan

Movement	WB	SB
Directions Served	TR	LR
Maximum Queue (ft)	16	30
Average Queue (ft)	1	5
95th Queue (ft)	12	24
Link Distance (ft)	247	170
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: Westbrook St & Swan

Movement	WB	SB
Directions Served	TR	LR
Maximum Queue (ft)	16	30
Average Queue (ft)	1	5
95th Queue (ft)	12	24
Link Distance (ft)	247	170
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3618	3668	3632	3542	3651	3624
Vehs Exited	3567	3625	3628	3522	3633	3595
Starting Vehs	53	62	78	70	79	70
Ending Vehs	104	105	82	90	97	96
Travel Distance (mi)	999	1015	1014	986	1016	1006
Travel Time (hr)	144.9	160.9	151.8	145.4	94.8	139.6
Total Delay (hr)	110.5	126.0	117.0	111.5	59.7	105.0
Total Stops	3152	3215	3094	3016	3184	3132
Fuel Used (gal)	64.2	68.3	66.3	63.9	53.2	63.2

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3618	3668	3632	3542	3651	3624
Vehs Exited	3567	3625	3628	3522	3633	3595
Starting Vehs	53	62	78	70	79	70
Ending Vehs	104	105	82	90	97	96
Travel Distance (mi)	999	1015	1014	986	1016	1006
Travel Time (hr)	144.9	160.9	151.8	145.4	94.8	139.6
Total Delay (hr)	110.5	126.0	117.0	111.5	59.7	105.0
Total Stops	3152	3215	3094	3016	3184	3132
Fuel Used (gal)	64.2	68.3	66.3	63.9	53.2	63.2

3: Congress & Westbrook/Westrook Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.5	0.4	3.7	0.1	0.1	0.1	131.9	126.7	61.4	1.6	1.9	55.9
Total Del/Veh (s)	93.4	56.1	16.1	76.3	75.2	49.3	52.1	43.2	27.9	36.4	41.2	43.5

Total Network Performance

Denied Del/Veh (s)	55.9
Total Del/Veh (s)	45.9

Intersection: 3: Congress & Westbrook/Westrook

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	T	TR
Maximum Queue (ft)	458	250	44	721	747	740	748
Average Queue (ft)	243	91	13	663	703	479	532
95th Queue (ft)	399	242	39	920	810	729	785
Link Distance (ft)	695		635	699	699	717	717
Upstream Blk Time (%)				21	47	2	6
Queuing Penalty (veh)				0	0	0	0
Storage Bay Dist (ft)		150					
Storage Blk Time (%)	41						
Queuing Penalty (veh)	40						

Network Summary

Network wide Queuing Penalty: 40

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1092	1077	1073	998	975	1043
Vehs Exited	1098	1067	1066	999	976	1043
Starting Vehs	21	16	12	19	16	15
Ending Vehs	15	26	19	18	15	18
Travel Distance (mi)	457	450	448	421	411	437
Travel Time (hr)	16.9	16.6	16.4	15.3	15.0	16.0
Total Delay (hr)	1.3	1.2	1.2	1.0	0.9	1.1
Total Stops	56	76	66	54	41	58
Fuel Used (gal)	13.8	13.6	13.5	12.7	12.3	13.2

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1092	1077	1073	998	975	1043
Vehs Exited	1098	1067	1066	999	976	1043
Starting Vehs	21	16	12	19	16	15
Ending Vehs	15	26	19	18	15	18
Travel Distance (mi)	457	450	448	421	411	437
Travel Time (hr)	16.9	16.6	16.4	15.3	15.0	16.0
Total Delay (hr)	1.3	1.2	1.2	1.0	0.9	1.1
Total Stops	56	76	66	54	41	58
Fuel Used (gal)	13.8	13.6	13.5	12.7	12.3	13.2

3: Site Drive 2 & Westbrook St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.6	0.1	0.1	0.5
Total Del/Veh (s)	1.1	0.8	4.7	12.7	1.0

7: Site Drive 1 & Westbrook St Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.2	0.0	0.1	0.1
Total Del/Veh (s)	0.2	2.6	3.6	1.9

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.4

Intersection: 3: Site Drive 2 & Westbrook St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	17	65	50	31
Average Queue (ft)	1	9	15	6
95th Queue (ft)	9	41	42	26
Link Distance (ft)	1609	252	172	171
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Site Drive 1 & Westbrook St

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	62	40
Average Queue (ft)	7	11
95th Queue (ft)	34	36
Link Distance (ft)	1609	187
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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

Westbrook St in Portland

REPORT PARAMETERS

Year 2013, Start Month 1 through Year 2015 End Month: 12

Route: **0560784**	Start Node: **15060**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **13048**	End Offset: **0**	☐ **Exclude Last Node**

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
15060	0560784 - 0	TL Portland Westbrook	2	0	0	0	0	0	0	0.0	2.953	0.00	0.39	0.00
												Statewide Crash Rate:	0.13	
12963	0560784 - 0.60	Int of SWAN ST, WESTBROOK ST	2	0	0	0	0	0	0	0.0	2.960	0.00	0.39	0.00
												Statewide Crash Rate:	0.13	
18492	0560784 - 0.79	Int of BUTTONWOOD LN WESTBROOK ST	2	0	0	0	0	0	0	0.0	2.997	0.00	0.38	0.00
												Statewide Crash Rate:	0.13	
18192	0560784 - 0.82	Int of KINGSMARK LN WESTBROOK ST	2	0	0	0	0	0	0	0.0	3.021	0.00	0.38	0.00
												Statewide Crash Rate:	0.13	
12957	0560784 - 0.88	Int of PARTRIDGE RD WESTBROOK ST	2	0	0	0	0	0	0	0.0	3.034	0.00	0.38	0.00
												Statewide Crash Rate:	0.13	
12952	0560784 - 0.95	Int of STROUDWATER RD WESTBROOK ST	2	1	0	0	0	0	1	0.0	3.103	0.11	0.38	0.00
												Statewide Crash Rate:	0.13	
12950	0560784 - 1.06	Int of PENRITH RD, WESTBROOK ST	2	1	0	0	0	0	1	0.0	2.962	0.11	0.39	0.00
												Statewide Crash Rate:	0.13	
13048	0560784 - 1.27	Int of CONGRESS ST WESTBROOK ST	9	30	0	0	0	6	24	20.0	10.521	0.95	1.03	0.00
												Statewide Crash Rate:	0.67	
Study Years: 3.00		**NODE TOTALS:**		32	0	0	0	6	26	18.8	31.551	0.34	0.45	0.75

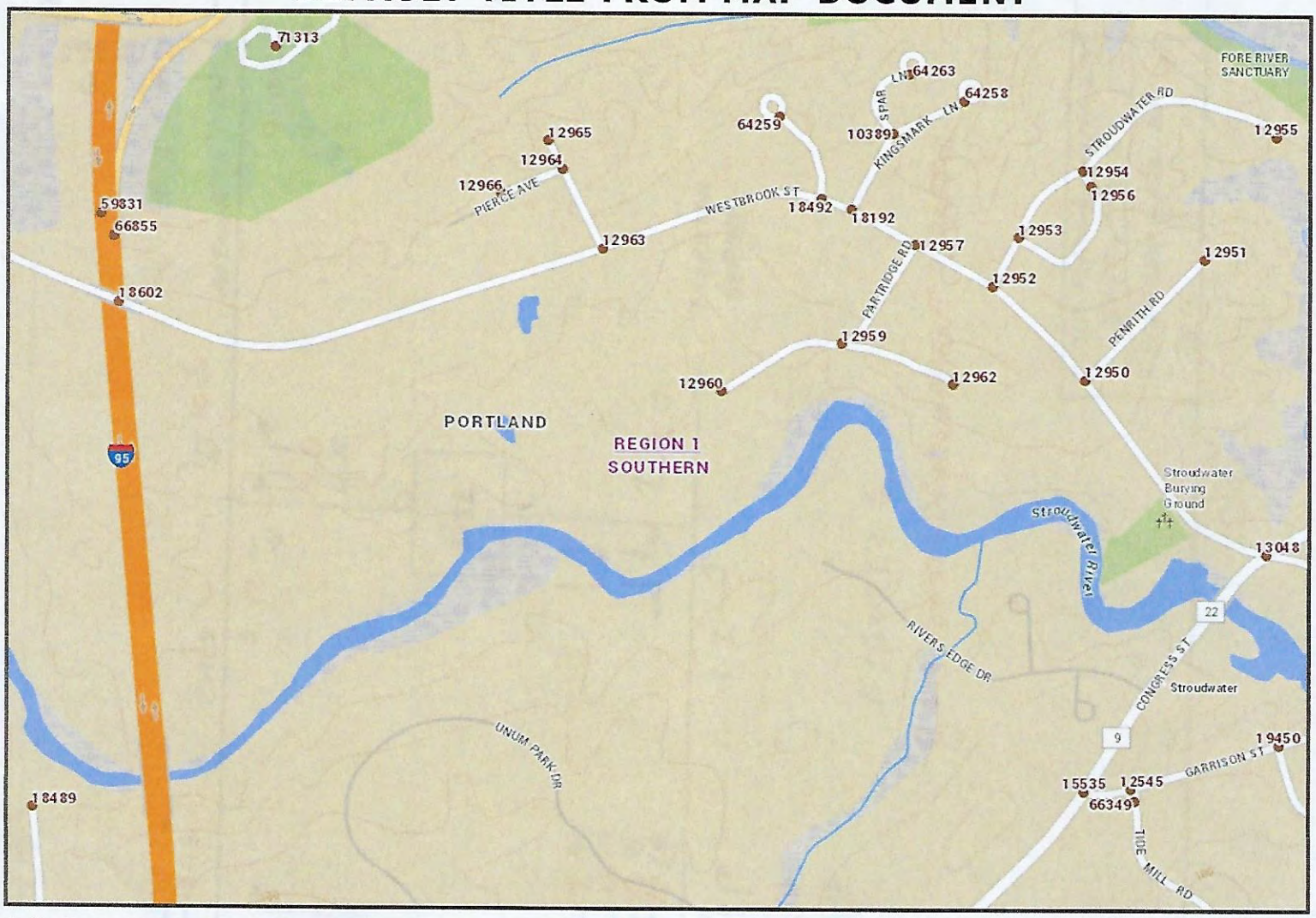
Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
12963	15060	3119195	0 - 0.60	0560784 - 0	0.60	2	5	0	0	2	0	3	40.0	0.01744	95.56	292.03	0.00
Int of SWAN ST, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
12963	18492	3119196	0 - 0.19	0560784 - 0.60	0.19	2	2	0	0	0	0	2	0.0	0.00566	117.79	379.55	0.00
Int of SWAN ST, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
18192	18492	3120115	0 - 0.03	0560784 - 0.79	0.03	2	0	0	0	0	0	0	0.0	0.00090	0.00	600.29	0.00
Int of KINGSMARK LN, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
12957	18192	187566	0 - 0.06	0560784 - 0.82	0.06	2	0	0	0	0	0	0	0.0	0.00179	0.00	509.82	0.00
Int of PARTRIDGE RD, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
12952	12957	3099870	0 - 0.07	0560784 - 0.88	0.07	2	0	0	0	0	0	0	0.0	0.00211	0.00	489.45	0.00
Int of STROUDWATER RD, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
12950	12952	3106230	0 - 0.11	0560784 - 0.95	0.11	2	0	0	0	0	0	0	0.0	0.00340	0.00	432.42	0.00
Int of PENRITH RD, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
12950	13048	3106231	0 - 0.21	0560784 - 1.06	0.21	2	7	0	0	0	2	5	28.6	0.00586	398.45	376.31	1.06
Int of PENRITH RD, WESTBROOK ST				RD INV 05 60784											Statewide Crash Rate: 159.40		
Study Years: 3.00				**Section Totals:**	1.27		14	0	0	2	2	10	28.6	0.03715	125.60	252.33	0.50
				Grand Totals:	1.27		46	0	0	2	8	36	21.7	0.03715	412.69	381.19	1.08

DEFAULT TITLE FROM MAP DOCUMENT



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.2 Miles

1 inch = 0.14 miles

Date: 10/18/2016
Time: 7:06:12 AM

PC1

Arthur F. McEvoy
89 Partridge Circle
Portland ME 04102-1632
(207) 773-4738

January11, 2017

Shukria Wiar, Planner
Planning Division
City Hall, 4th Floor
389 Congress St.
Portland , Maine 04101

re: Application ID#2016-282

I am commenting on the application to rezone property at 1700 Westbrook Street, Portland from Residential R1 to Residential R3.

I would like to be on record as in opposition to this application.

This 45 +/- acre parcel is, I understand, the largest undeveloped tract of land remaining in Portland. The Residential R-1 designation was originally assigned to these properties to establish and maintain the pastoral/residential character of this neighborhood. It seems that any time a developer(s) comes forward with a proposal to change, not add to and enhance, the established character of an area or neighborhood, the amendment is approved without recourse. This zoning amendment application, if approved, will allow the developers to proceed with the construction of 97 (their estimate) single family homes, increasing the density of Stroudwater Village from 270 homes to 367 and adding an additional approximately150 vehicles to the traffic flow, using 1.5 vehicles per household. If this application by Camelot Holdings is approved Stroudwater Village will never be able to be described as pastoral/residential again. The strong history of this neighborhood having served as the founding village of Portland and the source of His Majesty's masts will be forever lost.

In the two Stroudwater Village Association meetings that I have attended regarding this application I have inquired of the "representative of the developers", Michael Barton, about the developers identification and about their credentials as they relate to their history of construction of similar projects. He has steadfastly refused to respond. I, and others, have serious concerns about the experience and financial

capacity of this development group, whomever they are. Neither the city nor the residents of Stroudwater Village wants a partially completed and abandoned project for lack of resources.

A higher and preferred use of this property is to place it into use as a public recreational area for cross country skiing, track and as an extension of the existing Portland Trail, the trailhead for which is directly across the street. A citizen group is currently exploring financing options for securing this land parcel.

I strongly recommend that the Planning Board not pass their approval of this application along to the City Council.

Sincerely,

Arthur F. McEvoy

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

1700 Westbrook St

Mark Sengelmann <mark@alphaarchitects.com> Wed, Jan 11, 2017 at 10:58 AM
To: shukriaw@portlandmaine.gov

Hi Shukria,

Can you send me a link to the documents for 1700 Westbrook St.?

I live on Stroudwater Rd in Portland.

In early December I attended a presentation of the subdivision plan for the Roger's property on Westbrook St in Portland.

I've been thinking of this proposal a lot and I wanted to give you some feedback.

I was disappointed with the 'squeezed out of a tube' design. Rezoning to smaller lots is a bad idea in my opinion.

I brought up the idea of Cohousing at the meeting with the developer.

http://www.mainecohousing.org/available/available.html

Note how the buildings are staggered so that no one is looking directly into another residence.

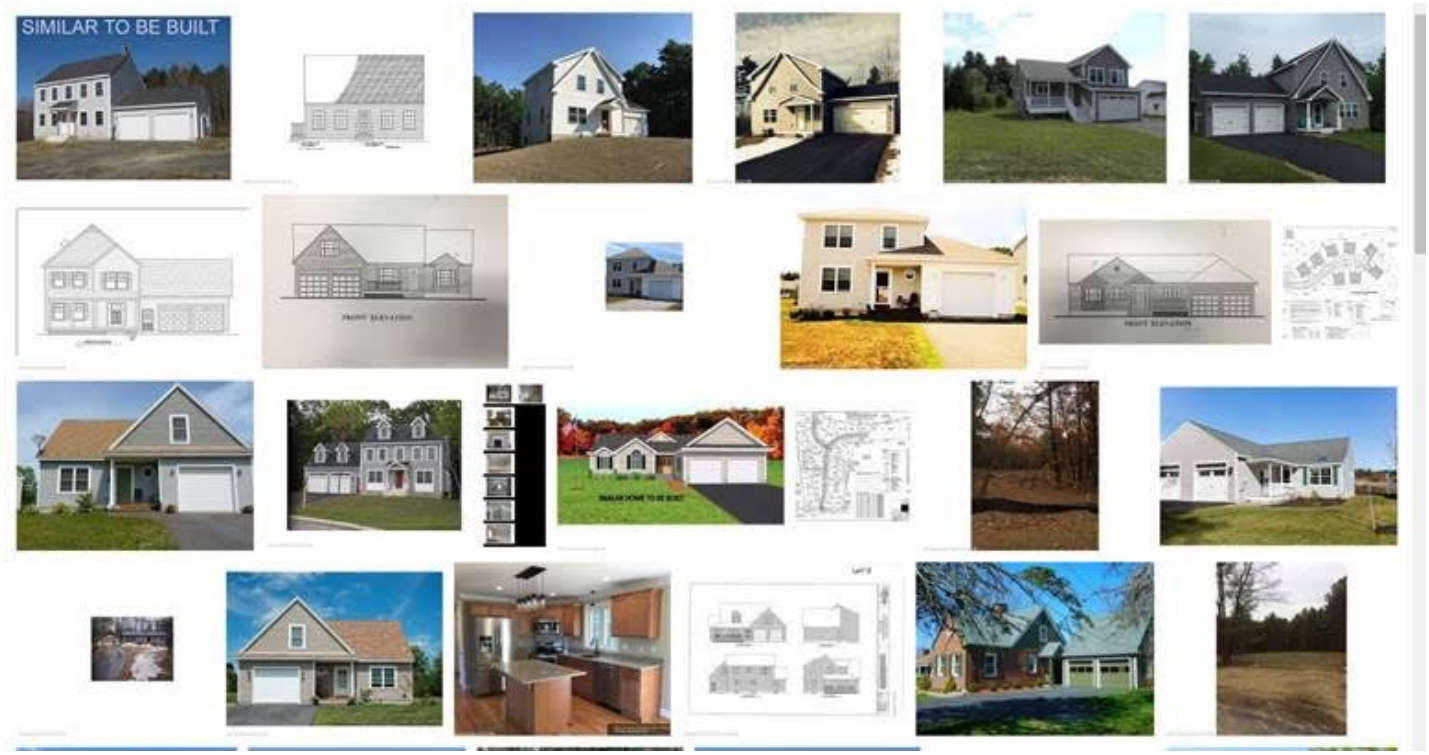
- Parking is merged for efficiency.
- A very wide number of unit types and price ranges.
- Common open Space and a Community Center for large gatherings.
- I believe that this thoughtful use of the Roger's property will be supported by the neighborhood.

http://www.peterboroughcohousing.org/content/site-plan

I am opposed to the banal uniformity of traditional subdivisions that have filled in the farmland in Gorham in the past and present.

I hope this ticky-tacky design does not come to the Stroudwater Village.

Current Gorham Housing



Mark

Mark Sengelmann
NCARB Principal
ALPHAarchitects

17 Chestnut Street
Portland, ME 04101-2211
(207) 761-9500
fax 207.761.9595
cell 207.671.4110
mark@ALPHAarchitects.com

Maine, New Hampshire and Massachusetts Licensed Architect

ALPHAarchitects.com

Google Groups

Statement from Stroudwater Village Association regarding proposed zone change at 1700 Westbrook Street (Camelot Farms property), January 2017

Stroudwater Village Association Board of Trustees <stroudwatervillageassociation@gmail.com> Jan 16, 2017 10:40 AM
Posted in group: **Planning Board**

Hello Planning Board, please find below a statement from the Stroudwater Village Association regarding the proposed rezoning of the Camelot Farms property. Please submit it to the record. Thank you.

-Dan Koloski, SVA President

Statement from Stroudwater Village Association regarding proposed zone change at 1700 Westbrook Street (Camelot Farms property), January 2017

Based on what the SVA and area residents have learned so far about potential development plans for the 45-acre 1700 Westbrook Street property, the Stroudwater Village Association does NOT believe a zone change from R-1 to R-3 is appropriate at this time, and request that the Planning Board deny the request to allow for more discussion about the highest and best use of the property.

It's important to note that we have appreciated the willingness of the proposed buyer/developer to work with area residents, and hope to come back to the Planning Board with a combined proposal that reflects continued discussions. A revised proposal may have different zoning implications, which is partially why we recommend against this change.

Mostly we are recommending against this change at this time because the current plan of record on which the zone change is based is not the right approach, and we believe a different starting point is needed. Specific resident concerns about the plan and zone change at this point include:

* Too much development volume. The proposal for ~96 single famlly homes would effectively double the number of homes on the stretch of Westbrook Street from Congress St. NW to the Westbrook line (currently there are ~110 homes in primarily R-1 and R-2 zones along Westbrook Street). There are meaningful questions about the downstream effects of a doubling of development in the area on traffic conditions on already-overcrowded Westbrook Street, the environmental status of the already-urban-impaired Stroudwater River and the existing abutting and nearby residents.
--- Action: The SVA has already requested alternatives from the developer that would involve numerically far less homes (more like in the 30-40 range, similar to the scale of the very successful River's Edge and Tide Mill developments). In addition, there are potentially higher-density cohousing options that could be explored to reduce land footprint. We would like time to work with the developer on alternative options.

* Unclear project viability. The project as proposed does not feel thoroughly vetted at this point and there is concern that the result will be a "half-done" project. For example, currently, the proposal includes a substantial number of homes (30-40) that are situated quite close to the Maine Turnpike and its attendant noise, which existing residents believe will be non-viable for prospective buyers. Similarly, a substantial portion of the lot is unbuildable due to riverfront protection zone (RPZ) and floodplain concerns, and resident experience shows that some of the areas proposed for development may be at-risk. Third, we have received only a limited amount of information as to the previous experience of the development team.
-- Action; The SVA would like to understand how any development would address noise concerns from the Maine Turnpike.
-- Action: The SVA would like to see a plan that includes an overlay with an accurate assessment of both existing RPZ zoning and floodplain analysis.
-- Action: The SVA and area residents have also requested the development backgrounds/bios of the (silent) limited partners in the project, as the (visible) partners appear to lack the experience for a project of this scale and complexity.

* Missed opportunity to do something better. Camelot Farms is the largest remaining parcel of open space in Portland, and sits on the Stroudwater River, which remains one of the few areas of Portland with meaningful wild natural amenities, flora and fauna. Existing access to the Stroudwater River and Fore River Sanctuary via Portland Trails and small watercraft is a wonderful, non-intrusive experience. The developer is proposing public access to some of the land via a partnership with Portland Trails (and the SVA very much applaud this idea!), but the proposal has limited the undeveloped land to the largely unbuildable wetlands in the RPZ. We would like the developer to think about doing something even bigger in the area of conservation and access. There are numerous opportunities for partnership with

organizations in farming, outdoor recreation, land trusts and conservation/environmental organizations to create something very special in this location that would be a gem in Portland's crown. Those conversations are ongoing, but early, and require time to unfold.
-- Action: The SVA has asked the developer to provide partial buyout options for additional portions of the parcel that might be better suited to conservation and similar efforts.

As stated above, we have appreciated the opportunity to work with the developer so far on early exploration of possible uses for the parcel. And we would like to continue to do so. However, a preemptive decision to rezone the entire 45 acres to R-3 would render many of the conversations impossible, and we believe the proposal on which the rezone request is based is the wrong starting point for this conversation.

As such, the Stroudwater Village Association does NOT believe a zone change from R-1 to R-3 is appropriate at this time, and request that the Planning Board deny the request to allow for more discussion about the highest and best use of the property.

The Stroudwater Village Association is a Maine Non-Profit corporation. All residents of Stroudwater are members and invited to participate in all of our activities.

Find us on the web at http://www.stroudwatervillage.org and http://www.livinginportland.org/stroudwater.htm
Find us on Facebook at https://www.facebook.com/StroudwaterVillageAssociation

PC4

Google Groups

Deny Camelot Farms Rezone

Angela J. Wheaton <angelajwheaton@yahoo.com> Jan 16, 2017 1:46 PM
Posted in group: **Planning Board**

Dear Portland Planning Board,
As a resident of the Stroudwater neighborhood, I ask that you deny the zoning conversion request re: the Camelot Farms property. As you know, the property is the last open farmland in the city, and is currently zoned in keeping with that use. Rezoning from R-1 to R-3 is a significant change, is not consistent with neighboring properties, and will result in widespread impacts to this part of our city. Changes such as this should be carefully studied from all perspectives, work that I do not believe has yet been done.

I greatly appreciate your thoughtful review and consideration of this proposal as well as your inclusion of neighboring residents in the process. I strongly urge you to deny this request in favor of a more comprehensive plan that would take the entire area and all options into consideration.

Thanks for your time and consideration. Sincerely, AJW

Angela J. Wheaton 30 Partridge Rd. Portland, ME 04102

Google Groups

Camelot Farms proposal to change zoning from R-1 to R-3

Sandy Beal <luckymainer@gmail.com> Jan 16, 2017 2:18 PM
Posted in group: **Planning Board**

Hi all,

My wife and I understand that the current zoning is R-1 and we are of the opinion that the developer should comply with the current zoning. We understand that the green space near the river is not developable by nature of the topography, et al., and we see no reason why the PB should support a zoning change to R-3 just so that the developer can have an opportunity to make (more) money with a higher density project. If the project can't be profitably developed within R-1 zoning from the developer's standpoint, we see that as the developer's problem. This area of Stroudwater is single-family residential, and those who have settled nearby may have relied on the zoning to be R-1, and it should be kept that way.

Alexander (Sandy) and Joan Beal
37 Old Mast Rd.
Portland, ME 04102

Google Groups

Concerned Neighbor

Michael Scannell <sohoinn@msn.com> Jan 16, 2017 8:32 PM
Posted in group: **Planning Board**

To whom it may concern,

I am writing on behalf of myself and family of 5 from 121 Partridge Circle. We live in one of the 8 homes in the Stroudwater Woods Association, and our home is abutting the Camelot site. We have been anxious to vocalize our disappointment of the development of the Camelot property. We have been blessed with the views of rolling hills and cows for over 12 years.

We understand the development of the property, but want it to be known there is **no way** the land should be changed from a R1 to a R3 zone. We purchased our homes (myself and my neighbors), with the comfort of privacy and buffers between them. R3 would put homes in our close proximity, a buffer of R1 is one of the main reasons we purchased at this location, and we feel that should be respected. As one of the largest neighboring abutting homes, our loss of privacy and views should be taken into consideration. Camelot Holdings, LLC is trying to take this away from us, and our hopes is that you will not let it happen.

I am disappointed that I am not able to attend the meeting and express my concerns in person. This change in our backyard can not be allowed. Development yes, but under our existing zoning ONLY.

Other concerns are: length of time, earth moving (dust), etc.

Sincerely,

Michael Scannell

Google Groups

Zoning Change for 1700 Westbrook St

Colleen Griffin <colleen_griffin@msn.com> Jan 16, 2017 9:19 PM
Posted in group: **Planning Board**

Dear Members of the Portland Planning Board,

My name is Colleen E. Griffin. I reside at 42 Penrith Road in the Stroudwater neighborhood. I write to you today to express my concern with the development of Camelot Farm located at 1700 Westbrook Street. I have several concerns with the purposed development of this beautiful lot of land.

1. **Traffic Concerns**: 96 homes condensed onto this property seems **outrageous.** What does 96 new homes mean for traffic flow up and down Westbrook St.? At this time, **without** the proposed 96 homes, it is a challenge to pull out of my street and on to Westbrook St. anywhere from 7:25 to 8:45am and again from 4:30 to 6:00pm. Penrith Road like most side streets in the area are dead-end streets. There is only one way out. If I happen to be traveling west from Westbrook toward Congress St. and need to make a left-hand turn onto Penrith Road, I stop traffic completely in the east bound lane as I look for a safe time to make that turn. I have on multiple occasions cringed when I hear breaks squeal as the cars behind me attempt to stop. 96 new homes could easily equal 200 more cars on this narrow stretch of road. What is the plan to keep our neighborhood safe? Widen the street? Add additional lanes and traffic lights to allow residents to safely pull out of their street? Would the very narrow sidewalks be widened from the city line to Congress St. for foot traffic?

1. **Pesticide and herbicide pollutants flowing into the Stroudwater River**:

This is a major concern. I currently hold a Private Applicator Pesticide License with the State of Maine. I have spent the last two years studying the issue of ground water contamination from residential use of pesticide and herbicides, causing algae blooms and destruction of the surrounding ecosystem. This property is covered with a considerable percentage of wetland. There is also a considerable downward slope towards the river. Once contaminated, the groundwater will be pulled by gravity into the slow moving Stroudwater River. With 96 new lawns to be installed and chemicals used to make every one green and beautiful, not to mention the pesticides that will be applied to keep the mosquitos at bay, a major algae bloom will be unavoidable. Destruction of the incredible ecosystem that so many of us enjoy will be imminent. This issue will not be contained to the Stroudwater River but will continue on to the Fore River and into Casco Bay.

1. **Green space in the city of Portland is disappearing at an alarming rate**. I frequently walk from my home to the entrance of Portland Trails. Walking past the wide-open space of Camelot Farm fills one with a sense of joy and peacefulness. I am grateful to live within walking distance of such a beautiful landscape. It is restorative in an increasingly chaotic world. Now, instead of being filled with peacefulness I will soon be witness to one of the last open green spaces in the city being ripped to shreds in the name of progress. What a shame.

I strongly urge the Portland Planning Board to keep the property at 1700 Westbrook St. a R-1 zone.

Thank you for your time.

Colleen E. Griffin

42 Penrith Road

Portland, ME

Sent from Mail for Windows 10

PC8

14 January 2017

To: City of Portland Planning Division

City Hall, 4th Floor

389 Congress St., Portland, ME 04101

From: Bruce L. Harrington

1618 Westbrook Street

Portland, ME 04102

RE: ID#2016-282 or CBL #229 A002001

Camelot Holdings, 1700 Westbrook Street

Subject: Opposition to rezoning from R-1 to R-3

Dear Shukria Wiar,

Article in Portland Press Herald dated 12.24.2016

Mr. Barton stated that the 45-acre parcel under current R-1 zoning with a minimum lot size of 15,000 sq. ft. could support approximately 100 homes. AS you know he has requested a zoning change to R-3 with a minimum lot size of just 6,500 sq. ft.

If the parcel will support 100 lots at 15,000 sq., Why would you rezone for 95 lots at 6,500 sq.

These small lots will create cluster housing as he said with all the homes built on the top 2/3 of the parcel along Westbrook and that 17 acres or 43% of the land along the river would remain preservation land or green space (undeveloped).

Isn't it more the point that these 17 acres are located in Flood Zone -C or Wetlands and placing it in Preservation status eliminates paying property taxes on that portion of the parcel that they can't build on but was purchased as a whole.

When viewing Camelot's site plan, I could not help but notice that house lots appear to be located in the direct path of deeded Right of Ways that run from Westbrook Street to the Stroudwater River and further. When will we be able to see an accurate plan for this parcel,

City of Westbrook has placed a six month monitorium on building to revaluate the impact of cluster housing off Spring Street. I viewed that development recently and saw the imact that this development has on the landscape and would not want to look at that from my backyard.

I believe that If the City of Portland allows a change in zoning, that our property's will be devalued and I am opposed to radically changing the continuity of this safe and beautiful neighborhood.

R-1 zoning has made Stroudwater a place that people want to live and raise a family and it has worked out well.

I would like to make a request that the city do a traffic impact study on Westbrook Street. Almost every weekday during morning commute, the inbound traffic is backed up past my house at 1618 Westbrook St. to Congress St.

This development will add a minimum of 100-200 vehicles onto Westbrook St. Most probably working in the City of Portland.

Today we received a letter from Camelot Holdings for a meeting at the Baptist Church on the 24th. This raises flags as to their true intentions for this parcel and that they want desperately for us to support the rezoning to R-3.

In closing, I oppose the zoning change from R-1 to R-3.

Thank You for your attention in advance,

Bruce L. Harrington

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Camelot Farm Development

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Jan 17, 2017 at 10:24 AM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Ryan Scipione** <ryan@mjmacaluso.com>
Date: Mon, Jan 16, 2017 at 1:23 PM
Subject: Camelot Farm Development
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>

Dear Ms. Wiar,

My name is Ryan Scipione, and I am resident of City Council District 3, as I live and own the home at 45 Machigonne Street, within the Rosemont Neighborhood. I am writing to you to express my support for the proposed Camelot Farm Residential Development, and urge you and the members of the Planning Board to move forward with the necessary zoning adjustments to make possible the development that has been thoughtfully proposed for the Camelot Farm land.

From the information that has been currently available to date, the Proposed Camelot Development is a welcome enhancement to the property and our district as a whole. When I first was made aware of what is being proposed, it very quickly reminded me of the composition of my own neighborhood, where neighbors are close in relationship, encouraged by closeness in physical distance. Such neighborhoods where families or individuals own homes with modest land plots, inherently take pride in their own properties, and are outside maintaining and enjoying them. This produces not only uniquely beautiful properties, but neighbor-to-neighbor conversations (whether over a flower planting, ball playing, snow shoveling, or lemonade drinking). This yields what makes a great neighborhood; beauty, closeness, and uniqueness. I know when I look around my neighborhood, the home ownership varies across the spectrum, we have residents who have lived there for 25+ years and their children who grew up there now have children of their own who visit. There are young families with children just starting out in the Portland School system, and there are even younger professionals who have recently moved in and are looking to stay for quite a long time, and that reason is very likely because of the type of the neighborhood that we live in. – The kind of neighborhood we need more of! A neighborhood where properties are respected, neighbors are close, and residents look out for one another.

On that note, it is no secrete that we need more housing in Portland. To use my neighborhood again as an example, specifically my very street; three houses on my street were sold and purchased within the past year or so, and none of them even had to post a sign on the lawn. I know two of the three did not even make it to the public market and were sold within a week of the previous owners reaching out to real estate agents. –That is unbelievable! And is a clear sign of the need and desirability for neighborhood housing like is being proposed for Camelot Farm.

The Camelot Development is exciting in that it embodies so many goals of the City's Comprehensive Plan. From the development of clear orderly growth, via organized lots naturally derived from existing nearby infrastructure and amenities , to respecting green space and waterfront areas. Certainly the development of this neighborhood would be an economic promotion to the City of Portland. Beyond the additional taxable real estate, the neighborhoods planned location is incredibly attractive as it is within easy striking distance to Downtown via congress street, is right around the corner from the Jetport, and is within close proximity to small and large businesses alike, from yoga studios and child care facilities, to insurance and grocery/retail giants.

With Camelot Development's proposed diverse housing, it suggests that varied decent housing will be provided, creating opportunities for diverse residents, in the historic spirit of Portland. Additionally, the proposed maintenance, respect, and enhancement of greenspace and the Stroudwater River waterfront, with the possible addition/ connection to the Portland Trail system, certainly embodies many of the goals laid out in the Comprehensive Plan. For me, this is an appealing prospect, as the proposed development is between two of my favorite city trail areas; Fore River Sanctuary and

Stroudwater Trail.

I want to thank you for your time, and I know that you and members of the Planning Board understand the many positive aspects that a Development like that which is being proposed for Camelot Farm will bring to the City of Portland. It is more of this “good” that we need and want, and I support development that will bring this, and trust you will as well.

Respectfully,

Ryan Scipione, AIA, ARA
Partner, Architect
MJM+A architects
Email: Ryan@mjmacaluso.com
ME, NY, VT Licensed Architect

Portland
46 Romasco Lane
Portland, ME 04101
Phone: 207.619.7466
www.mjmaarchitects.com

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Camelot Farm development

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Jan 17, 2017 at 10:24 AM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Tom Minervino** <tom.minervino@gmail.com>
Date: Mon, Jan 16, 2017 at 4:15 PM
Subject: Camelot Farm development
To: shukriaw@portlandmaine.gov

Dear Ms. Wiar:

I am writing to support the proposed Camelot Farm residential development project on Westbrook Street in the Stroudwater neighborhood. I live at 60 Starbird Road in Portland with my wife and three young sons. It's a great neighborhood with a mix of young couples, families with kids, and retirees. Kids can ride bikes and residents help elderly neighbors shovel their walkways and driveways. It's very similar to the neighborhood I grew up in in Libbytown and is exactly what my wife and I were looking for when we bought a home several years ago.

The Camelot Farm plan calls for this type of traditional neighborhood, which Portland, with its growing demand for housing, desperately needs. So much of the recent residential development in Portland has been geared toward high-end, urban condominiums that aren't affordable or practical for most. Camelot Farm is different, proposing modest lots, green space and a walkable, environmentally responsible neighborhood that adds nearly 100 units of much-needed housing, as called for in the city's Comprehensive Plan.

Both my grandfathers built homes in Portland for their young families decades ago -- one in Back Cove and the other in Deering Center. They lived in those homes for over 30 years and their neighbors became their lifelong friends. I am still close with friends I made at Longfellow Elementary School and Lincoln Middle School. I think the sense of camaraderie that's built in traditional neighborhoods, where kids can gather for wiffle ball games and adults get together for barbecues, leads people to take pride in their homes, community, schools and city. Camelot Farm is one of the last spaces within the city bounds where a neighborhood like this can be created, so I hope Portland doesn't miss out on this opportunity.

Sincerely,
Tom Minervino
(207) 831-3634

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Camelot Farms

1 message

Jen Borland <jen.robinson.borland@gmail.com> Tue, Jan 17, 2017 at 11:35 AM
To: shukriaw@portlandmaine.gov, planningboard@portlandmaine.gov
Cc: stroudwatervillageassociation@gmail.com

Planning Division

City Hall, 4th Floor

389 Congress Street

Portland , Maine 04101

I hope you will take the time to read and consider the following:

As a Portland native, I have witnessed the transformation of our beautiful city by the sea over the last few decades. The redevelopment of downtown as a thriving business and arts district, renovation of older and addition of new housing for people of all income levels throughout the city, investment in the colleges and universities, and land conservation efforts have greatly improved Portland. The development of Camelot Farms on Westbrook Street could be an opportunity to continue in the right direction. As a Stroudwater resident I have questions and concerns about the possible re-zoning of the property. It is my understanding that the proposal to change from R-1 zoning to R-3 zoning is to allow for 96 homes to be built on the 45 acres of land abutting the Stroudwater River and the Maine Turnpike.

I believe this is one of the largest remaining undeveloped tracts of land in the city. Land conservation has been tremendously popular and positive in recent years. I have witnessed the transformation of many of our city's greenspaces; most recently the reclamation of Capisic Pond Park. To see so many families and their pets enjoying the outdoor recreation spaces year round is wonderful. It seems to me that there is an opportunity to do more with this space than build housing, a chance to conserve nature and provide outdoor public space. Public access to more greenspace and the river for recreation purposes would be appreciated by so many. I would love to have more places in Portland to take my Girl Scout troop skating, cross-country skiing, kayaking, and spending time enjoying and observing nature.

The addition of this many single-family homes in one of the most desirable areas of the city would surely add a great number of children to our public schools. Plans for a new school to replace Hall School have been approved and construction will begin soon, will the new school be large enough to absorb the additional students from a development this size? And King Middle School and the public high schools? Besides the school buildings, will the busses have capacity or will additional busses be needed?

The increased traffic is of great concern. Adding nearly 100 homes to the neighborhood would approximately double the number of homes between Congress Street and the Westbrook-Portland line. The traffic volume would undoubtedly increase. Morning traffic on Westbrook Street is heavy currently; pulling out of driveways or side streets often requires a very long wait. Adding 100 - 200 drivers to morning traffic would inevitably congest traffic further. How would this be mitigated? What additional costs will be incurred (paving, plowing, signage, etc.)? How will this be funded?

I also wonder about the viability of the development. Will homes so close to the noise of the Turnpike be desirable enough to sell? Could this end up being an unfinished development or a street with vacant homes? Vacant homes can be an "attractive nuisance." Most residents in our area are aware that there are people living in the Fore River Sanctuary, on land

adjacent to the Turnpike, under Veterans' Bridge, and in other places nearby. Would vacant or unfinished homes attract squatters and the costs and issues that can follow?

At this time, I hope the Planning Board will not change the zoning at this time so there can be more time for discussion about the best use of the property. There are many questions to be answered and ideas to be considered before a final plan should be set in place.

Thank you.

Jennifer Borland
1473 Westbrook Street
Portland, Maine 04102
207-671-0037
jen.robinson.borland@gmail.com

Director of Investor Consulting Services

Education & Training Development

SPECTRUM Enterprises

(207) 805-0025 direct
(207) 767-8000 ext 206
(207) 767-1620 fax

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Camelot Farms PB Workshop 1/17

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Jan 17, 2017 at 12:12 PM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **David Silk** <DSilk@curtisthaxter.com>
Date: Tue, Jan 17, 2017 at 8:37 AM
Subject: Camelot Farms PB Workshop 1/17
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>

Hi Shukria: I may have missed this but when I looked at the material in the PB packet regarding the Camelot Farm rezone request, I did not see a map showing the location on the site of both the RPZ and Shoreland Overlay Zone. It would be helpful to see on the applicant's R-3 build out sketch the depiction on the sketch of both of these zones and to confirm that the applicant is not seeking to modify the location on the parcels of these two zones.

Also I have several questions that perhaps can be asked tonight at the workshop.

First, when the applicant compares the number of possible lots under R-1 to R-3, is the applicant taking into account the existing RPZ and Shoreland Overlay Zone? If not what would the count be when taking into consideration these two overlay zones?

Second, is new residential development permitted in either the RPZ or the Shoreland Overlay Zone?

Third, in looking at the zoning map, I notice the R-2 zone almost extends to the easterly side of the combined parcels. When was the R-2 put in place? What would be the number of lots permitted if Camelot Farms was rezoned from R-1 (min. lot size 15,000SF) to R-2 (min. lot size 10,000SF)? Looking at the purpose sections of R-1 and R-2 they appear to be the same.

> To provide for low-density residential development characterized by single-family homes on individual lots in outlying areas
>
> of the city and along traffic corridors with limited additional traffic capacity.

Camelot Farms is in an outlying area and along a traffic corridor. Has Tom Errico been asked to weigh in on the amount of additional traffic capacity for the relevant traffic corridors?

The R-3 purpose is bit different. It says:

To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide

for planned residential unit development on substantially sized parcels. Such development shall respond to the physical qualities

of a site and complement the scale, character and style of the surrounding neighborhood.

Given Camelot Farms is a substantially sized parcel, if rezoned to R-3, is it the developer's intent to proceed with a PRUD? What is the scale, character and style of the surrounding neighborhood? An overview may be helpful to get a sense of that.

Thanks for taking my questions. Please feel free to share with the PB and the applicant.

David Silk

1187 Westbrook St

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Camelot Present Zoning.pdf
70K

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Camelot Farm proposal to rezone

1 message

Martham3 <martham3@maine.rr.com> Tue, Jan 17, 2017 at 12:12 PM
To: shukriaw@portlandmaine.gov, planningboard@portlandmaine.gov
Cc: stroudwatervillageassociation@gmail.com

One of the reasons I live in Portland is because of the vibrancy and diversity of the city. It is arguably the most diverse city in the state. It is a city composed of different types of neighborhoods and areas including but not limited to- our charming downtown Old Port, the apartment and multi story buildings in the evolving hip Eastern Prom area, the stately homes along the Western Prom , our more densely packed Northgate and Brighton Ave areas and our more rural and historic Stroudwater.

This diversity in neighborhoods and housing attracts all kinds of people to Portland.

There is an opportunity to do something with this land. It could be providing a different type of housing than we have in the area. It could be leaving the land as is. It could be combination of housing and recreational area (other than just the unbuildable part along the river that the current development proposes). It could even include a small area off of Westbrook St for neighborhood amenities (coffee? Small fitness center?). This opportunity should not be squandered for duplication of the type of housing that we already have plenty of in Portland and that fundamentally changes a neighborhood.

As an abutting owner and a Stroudwater resident, I oppose the rezoning from R-1 to R-3.

Thank you.

Martha McEvoy

89 Partridge Circle

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: 1700 Westbrook Street comments

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Jan 17, 2017 at 12:23 PM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Christian MilNeil** <c.neal.milneil@gmail.com>
Date: Tue, Jan 17, 2017 at 12:21 PM
Subject: 1700 Westbrook Street comments
To: "Shukria Wiar (shukriaw@portlandmaine.gov)" <shukriaw@portlandmaine.gov>
Cc: Stuart O Brien <sgo@portlandmaine.gov>, William Savage <wsavage@acorn-engineering.com>, mark@alphaarchitects.com

Hi Shukria, Stuart and William,

Please accept this as a formal public comment re: 1700 Westbrook Street in advance of tonight's workshop.

While I welcome any addition of new housing in our city, I'm concerned that the auto-dependent tract housing model in this proposal (the only kind of housing allowed in the R-3 zone) is classic sprawl, and a huge missed opportunity for the site.

I'd appreciate it if neighbors, the developer and the planning board considered an alternative model – currently being employed with considerable success in Scarborough's Eastern Village and Dunstan Crossing subdivisions – to allow smaller lot sizes and a greater variety of housing types to create a more compact, walkable neighborhood with more open space preservation than would be possible in the current plan.

Here's a view of the current proposal, with 96 large lots dictated by the rules of the R-3 zone.

And here's a view of what might be possible with a mix of R-5a and B-1b zoning, to allow (for instance) 75 single-family homes on smaller, clustered lots, 24 units in slightly duplex buildings, and 10-12 townhouse units in mixed-use buildings near the intersection of Swan Street, where 2-3 small retail units could accommodate neighborhood-oriented businesses and reduce the number of automotive trips made for daily errands. The rest could be preserved as public open space or community gardens/farmland with the ROS zoning designation:

Maine Turnpike (Toll road)
Cumberland and Oxford Canal
Belle Pearl
Stroudwater Christian Church
Stroudwater Food Pantry
Westbrook St
Camelot Farm
Stroudwater Trail

Clustered R-5a and B-1b zoning would allow the developer to build more units in a considerably smaller footprint, thus preserving more open space and reducing infrastructure cost. Besides reducing costs and increasing the number of potential home sales, more compact and walkable neighborhoods also reliably command a premium for each house on the market – not only for the residents of the development, but also for existing homeowners along Stroudwater Street. Lower costs and higher revenues, in turn, could make it possible for the developer to subsidize a greater number of affordable workforce units here.

The R-3 zoning under the planning board's consideration makes a walkable, mixed-use neighborhood illegal to build, and instead mandates a car-dependent suburb. The R-3 zone meets a pressing city need for more housing, but at the expense of other city goals, like reducing greenhouse gas pollution, reducing traffic, and preserving open space.

Now, maybe business-as-usual sprawl is what Stroudwater residents want, in which case, R-3 makes sense. But if the neighborhood is open to a more creative development, and the developer is open to selling more homes at a lower cost of development, then the city as a whole would benefit considerably from a clustered R-5a and B-1b zone instead.

More images of new urbanist mixed-use housing below. Speaking as one citizen, I'd much rather you legalize this kind of neighborhood instead of legalizing expensive tract housing. I have a hunch that the developer and neighbors might also prefer this.

Yours,
Christian MilNeil
45 Smith Street
- - - - - - - - - - - - -
double u double u double u dot christianmilneil dot com

Eastern Village in Scarborough:

Serenbe, near Atlanta, GA:

Serenbe:

--

Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Mary Davis
1666 Westbrook Street
Portland, ME 04102

January17, 2017

Shukria Wiar, Planner
Planning Division
City Hall, 4th Floor
389 Congress St.
Portland , Maine 04101

re: Application ID#2016-282

I am writing to convey my strong objection to allowing the high density development proposed for 1700 Westbrook Street. This developer is not proposing to follow the rules that have been set and are currently in place to protect the character of the neighborhood. Instead, the developer asks that the rules be changed to allow him to jump zones from Residential R1 to Residential R3. The purpose of the change request is to make greater profits for the developer.

I would be surrounded on three sides by five new houses. I have 30,000 square feet in my lot and understand the R3 requirement is only 6,500 square feet. That drastic a change does not mesh with the surrounding area and would totally ruin its rural character.

I hope the planning board rejects this application and gives the land a reprieve in the hopes that it can be saved from development. Remember, please, that this developer is not planning to follow the rules. Had the developer proposed housing in compliance with R-1 zoning, we would not have the same opportunity to gain time. Once gone, this natural land is gone forever.

The beautiful open field goes down to the tree line and the river. It provides a habitat for native plants which are necessary for native insects and caterpillars which are necessary for birds and reptiles. Now, there are owls and hawks and many varietys of song birds. There is also a habitat for mammals. I see coyotes and fox. If the high density development goes through, instead of land that benefits the whole environment, we will have dirty air from approximately 200 additional cars and the congestion they would cause. We will have fertilizer, pesticides and herbicides along with other pollution in the water. Casco Bay is already in trouble. Grass, instead of native vegetation, is sterile and cannot support the native

diversity of life. This development would be bad for the earth as a whole as well as the neighborhood.

Neighboring towns have seen the importance of land trusts saving both wild and farmland from development. The city of Augusta just announced the preservation of a piece of land. We are just beginning to discover the benefits to human beings from having natural, undeveloped land around them.

The zone change would be bad for all the residents of Portland. First, Portland is made of diverse neighborhoods which adds to the quality and charm of the city for all of us. The character of Stroudwater is rural. Second, all Portland residents can enjoy open space even outside our own small neighborhood. Canco Woods, Baxter Park, the Boulevard for example are good for all Portlanders. Third, residents of all neighborhoods should be able to count on public officials to protect them by enforcing zoning. I feel the responsibility of the board is to protect residents who rely on zoning rather than developers who want special treatment by changing the rules to help them make profits. Fourth, everybody loves the cows. They are a special feature of Portland.

Sincerely,

Mary Davis

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: 1700 Westbrook Street comments.2

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Jan 17, 2017 a
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Mark Sengelmann** <mark@alphaarchitects.com>
Date: Tue, Jan 17, 2017 at 1:10 PM
Subject: RE: 1700 Westbrook Street comments.2
To: Christian MilNeil <c.neal.milneil@gmail.com>, Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Stuart O Brien <sgo@portlandmaine.gov>, William Savage <wsavage@acorn-engineering.com>

Shukria,

As a Portland architect and Stroudwater resident, I support Christian Milneil's approach to creating a more desirable neighborhood in Stroudwater.

Turk and members of the Planning Board, I urge you to take a careful look at this property.

Mark

Mark Sengelmann
NCARB Principal
ALPHAarchitects
17 Chestnut Street
Portland, ME 04101-2211
(207) 761-9500
fax 207.761.9595
cell 207.671.4110
mark@ALPHAarchitects.com

Maine, New Hampshire and Massachusetts Licensed Architect

ALPHAarchitects.com

From: Christian MilNeil [mailto:c.neal.milneil@gmail.com]
Sent: Tuesday, January 17, 2017 12:21 PM
To: Shukria Wiar (shukriaw@portlandmaine.gov) <shukriaw@portlandmaine.gov>
Cc: Stuart O Brien <sgo@portlandmaine.gov>; William Savage <wsavage@acorn-engineering.com>; mark@alphaarchitects.com
Subject: 1700 Westbrook Street comments

Hi Shukria, Stuart and William,

Please accept this as a formal public comment re: 1700 Westbrook Street in advance of tonight's workshop.

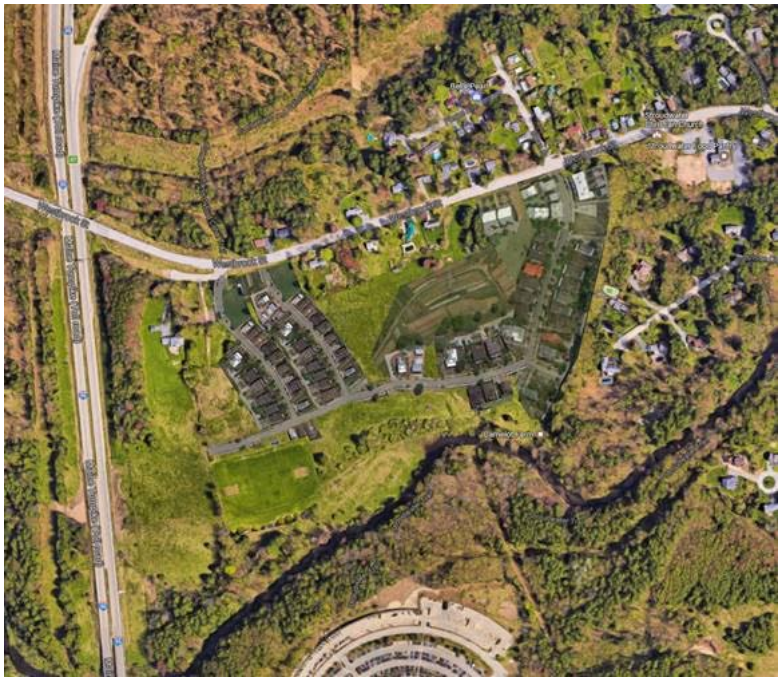
While I welcome any addition of new housing in our city, I'm concerned that the auto-dependent tract housing model in this proposal (the only kind of housing allowed in the R-3 zone classic sprawl, and a huge missed opportunity for the site.

I'd appreciate it if neighbors, the developer and the planning board considered an alternative model – currently being employed with considerable success in Scarborough's Eastern V and Dunstan Crossing subdivisions – to allow smaller lot sizes and a greater variety of housing types to create a more compact, walkable neighborhood with more open space prese than would be possible in the current plan.

Here's a view of the current proposal, with 96 large lots dictated by the rules of the R-3 zone.

Belle Pearl
Stroudwater Christian Church
Stroudwater Food Pantry
Cumberland and Oxford Canal Trail
Maine Turnpike (Toll road)
Westbrook St
Stroudwater Trail

And here's a view of what might be possible with a mix of R-5a and B-1b zoning, to allow (for instance) 75 single-family homes on smaller, clustered lots, 24 units in slightly duplex buildings, and 10-12 townhouse units in mixed-use buildings near the intersection of Swan Street, where 2-3 small retail units could accommodate neighborhood-oriented businesses reduce the number of automotive trips made for daily errands. The rest could be preserved as public open space or community gardens/farmland with the ROS zoning designation:



Clustered R-5a and B-1b zoning would allow the developer to build more units in a considerably smaller footprint, thus preserving more open space and reducing infrastructure cost. Besides reducing costs and increasing the number of potential home sales, more compact and walkable neighborhoods also reliably command a premium for each house on the ma not only for the residents of the development, but also for existing homeowners along Stroudwater Street. Lower costs and higher revenues, in turn, could make it possible for the developer to subsidize a greater number of affordable workforce units here.

The R-3 zoning under the planning board's consideration makes a walkable, mixed-use neighborhood illegal to build, and instead mandates a car-dependent suburb. The F zone meets a pressing city need for more housing, but at the expense of other city goals, like reducing greenhouse gas pollution, reducing traffic, and preserving open space.

Now, maybe business-as-usual sprawl is what Stroudwater residents want, in which case, R-3 makes sense. But if the neighborhood is open to a more creative development, and th developer is open to selling more homes at a lower cost of development, then the city as a whole would benefit considerably from a clustered R-5a and B-1b zone instead.

More images of new urbanist mixed-use housing below. Speaking as one citizen, I'd much rather you legalize this kind of neighborhood instead of legalizing expensive tract housing have a hunch that the developer and neighbors might also prefer this.

Yours,

Christian MilNeil

45 Smith Street

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double u double u double u dot christianmilneil dot com

Eastern Village in Scarborough:

Serenbe, near Atlanta, GA:

Serenbe:

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Version: 2016.0.7996 / Virus Database: 4749/13769 - Release Date: 01/14/17

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Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Deny Rezoning of Camelot Farms/Stroudwater Village

1 message

Lisa McLaughlin <torrey@maine.rr.com> Tue, Jan 17, 2017 at 1:42 PM
To: planningboard <planningboard@portlandmaine.gov>

Dear Portland Planning Board members,

I strongly and respectfully ask that you deny the rezoning request for the Camelot Farms property.

I am a resident of Partridge Road in the Stroudwater Village neighborhood, and am very concerned about the potential impact to our area of Portland. As you know, the property is the last open farmland in the city, and is currently zoned in keeping with that use. Rezoning from R-1 to R-3 is a significant change, inconsistent with neighboring properties.

Please consider supporting a plan that better supports open space and ecological/environmental needs.

Thank you for your thoughtful review and inclusion of neighboring residents in the process.

Again, I strongly urge you to deny this request in favor of a more comprehensive plan that takes the entire area and all options into consideration.

Sincerely,

Lisa McLaughlin
30 Partridge Rd.
Portland, ME 04102

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

1700 Westbrook Street parcel for zone change

1 message

Eugenia O'Brien <genieme@maine.rr.com> Tue, Jan 17, 2017 at 3:34 PM
To: shukriaw@portlandmaine.gov, planningboard@portlandmaine.gov, Stroudwater Village <stroudwatervillageassociation@gmail.com>

Alas, a prior commitment keeps from attending this meeting tonight - Please delay a zone change for 1700 Westbrook Street.

See below or attached:

January 17, 2017
Re: 1700 Westbrook Street

Dear Members of the Portland Planning Board,

Please do not re-zone the property at 1700 Westbrook Street from R-1 to R-3. This effort reveals a lack of understanding for the texture of the neighborhood and the wants of the people living here. Please keep this conversation open to further discussion by delaying this vote tonight.

You are choosing to increase our total residences by 33% in one neighborhood at a single location. Taking the last pastureland STILL USED for cows within the city of Portland appears rash and inexplicable during a time when our farmlands are disappearing and needing to be saved, not paved.

Stroudwater is a large neighborhood with low density housing and this is a missed opportunity for what could be at this 1700 Westbrook Street site. Changing the zoning this early in discussions would close doors to more ideas that could be embraced. We are not against development or more neighbors, we are, however, not going to endorse proposals that are so far astray from the reality of the texture and tenor of what is already here. It is the gateway to historic Stroudwater, and farmland is part of the charm and allure. Even the Jetport remains unique nationally for its green welcome to the city. It is okay to not pave everything within city limits.

Oh, and yes, the wildlife uses that field to cross over to the larger old Audubon-now-Portland Trails and the Fore River Sanctuary and estuary - it will totally hamper the foxes, deer herds and the songbirds who are finding diminishing territory. Even bears have had to be removed from this area in the past.

The deliberate dismissal of pre-existing zoning by the city's Planning Board is occurring at an alarming rate. This development's impact on the roads and infrastructure, along with the volume of increased transportation (potentially an additional 250 cars?) and the influx of students at our public schools are all a jolt. Stroudwater residents have selected a rural setting with many homes possessing acreage, views and wildlife. You are destroying why we are here and I am terribly upset by your actions and lack of understanding for them.

Please delay this vote and allow a better plan to come forward.

Thank you.

Eugenia O'Brien
1376 Westbrook Street, Portland, ME 04102 (207) 773-5610

Dear Planning Board 1.17.17.pages
103K

Meagan J Smith, Associate Broker
330 Forest Avenue
Portland, ME 04101
207.423.2208
SOLDbyMeg@gmail.com

January 13, 2017

Shukria Wiar, Planner
Planning Division
City Hall, 4th Floor
389 Congress St.
Portland, ME 04101

Re: Application ID #2016-282

I am writing to comment on the application to rezone the property located at 1700 Westbrook St, Portland from Res R1 to Res R3.

As a resident of Portland and real estate professional in Greater Portland, I'm writing in favor of the development of 1700 Westbrook Street.

This undeveloped parcel has the potential to bring many residents to Portland, while preserving land for recreation and connection to Portland Trails. The vision represent an old fashioned neighborhood nestled in a natural environment.

If the parcel was left solely for recreational use, concerns arise around where the funding would come to create appropriate parking. Without a proper road that leads to a parking lot, traffic problems and congestion could become problematic for the local residents.

This project is an opportunity to allow more families to purchase homes in Portland. Many buyers prefer a new construction, desire to be in Portland and seek a walkable neighborhood- something we are currently lacking in the market.

I fully support this project based on the need and desire in the Portland marketplace, as well true excitement for the plans of this development itself.

Sincerely,

Meagan J Smith

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Zoning change Camelot Farms Proposal

1 message

'Marc Hodroff' via Planning Board <planningboard@portlandmaine.gov> Fri, Jan 20, 2017 at 9:06 AM
Reply-To: Marc Hodroff <marchodroff@yahoo.com>
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>, "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>
Cc: "stroudwatervillageassociation@gmail.com" <stroudwatervillageassociation@gmail.com>

1/20/17

Regarding: zoning conversion request of the Camelot Farms property.

Dear Portland Planning Board,

I am a resident of the Stroudwater neighborhood. I was present at the meeting at City Hall on 1/17/17.

There were a few questions raised and comments I feel require additional thought as you considering potentially rezoning.

1. A board member inquired why the builder didn't request R2 rather than R3 zoning. The answer, to paraphrase, "because this would reduce the green space." The math was a bit fuzzy to me. That statement is absolutely true if one is still trying to maximize building numbers and profit, but not true if one really focused on green space as well as reduce the number of units and not encroaching on designated green space.

- I would like to further point out that the builder purchased this with the full knowledge it is currently designated as an R1. I imagine they are very knowledgeable and know that the request for change to R3 was only a request. They still proceeded to purchase and I imagine looked at cost/profit even at R1 designation and still proceeded knowing they would still profit, albeit less.
- In any zoning request I would think the burden to justify a change falls on the builder/owner of the new property. As noted by several board members, there seems to be a lack of justification for this significant change where no property or sites along this area, nor immediately adjacent areas reflect that building style or code or plan.

2. A board member felt this R3 designation would be great to help new, "first time home owners," as well as the comment its so nice to get to know your neighbors in closer spaces.

- the proposed lots are extremely small on the order of ~ .11 acres. Moreover these homes will reflect a smaller size and these would have a majority of "starter homes." Two problems with this—The average so so building costs will be at least 150-200$ per square foot. (I don't know what the builder feels they can build this for nor the average square foot). However with this and the cost of building materials as compared to older housing, this has doubled in the last 10 years for most supplies. Thus I would pose the question: the homes are starter home-like with small lots and likely smaller sq ft. Yet the pricing will likely be 300,000K plus to purchase (again part in due to cost to build and part due to supply and demand). I would like to caution that I am not aware of too many first time home owners (generally in their mid to late 20s to early 30s) that can afford 300-350k esp with interest rates guaranteed to go up by the Fed.
- Second problem with the model is that it becomes a turn over community. While one member noted how nice it was to be close to her neighbors to know them…she moved after a few years to go to a bigger home with more space. Me too. In fact so did all but two homes in my prior neighborhood on the short end of Bradley Street. I mean all turned over, truly all but two. The average first time home buyer stays in their home less than 10 years.

    - If one looked at the board room that night, all the persons opposed (in fact everyone in the room) were not 20-30 year old persons but persons of maturity. 40+ years old. Persons who raised their family in homes that were NOT first time home designations--those with small lots and smaller sq ft—ie what is currently not in the Stroudwater region. These are families that have been here for years, raised their children here, sent their kids to school here, pay taxes here and want to stay here. Not a community that has < 10 year turn over rate and moves to areas that are more affordable with more room. This is the type of area Portland needs more of, not less. All my prior neighbors had a hard time looking for that in Portland. These are the people that stay, invest and love to be here despite the expenses.

- Even with 100 homes, this will have no impact on supply and demand costs. Portland is a very desirable area and to have an impact on cost, which is more than solely a supply issue, that would require thousands of individual homes, not hundreds.

We all realize this can be developed but there is a huge difference in R1 than R3. Huge. There should also be close and careful consideration as to the issues above. I know this is important to you all as you live here and care about the area and our children and sustainability in keeping people here beyond just their "first home."

I appreciate your consideration and pause as we all know that with an R3 designation, there is no going back and Pandora's Box is open as to what can be done there.

Sincerely,

Marc Hodroff, 48 Partridge Circle, Portland.

Google Groups

Fwd: Camelot Farms

raeleneg <raeleneg@maine.rr.com> Feb 7, 2017 7:20 AM
Posted in group: **Planning Board**

Sent from my U.S. Cellular® Smartphone

-------- Original message --------
From: raeleneg <raeleneg@maine.rr.com>
Date: 2/7/17 7:10 AM (GMT-05:00)
To: sld@portlandmaine.gov
Subject: Camelot Farms

Dear Land Bank
Pls protect Camelot Farms from rezoning and development. This is a Stroudwater landmark and should be preserved. Like a park would be.
Thank you.

Raelene Gardner
22 Heritage Court
Portland ME 04102

Sent from my U.S. Cellular® Smartphone

Google Groups

Camelot Farms

David Walter <dwalter@maine.rr.com> Jan 21, 2017 7:22 PM
Posted in group: **Planning Board**

Hello. We live off Kingsmark and have a question about the proposed development. Currently, all high schoolers take the Metro which drops off the kids down near Stroudwater Church. The city has not been clearing the sidewalks all the way to Kingsmark, and while they're usually clear up the Stroudwater Road, so the kids need to walk along the shoulder of Westbrook Street. This would not be an of itself would not be as much of issue except with any significant snowfall the shoulder is also covered, forcing kids along the very edge of the street. If you're familiar with Westbrook street, drivers tend to follow the speed limit.

With this new development, would there be consideration of a Metro route being extended down Westbrook Street. I'd be worried about high schoolers having to walk even further along Westbrook with sidewalks that may or may not be clear.

Thanks you,
David Walter

Sent from my iPhone

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David

Sent from my iPhone

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David

Sent from my iPhone

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may include information that is privileged and/or confidential under both State and Federal Law. If you are not the intended recipient, or agent of the recipient, you are notified that any further use, dissemination, copy, distribution, printing or disclosure of this communication is strictly prohibited. If you have received this communication in error, please notify the originator and delete it from your system (do not retain any copies), return the original transmittal to us by mail without making a copy, and reply to the sender to advise us that this communication was misdirected. Your cooperation in protecting confidential information is appreciated.

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Camelot Farms

Shukria Wiar <shukriaw@portlandmaine.gov> Wed, Feb 8, 2017 at 1:42 PM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Mihku Paul-Anderson** <mihkupaul@gmail.com>
Date: Wed, Feb 8, 2017 at 1:38 PM
Subject: Camelot Farms
To: shukriaw@portlandmaine.gov

Dear Shukria,

I am writing to oppose the zoning request for Camelot Holdings, LLc, for the parcel located on Westbrook St. in Portland. I am already aware that the city is in favor of granting this request. As disappointing as that is, I am still going to voice my opinion on this. I have lived in Stroudwater for 4 years as a homeowner. We have an active neighborhood association of which I am a member. Like many neighborhoods in Portland, we love where we live and would like to maintain the quality of our neighborhood.

I realize that Portland needs housing. It is growing rapidly. However, I don't see this sub-division solving some of the real housing issues we have, except for *those who can afford it.* I don't believe that "single-family" homes costing more than 300k are affordable. And some will no doubt cost even more. Even if a measly 10% of these is sold at so-called affordable prices, those guideline do little to nothing to assist those in Portland who truly need help with housing; the working poor, our young people just starting out and the homeless.

Development has been going on at an accelerated pace in Portland for more than 5 years. I don't see any meaningful changes or reductions in our taxes. What I see is more, taller buildings on the peninsula and businesses playing musical chairs downtown or just folding due to the higher and higher cost of overhead. Yes, we live in a city. But that is no good reason to race toward an uncertain future with run-away development when we have such a special place in Portland.

I oppose the zoning change for the Camelot Farms parcel for numerous reasons:

1. The impact on the Stroudwater River has not been evaluated properly. The city green-lighted the Elks project and now there are going to be even more parking spaces (impervious surface) than typically allowed. And within 75 feet of a compromised waterway. The impact of 3.5 +/- acres of asphalt on our side of the river will damage it even further.
2. This plan is not in keeping with the home lots already here. It doesn't fit and will permanently alter the feel of the area. That is not good urban planning.
3. Natural eco-systems will be permanently removed or damaged. The wildlife corridor will be ruined. Wetlands and wildlife will die out.

4. Removal of all the buffer trees will greatly increase noise, and decrease air quality.

5. The increased traffic will have a deleterious and unsafe impact on the neighborhood. We have been given NO GUARANTEE from the developers that they will push to keep the speed limit at 35 or lower. Having hundreds of cars flying past homes at highway speeds does not "create a neighborhood" as Mr. Barton states. It destroys a neighborhood.
6. It remains to be seen whether this project will even be completed past Phase 1. The development team is not tested on this size project. We could end up with damaged land that just sits there.

7. A change from R-1 to R-3 will open up the possibility of commercial development. To most of the people I have spoken with, this is unacceptable.

Most Respectfully Yours,

Mihku Paul
Stroudwater Homeowner

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

Google Groups

Zoning Change

JACKIE DAY <feetup100@yahoo.com> Feb 20, 2017 3:32 PM
Posted in group: **Planning Board**

20 February 2017

Dear Members of the Planning Board,

I am a resident of Stroudwater and live at 1630 Westbrook Street. I am writing to state my strong opposition to the zoning change proposed for 1700 Westbrook Street, a property known as Camelot Farm. A group of developers are requesting that the Planning Board change Camelot Farm's zoning from R-1 to R-3. Under the property's current zoning, the developers would be permitted to build 61 homes. This is consistent with the density and character of the Stroudwater neighborhood. As you are undoubtedly aware, Stroudwater is the oldest residential community in Portland and is currently home to 250 families.

A change in the zoning to R-3 would allow 96 homes to be built on Camelot Farm. This level of density is completely out of character with the neighborhood and should not be allowed in an area that has been R-1 for decades. In addition, the infrastructure on the area cannot accommodate this extreme deviation from the existing designation. For example, Westbrook Street cannot accommodate an additional 144 vehicles during morning and evening commutes, assuming conservatively that each family has 1.5 vehicles. And the Stroudwater River cannot handle the runoff from 96 new homes.

I would like to make it clear that this is not a well-considered and planned development. There are many examples of this in the Greater Portland area. A development with an R-3 density in Stroudwater, however, would totally change the character of the neighborhood.

Sincerely,
Jackie Day

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Proposed Camelot Farms Development

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Feb 21, 2017 at 9:15 AM
To: Jennifer Munson <jmy@portlandmaine.gov>

Public Comment…

---------- Forwarded message ----------
From: **Kevin Regan** <regan.kevin1@gmail.com>
Date: Sun, Feb 19, 2017 at 10:55 AM
Subject: Proposed Camelot Farms Development
To: shukriaw@portlandmaine.gov

Dear Planning Board Members

I reside in the Stroudwater area at 1646 Westbrook Street that abuts the proposed development as known as Camelot Farms. This letter is written to advise that I am strongly against any zoning change to assist the Developers in creating their plans for this area. Under current property zonings (established with rationale) they would be permitted to build 61 homes. When the zoning rules were established it was with reason and intent to maintain the character and density of the Stroudwater neighborhood. This area is the oldest residential community in Portland growing to 250 families.

Changing zoning regulations to R-3 would allow 96 homes to be built. This is not consistent with the character of the neighborhood and should NOT be allowed in an area that for decades had been regulated zone R-1. Over the years traffic has increased through our neighborhood with commuters from surrounding area. With the zoning change this would rapidly allow heavy increases to this flow. Given the assumption that 98 homes have 1.5 cars would add another 144 cars in the morning and evening commute. In a small matter of time traffic lights would have to be constructed to safely allow cars turning and out of this development. I live along Westbrook Street close to the Westbrook line. I can attest first hand that it can be dangerous pulling out and entering my property at busy times. With this proposed development I can assure you, in the not so distant future, safety problems will occur with the added home owners. Rest assured traffic lights will be needed or Westbrook Street will have to be widened in areas to mitigate these safety or congestion issues.

I DO NOT think this is a well-considered or planned development. These zoning change, if allowed will change the neighborhood's character and create more traffic problems for the City in the future.

Thank you for your time and consideration,

Kevin Regan

1646 Westbrook Street, Portland

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Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

PC26

20 February 2017

Dear Members of the Planning Board

I am a resident of Stroudwater and live at 1618 Westbrook Street. I am writing to state my strong opposition to the zoning change proposed for 1700 Westbrook Street, a property known as Camelot Farm. A group of developers are requesting that the Planning Board change Camelot Farm's zoning from R-1 to R-3. Under the property's current zoning, the developers would be permitted to build 61 homes. This is consistent with the density and character of the Stroudwater neighborhood. As you are undoubtedly aware, Stroudwater is the oldest residential community in Portland and is currently home to 250 families.

A change in the zoning to R-3 would allow 96 homes to be built on Camelot Farm. This level of density is completely out of character with the neighborhood and should not be allowed in an area that has been R-1 for decades. In addition, the infrastructure on the area cannot accommodate this extreme deviation from the existing designation. For example, Westbrook Street cannot accommodate an additional 144 vehicles during morning and evening commutes, assuming conservatively that each family has 1.5 vehicles. And the Stroudwater River cannot handle the runoff from 96 new homes.

I would like to make it clear that this is not a well-considered and planned development. There are many examples of this in the Greater Portland area. A development with an R-3 density in Stroudwater, however, would totally change the character of the neighborhood

Bruce Harrington

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Camelot Farm Development Concerns

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Wed, Feb 22, 2017 at 6:38 PM
To: Jennifer Munson <jmy@portlandmaine.gov>

---------- Forwarded message ----------
From: **Holly Hoffman** <HHOFFMAN4@maine.rr.com>
Date: Tue, Feb 21, 2017 at 2:10 PM
Subject: Camelot Farm Development Concerns
To: shukriaw@portlandmaine.gov

February 21, 2017

City of Portland

389 Congress St

Portland, ME 04101

Dear Members of the Planning Board,

I am a resident of Stroudwater Village and live at 1619 Westbrook Street. I am writing to voice opposition to the proposed zoning change for a new development located at 1700 Westbrook Street formerly known as Camelot Farms. The developers are requesting a zoning change from R1 to R3. Under current zoning laws approximately 61 houses would be permitted to be built keeping the density in line with current R1 zoning. An R3 zoning change would allow 96 houses to be built at the site. There is concern about the added number of cars (estimated 144 per day) and infrastructure issues concerning flooding and runoff into the Stroudwater River.

As Stroudwater is the oldest residential neighborhood in Portland a lower number of houses would better blend into the area helping to preserve the historical character.

I ask the Planning Board to consider the zoning change carefully before making a final decision.

Respectfully,

Holly S. Hoffman

Holly S. Hoffman

1619 Westbrook Street

Portland, ME 04102

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

PC28

2/23/17

City of Portland Planning Board -

My name is Shaun Donlin and my family and I live at 1557 Westbrook Street. I wanted to voice my opinion on the potential development of the property formerly known as Camelot Farms, located at 1700 Westbrook Street, which is directly across the road from my family's home. The group of developers that purchased the farm are requesting that the Planning Board change the zoning from R-1 to R-3, which would allow the developers to increase the number of homes they would be permitted to build, from 61 to 96. That is a 57% escalation in new homes that would be added to our historic residential community.

We bought our home here 7 years ago with the hopes of raising our 3 children in a peaceful place, set away from the hustle and bustle of in-town Portland. Now, instead of my daughter looking at the towering pine trees, wild turkeys, cows and all the other beautiful things mother nature has blessed this area with as she waits for the school bus in the morning, she will see only cookie cutter homes and the mass departure of cars leaving this new development as the hundreds of new residents head to work on a daily basis.

The commuter traffic between Westbrook and Portland is already heavy on this road and with the addition of 100+ new vehicles that would now be forced to use this road daily, it can only lead to bigger problems. Congestion, which will inevitably slow down commute times for our neighborhood residents, school buses and those who commute between Portland and Westbrook. The inclusion of more cars to our neighborhood will absolutely raise the potential for more traffic accidents and MOST importantly, it will increase the risk of a child being harmed as they play, walk to a friends or to and from the school bus stop, ride bicycles or any other activity that they've been accustom to their whole lives. Now the neighborhood kids will have to constantly look over their shoulder due to the massive influx of new vehicles in our neighborhood.

Last year there was a similar development built on farm land at Spring Street in Westbrook and it's a tremendous eye sore that destroys any continuity that once rural area had. If the proposed development at 1700 Westbrook Street in Portland is going to look anything like that, it surely will detract from our neighborhood's natural beauty and appeal. So, naturally I am fearful that this will also lower the property values in our community.

In conclusion, my family and many of our neighbors are strongly against not just the rezoning of the Camelot Farms property, but this development at a whole. It will damage a significant portion of the natural beauty and the eco-system of our neighborhood by leveling most, if not all, of the woodlands on that piece of land. Stroadwater Village has literally existed for centuries and with an unnecessary rise in traffic flow due to this development, it can only add an increased level of danger for our children, commuters, pedestrians, cyclists and our pets.

This is a very close community and the residents enjoy its serenity. I truly hope the Planning Board will take into consideration the historic value that this neighborhood has possessed for generations. If this development were to move forward, that value will surely be lost forever.

Respectfully,

Shaun Donlin and Silvia Vasquez

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd:

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Thu, Feb 23, 2017 at 12:24 PM
To: Jennifer Munson <jmy@portlandmaine.gov>

A public Comment for Camelot Farms. Thanks.

---------- Forwarded message ----------
From: **SysterSynergy** <systersynergy@gmail.com>
Date: Thu, Feb 23, 2017 at 12:15 PM
Subject: Fwd:
To: shukriaw@portlandmaine.gov

Sent from my Verizon Wireless 4G LTE DROID

-------- Original Message --------
Subject:
From: SysterSynergy <systersynergy@gmail.com>
To: estrimling@portlandmaine.gov
CC:

Dear:
Elizabeth Boepple
Sean Funding
Carol Morrissey's
David Eaton
Kristien Nichols
Lisa Whited
Maggie Stanley

I am a resident of Stroudwater and have lived at 1465 Westbrook Street since it was built in 1956.

I am writing to state my very strong opposition to the proposed zoning change for 1700 Westbrook Street a property known as Camelot Farms.

The area cannot support the extreme deviation from the existing zoning designation.

Its impact on the neighborhood and the environment are detrimental.

Thank you for your consideration

Linda Dambrie

Sent from my Verizon Wireless 4G LTE DROID

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083

Fax: 207.756.8258

PC30

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: Stroudwater re zoning

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Fri, Feb 24, 2017 at 9:16 AM
To: Jennifer Munson <jmy@portlandmaine.gov>

Please this to the public comments. Thanks.

---------- Forwarded message ----------
From: **richard michel** <richard.michel88@yahoo.com>
Date: Thu, Feb 23, 2017 at 6:42 PM
Subject: Stroudwater re zoning
To: shukriaw@portlandmaine.gov

Dear Planning Board Members,

I am writing in concern of the re zoning of the Camelot Farm property at 1700 Westbrook street in Portland. I/we live at 1683 Westbrook Street directly across the street of the Roger's home. The new zoning would affect us quite a bit and is not welcomed. The changes in the already horrible traffic would only increase, have a negative effect on the trail system, and be devastating to the natural wildlife and water system. I think the change of zoning from R-1 to R-3 would a terrible mistake for the area, neighborhood, and certainly the local environment.

I also think the change is driven by the cash boxes of the city and not really for helping in the housing issues of the city. The majority of those needing housing cannot afford a house with starting cost of 250,000 or more. Therefore my question is to whose benefit is the re zoning for ? ,the Stroudwater community or the cash boxes of the city ?

I submit this request to all of you in the hope you will hear my/ our concerns.
Thank you for your attention.
Richard Michel
1683 Westbrook Street
Portland

Sent from my iPad

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

PC31

Arthur F. McEvoy
89 Partridge Circle
Portland ME 04102-1632
(207) 773-4738

February 14, 2017

David Eaton
City of Portland Planning Board

Dear Dave,

This is not a Public Comment.

I'm disappointed that the Angler's Club dinner was cancelled but I understand the reasoning. This would have been the first one attended since early last season. L.L.Bean has had the uncanny ability to schedule me to work on every dinner occasion. I had to do some sharp horse trading to get tomorrow off.

Not only was I interested in Nick Mills, the scheduled speaker, but I also wanted to corner you for a couple minutes discussion of the Camelot Farm application. I live on Partridge Circle so I have a special interest in the Village. I have less concern about a well thought out residential development than I have about a change in the existing Residential R-1 zoning. One hundred, (yes, there are 100 lots defined) Disney World style small cottages on postage stamp-sized lots that will introduce twice annual applications of lawn fertilizer and weed control products ultimately finding their way to the fragile Stroudwater River is not what I want in my neighborhood or my city. You know what always flows downhill.

At the first Planning Board Workshop you seemed willing to give the zone change application more consideration. The two ladies to your left were, in my opinion, completely out of touch, one citing irrelevant anecdotes about living on Frances Street. I lived close by on Orland Street for 13 years. It's an entirely different environment. The Chair clearly had already reached a decision and Sean was secure in her shadow. One of my concerns, as well as that of many other concerned neighbors, is the financial viability of the two developers, Mike Barton and his sidekick who always appears in his parking lot striping outfit.

At $350,000 to $450,000 per house this would require a +/- $20,000 deposit, a monthly mortgage payment out of reach of the typical first time home buyer that this targets and real estate taxes estimated by Mike Barton to be $5,000 to $6,000 per year. Those who can afford to buy don't want tiny shoulder to shoulder lots, uncomfortably close proximity to existing homes or to the turnpike, all of which exist within this plan.

If the marketing plan for Camelot Farm fails this part of the city will bear the scar. A new developer will reset the clock and we'll enter the unknown zone again..

I am certainly not opposed to well considered and planned development. There are many examples in the greater Portland area. It's this particular zoning change application that has my feathers ruffled.

Tight lines.

Sincerely,

Art McEvoy
element89@maine.rr.com

Portland Maine | Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

Stroudwater Neighborhood

1 message

Angela J. Wheaton <angelajwheaton@yahoo.com> Mon, Feb 27, 2017 at 3:25 PM
Reply-To: "Angela J. Wheaton" <angelajwheaton@yahoo.com>
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>

Dear Portland Planning Board,

I live at 30 Partridge Road in the Stroudwater neighborhood. Stroudwater is the oldest residential community in Portland and is currently home to roughly 250 families living in single family dwellings on property that is largely zoned Residential-1 (R-1). When I moved to Portland four years ago, Stroudwater was exactly the type of neighborhood I sought, in large part because of the existing zoning. I had confidence that the city would honor the existing zoning and that my quality of life and property value would not be impacted by other land uses.

I am writing to state my strong opposition to the zoning change proposed for a portion of the Stroudwater neighborhood, 1700 Westbrook Street, also known as Camelot Farm. A group of developers is requesting that Camelot Farm's zoning be changed from R-1 to R-3. Under the property's current zoning, the developers would be permitted to build 61 homes. This number is consistent with the density and character of our Stroudwater neighborhood. A change in the zoning to R-3 would allow 96 homes to be built on Camelot Farm. This level of density is inconsistent with the design and character of the neighborhood and should not be permitted in an area that has been zoned R-1 for decades.

I also have serious concerns that the infrastructure of the area cannot support this deviation from the existing zoning designation. It has been estimated that during morning and evening commutes, the proposed development would add about 144 cars to the already congested Westbrook Street/Congress Street intersection, and significant traffic to Westbrook Street in general. Also, the Camelot Farms property borders the Stroudwater River, an important ecosystem which likely cannot handle the runoff from 96 new homes.

I am not opposed to well-considered and carefully planned development. There are many examples of this in the greater Portland area. A development with an R-3 density in Stroudwater, however, does not reflect the current flavor and design of our neighborhood.

Thanks for reading and considering my thoughts. I would be more than happy to discuss our neighborhood at any time.

Angela J. Wheaton 30 Partridge Rd. Portland, ME 04102

Portland Maine | Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

Camelot Farm Development-1700 Westbrook Street

1 message

James Mooney <jtmooney3232@yahoo.com> Sun, Feb 26, 2017 at 12:47 PM
To: planningboard@portlandmaine.gov
Cc: shukriaw@portlandmaine.gov

I am in total opposition to the zoning from R-1 to R-3. It is the right of the past owners to be able to sell that property for its designated zoning of R-1. I have lived at 54 Stroudwater Road since 1998 and have enjoyed the area tremendously. It's always been the countryside portion of Portland. Until now.

Stroudwater Village is an area of deep historical roots where many parents currently living here have families with young children. Also, we have couples who are retired and enjoy the area as well. Many of us already know how challenging it can be to walk, push a stroller, run and bicycle on Westbrook Street. It's a major artery for going to work in the morning and returning home after work. It's a major route of getting ambulances to Maine Medical Center. The city has tried desperately to control speeding traffic to no avail. There is a speed sign that clocks vehicle pace and it's always flashing indicating a high speed of travel. Every day!

As an employee of Maine Medical Center one of my major responsibilities is to protect the safety and health of patients, employees and visitors to the hospital. I find this expansion from R-1 to R-3 a benefit to the investors but not to the citizens of Stroudwater Village. The increase in vehicles created by this expansion will draw more cars, delivery trucks and service trucks let alone all the heavy truck traffic during the construction phase of this project. The Safety of all those currently living here should be paramount now and after the R-1 work begins.

I am opposed to the R-3 density plan. I am for the R-1 plan. Let's promote growth but not at the price of making a great neighborhood less desirable for those of us who have been living and recreating here for many years.

Sent from the iPad of:
James T. Mooney
Maine Medical Center
Department of Safety-Emergency Management
207.712.4672

Portland Maine | Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

1700 Westbrook Street

1 message

javaj@maine.rr.com <javaj@maine.rr.com> Sun, Feb 26, 2017 at 1:26 PM
To: shukriaw@portlandmaine.gov
Cc: bbatson@portlandmaine.gov

Dear city legislators and fellow concerned citizens,

My name is Janet Page and I am the homeowner and resident of 1487 Westbrook Street. I am writing to express my opposition to the proposed zoning change for the "Camelot Farm" development at 1700 Westbrook Street. If the change is allowed the development would totally overwhelm our neighborhood and an already busy city street. Thank you for your careful consideration.

Sincerely, Janet Page

PC35

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

PLEASE READ MY LETTER

Colleen Griffin <colleen_griffin@msn.com> Mon, Feb 27, 2017 at 3:28 PM
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>, "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

Dear Planning Board,

I am writing once again to voice my **strong opposition** to the zoning change, R-1 to R-3, proposed for 1700 Westbrook St. As a resident of Stroudwater (42 Penrith Road), I fear that my neighborhood will be forever changed and not for the better.

The addition of 96 new homes on the Camelot Farms property will forever change and truly destroy the character of Portland's oldest neighborhood. Development of this property is of course unavoidable, but 96 homes is clearly **over-development.** The property is currently zoned as R-1 which will allow for 61 homes to be built. This is a much more sane and safe plan.

My fear is that the property will not be able to ecologically support 96 homes. With the current use of lawn chemicals, specifically nitrogen and phosphorus, an algae bloom in the Stroudwater River is imminent and will be devastating. The Fore River and Casco Bay will also suffer the effects of over development of this property.

Traffic is another very big concern. Will the city be installing traffic lights, widening Westbrook St,. Installing sidewalks to accommodate the influx of traffic from 96 new homes? Without these infrastructure improvements, Westbrook St will become a major highway. It is a challenge to pull out safely into traffic on Westbrook St now. If I had the option to travel another way I certainly would. Since Penrith Rd (like most all others in the area) are dead end, I have no other option.

Shouldn't the current residents of the Stroudwater neighborhood have as much of a voice as the developer in this matter? Please consider carefully the full extent of the zone change for 1700 Westbrook St. **Your decision** to change the zone from R-1 to R-3 will forever change the character of **my neighborhood**.

Thank You,

Colleen Griffin

Sent from Mail for Windows 10

PC36

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

1700 Westbrook Street (Camelot Farm)

1 message

Eugenia O'Brien <genieme@maine.rr.com> Mon, Feb 27, 2017 at 3:55 PM
To: planningboard@portlandmaine.gov, shukriaw@portlandmaine.gov

February 25, 2017

Portland Planning Board

re: no zone change for 1700 Westbrook Street (Camelot Farm)

Dear Elizabeth Boepple (Chair), Sean Dundon, Carol Morrissette, David Eaton, Kristien Nichols, Lisa Whited, and Maggie Stanley:

I strongly question the proposed zone change for Camelot Farm from R-1 to R-3 to permit a 'grow-smart' hyper-density housing development of 96 homes on 30 acres.

A change to allow a density which is so completely out of character with the oldest residential community in Portland is counter-intuitive in an area that has been zoned R-1 for decades. It was only when such a dense plan was put forward that the alarm was sounded regarding this sale, as no signage announced there would be a zone change that went with the acquisition of this large open property. Intent was unknown. Until now.

In addition, the infrastructure of the area cannot accommodate this extreme deviation from the existing zoning designation. For example, Westbrook Street cannot accommodate an additional 144 cars during morning and evening commutes, assuming conservatively that each family has 1.5 cars. And the Stroudwater River cannot handle the runoff from 96 new homes. And are schools really ready to cope with the influx of close to 100 new homes and the school children associated with this new development marketed to be family-friendly?

By denying this zone change, you would allow for a public-private purchase of this private property prior to a finalized sale. Portland has an amazing history of reverence for green space and it deserves equal consideration in Portland's future. Vacant space does not always cry out for housing and tar.

There are many examples of well-considered and carefully planned developments in the greater Portland area. As presented, this development would not be well-considered or well-planned and forever alters the rural ambiance and natural allure that is the heart of Stroudwater. This 45+ acre site deserves a larger conversation in the context of Portland's Strategic Plan.

Eugenia O'Brien
1376 Westbrook Street, Portland, Maine
(207) 773-5610 / (207) 232-0717

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Fwd: Opposition to zoning change in Stroudwater

1 message

Shukria Wiar <shukriaw@portlandmaine.gov> Tue, Feb 28, 2017 at 8:56 AM
To: James Dealaman <jdealaman@portlandmaine.gov>

Please save and print.

---------- Forwarded message ----------
From: **huang june** <junehuang71@hotmail.com>
Date: Mon, Feb 27, 2017 at 4:17 PM
Subject: Opposition to zoning change in Stroudwater
To: "shukriaw@portlandmaine.gov" <shukriaw@portlandmaine.gov>

Dear Members of the Portland Planning Board,

I am a resident of Stroudwater who resides at 18 Spar Lane. I am writing this email to state my strong opposition to the zoning change proposed for 1700 Westbrook Street (Camelot Farm). As you are aware, a group of developers is requesting that the Planning Board change the zoning from R-1 to R-3 on Camelot Farm. Under the current R-1 zoning, the developers are permitted to build 56 houses. This number is consistent with the density and character of the Stroudwater neighborhood. Stroudwater is the oldest residential community in Portland, and is currently home to 210 families.

A change in zoning from R-1 to R-3 would allow developers to build 96 houses on the same plot of land. This level of density is completely out of character with the neighborhood and should not be allowed in an area that has been classified as R-1 for decades. Additionally, the the infrastructure of the area cannot accommodate this extreme deviation from the existing zoning designation. For example, Westbrook Street simply cannot accommodate an additional 144 cars during morning and evening commutes, assuming conservatively that each family has 1.5 cars.

I would like to make it clear that I am not opposed to well-considered and planned development. There are many examples of this in the greater Portland area. However, a development with an R-3 density in Stroudwater would not be well-considered or well-planned.

Thank you for your time and consideration.

Sincerely,

Xiao Jun Huang

--
Shukria Wiar, Planner
Planning Division
City of Portland 389 Congress Street
Portland, ME 04101
Ph: 207.756.8083
Fax: 207.756.8258

PC38

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Fwd: Camelot Farms

James Dealaman <jdealaman@portlandmaine.gov> Tue, Feb 28, 2017 at 12:00 PM
To: Syster Synergy <systersynergy@gmail.com>
Cc: Shukria Wiar <shukriaw@portlandmaine.gov>

Thank you for your e-mail. Your public comment will be included in the review and will become part of the public record.

If you have any further questions, please contact me.

--
James Dealaman, Administrative Officer
Planning and Urban Development Department
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8721 (T)
(207) 756-8258 (F)
planning@portlandmaine.gov
www.portlandmaine.gov
Office Hours are Monday - Friday 8:00 a.m. - 4:00 p.m.

---------- Forwarded message ----------
From: **SysterSynergy** <systersynergy@gmail.com>
Date: Tue, Feb 28, 2017 at 9:02 AM
Subject: Fwd: Camelot Farms
To: shukriaw@portlandmaine.gov

Sent from my Verizon Wireless 4G LTE DROID

-------- Original Message --------
Subject: Camelot Farms
From: SysterSynergy <systersynergy@gmail.com>
To: shukirawiar@portlandmaine.gov
CC:

Hello
My name is Linda Dambrie, I own 1465 Westbrook St. Portland Maine
I have been a resident here since 1956. Ian writing to let you know that I am apposed to the rezoning of Camelot Farms from r1 to r3.
Please forward this to all members of the planning board.
Could you also keep me informed of all meetings or presentations which one or more of the applicants for the zoning change for 1700 Westbrook St application id #2016-282 or CBL #229 A002 have with any member of the planning board or member of its staff. I also request notification and transcript of any ex parte discussion via phone , text, or email that one or more of the applicants have with any member of the planning board or member of its staff. I can be contacted by the email and phone listed below.
Any transcripts can be mailed to 1465 Westbrook St.
Thank you for your time and consideration.
Linda Dambrie
1465 Westbrook St
Portland Maine 04102
Systersynergy@gmail.com
207-774-7353

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Re-zoning of 1700 Westbrook St

1 message

Michael Archibald <marchie1962@gmail.com> Tue, Feb 28, 2017 at 9:46 AM
To: planningboard@portlandmaine.gov, shukriaw@portlandmaine.gov

Dear Members of the Portland Planning Board,

I am a resident of Stroudwater and live at 126 Stroudwater Road. I am writing to state my strong opposition to the zoning change proposed for 1700 Westbrook Street, a property known as Camelot Farm. A group of developers are requesting that the Planning Board change Camelot Farm's zoning from R-1 to R-3. Under the property's current zoning, the developers would be permitted to build 56 homes. This number is consistent with the density and character of the Stroudwater neighborhood. As you are undoubtedly aware, Stroudwater is the oldest residential community in Portland and is currently home to 210 households.

A change in the zoning R-3 would allow 96 homes to be built on Camelot Farm. This level of density is completely out of character with the neighborhood and should not be allowed in an area that has been zoned R-1 for decades. Currently, there are150 households situated between Congress Street and the Westbrook border (north of Stroudwater River) that use Westbrook Street as their main arterial route in and out of the neighborhood. That would be a huge increase of 65% of households. The infrastructure of the area cannot accommodate this extreme deviation from the existing zoning designation. For example, Westbrook Street cannot accommodate an additional 144 cars during morning and evening commutes, assuming conservatively that each family has 1.5 cars. Also, winter sidewalk snow removal has been sketchy at best along Westbrook Street where children, the elderly, and others try to walk. An increase in the number of children (probably 25-50) with such a re-zoning is dangerous and should also be addressed by the developer. And finally, Stroudwater River may be damaged by an increase in excessive runoff from inorganic yard and waste chemicals.

I would like to make it clear that I am not opposed to a well-considered and well-planned development at Camelot Farm, especially in light of the fact that Portland and Southern Maine are hoping to attract a younger generation to settle here. There are many examples of such developments in the Greater Portland area. I would encourage both the developer and the Planning Board to look to these developments for inspiration. A development with a R-3 density in Stroudwater Village, however, would NOT be well-considered or well-planned.

Sincerely,
Michael Archibald
126 Stroudwater Rd
Portland ME 04102
617-699-3017

PC40

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Statement from Stroudwater Village Association regarding proposed zone change at 1700 Westbrook Street (Camelot Farms property), February 2017

1 message

Stroudwater Village Association Board of Trustees Tue, Feb 28, 2017 at 10:12 AM
<stroudwatervillageassociation@gmail.com>
To: shukriaw@portlandmaine.gov, planningboard@portlandmaine.gov
Cc: Brian Batson <bbatson@portlandmaine.gov>, Charlton Smith <charltonsmith@mac.com>

Hello, please see the statement below (also attached for convenience) from the SVA, and please add it to the public comments for tonight's Planning Board Workshop. SVA VP Carl Smith (copied) will be at the meeting to represent the SVA. Thank you. -Dan Koloski, SVA President

Statement from Stroudwater Village Association regarding proposed zone change at 1700 Westbrook Street (Camelot Farms property), February 2017

Summary: The Stroudwater Village Association restates its January 2017 position that it does NOT believe a zone change from R-1 to R-3 is appropriate at this time, and requests that the Planning Board table or deny the request as presented to allow for more discussion about the highest and best use of the property.

1. Lack of notice impedes due process

To begin with, the SVA would like to register its disappointment that once again, no formal notice of this workshop was sent to the official SVA email address which receives all other city notices. We are unable to help the city provide due process to residents/taxpayers without timely notice, and we most certainly qualify as an "interested party." We also note that 4:30PM is a very difficult time for working residents to attend meetings, thereby increasing the importance of time to prepare written feedback.

Action: Please ensure electronic notifications regarding ANY properties in the Stroudwater area are sent to stroudwatervillageassociation@gmail.com with proper notice timing.

2. Parcel-by-parcel re-zoning is not "planning"

The SVA continues to have serious concerns with the reactive policy/process approach from the city regarding re-zoning proposals in our area. We point out that is the third major re-zoning application in the last 12 months in which the seller and buyer operated under a presumption that re-zoning would be simply "rubber-stamped" as part of a parcel sale (the prior two were the Northland/Elks Club and Verizon Wireless proposals). We believe that the current "anything goes" mentality among sellers in the neighborhood is the direct result of tacit encouragement and incentives from the city due to the lack of planning for the area, and this potential re-zoning will only encourage more of the same.

In several meetings surrounding the revised Comprehensive Plan, it was noted that the next step should be neighborhood-specific plans developed collaboratively by the city, neighborhood associations and residents. No such plan exists for Stroudwater, and we've been given no indication that one is forthcoming. The city produced the "Outer Congress Street Land use" white paper only at the very tail end of the Elks Club debate and after considerable pressure from residents, but even in that very brief paper it noted that "As development pressure continues on Outer Congress

Street, it is important that the city establish a policy direction for future land use decisions in this area." The same is true of the Westbrook Street corridor. We do not believe neighborhood transformation should happen by accident.

We also note with alarm the Planning Board's explicitly-stated desire (in the current materials, staff memo) to additionally rezone existing adjacent occupied parcels over the objections of the current (and in many cases, longstanding) residents. This feels like unnecessary overreach and raises many questions about the future of other residential properties in the area and adverse incentives for future sellers.

Action: The SVA requests that the city table parcel-by-parcel rezoning in our area until a vision process is complete.

3. This re-zoning is proposed in support of a project that may not be viable

In the last Planning Board Workshop, Board members noted the risk associated with re-zoning around a particular proposal is that there is no guarantee that the ultimate plan will bear any semblance to the existing proposal, especially if the property ownership changes hands post re-zoning.

The project has been described as a multi-year, multi-phase, build-on-presale business model even though initial infrastructure costs (new roads, sewer, etc.) will be substantial. Furthermore, the project is described as having "starter homes in the $350-450K range." Many residents have questioned both the existence of financing required to sustain such a project over many years as well as the level of demand for "starter homes" above $350K, and as such we have previously asked the developer for background on previous projects they have completed, as well as the full background on the team and its resources.

To date we have not received any additional information that would give us confidence that this team has the ability to execute what they are proposing...which leads directly back to the risk of re-zoning.

Action: Since this re-zoning is only being proposed to support a particular project, the SVA requests that any future zoning revert back to previous (R-1) zoning if there are substantial changes to the underlying project on which the re-zoning was approved.

4. There are meaningful concerns about the project even if financially viable

The developer has been willing to engage with residents on aspects of the proposal, and we are appreciative of these efforts. We also note some areas in which the developer has been responsive to resident suggestions such as Turnpike noise buffering. We think more time is needed for ongoing collaborative discussion to resolve major outstanding issues, including the ones noted below.

4A. Too much automobile volume: We reiterate our serious concerns about arbitrarily doubling the number of single-family (1.5/2-car-per-household) homes on this section of Westbrook Street. As anyone who lives or commutes on Westbrook Street knows, there is no easy way the existing thoroughfare can absorb that level of rush-hour increase, and there is no alternative ingress/egress possible. The traffic study cited incorrectly focused on the incremental effect from a hypothetical full R-1 buildout (83 homes) to the proposal under R-3 (96 homes. That is the wrong metric, as there is no existing housing in place, and so, regardless of underlying zoning, every single car is incremental in this circumstance.

Action: The SVA has previously requested alternatives from the developer that would involve numerically far less homes (more like in the 30-40 range, similar to the scale of the very successful River's Edge and Tide Mill developments) as well as phase-by-phase development plans and buyout options that would prevent incremental development. To date, we have not received any of this information.

Action: Regardless of whether we are talking about 30 homes or 90 homes, the SVA requests specific traffic demand management plans from the developer and MDOT including stoplights at parcel ingress/egress as well as ways to encourage alternative routing for non-resident commuters (such as additional Westbrook Street traffic calming to reduce non-peak-hour speeds and regional efforts such as removal of local turnpike tolls).

4B. Unknown environmental effects: There is also meaningful concern about environmental impacts of incremental development on the Stroudwater River and surrounding ecosystem, and changes to the river flow may also negatively impact the already-damaged historic Stroudwater Dam.

Action: The SVA requests a full inventory of environmental impact and mitigation plans for the project. Thus far we have seen some information about stormwater management, but no information about pesticides and impacts on existing conditions (wetlands, vernal pools, etc.).

Action: The SVA requests the city release its plans for Stroudwater Dam repair before any large-scale development that borders the river would be undertaken.

4C. Incompatible density/layout with existing development patterns. There is no existing precedent for the proposed combination of density and layout anywhere in Stroudwater. The applicant's materials and staff memo note approximately 28 existing noncomforming (to R-1 and R-2 zoning) lots in the Stroudwater area, as well as the River's Edge "Conditional R-3" rezoning from 1992, as precedent for this re-zoning. However, these precedents actually argue against the current plans.

- The majority of nonconforming lots with overall sizes close to the sq. ft range for this project (~9,070 sqft average) are not near the site but rather in the Stroudwater Historic District (cited lots are in the ~1100-1300 Westbrook Street range as well as Cobb Ave. and Garrison St., all to the southeast of the Westbrook/Congress St. intersection). The nonconforming lots that are closer to 1700 Westbrook Street (cited lots are in the ~1500-1600 Westbrook Street range, though notably on the opposite side of Westbrook Street, as well as on Swan St. and Pierce Avenue) are mostly cited based on lot width, but most are substantially larger than the average proposed size. The point being, this combination of thin-width lots AND densely packed lots doesn't really exist in the neighborhood today.

- Even the River's Edge example provides a precedent for less density/volume, not more, as the staff memo notes, "The reason for the conditional zone change request to the R-3 zone was because the R-3 zone allowed a Planned Residential Unit Development (PRUD) for single family homes at that time. The applicant kept the density of the proposed subdivision at 29 lots which was the same density as permitted under the R-1 and R-2 zones."

The bottom line on all of this is that more discussion is needed. We are all simply "not there yet."

The Stroudwater Village Association restates its January 2017 position that it does NOT believe a zone change from R-1 to R-3 is appropriate at this time, and requests that the Planning Board table or deny the request as presented to allow for more discussion about the highest and best use of the property.

The Stroudwater Village Association is a Maine Non-Profit corporation. All residents of Stroudwater are members and invited to participate in all of our activities.

Find us on the web at http://www.stroudwatervillage.org and http://www.livinginportland.org/stroudwater.htm

Find us on Facebook at https://www.facebook.com/StroudwaterVillageAssociation

Statement from Stroudwater Village Association regarding proposed zone change at 1700 Westbrook Street-20170226.pdf
128K

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Camelot Farms rezoning proposal

1 message

Carolyn Claiborn <c_claiborn@hotmail.com> Tue, Feb 28, 2017 at 10:48 AM
To: "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>, "Angela J. Wheaton" <angelajwheaton@yahoo.com>, "Strimling@portlandmaine.gov" <Strimling@portlandmaine.gov>, "bsr@portlandmaine.gov" <bsr@portlandmaine.gov>, "sthibodeau@portlandmaine.gov" <sthibodeau@portlandmaine.gov>, "bbatson@portlandmaine.gov" <bbatson@portlandmaine.gov>, "jcosta@portlandmaine.gov" <jcosta@portlandmaine.gov>, "dbrenaman@portlandmaine.gov" <dbrenaman@portlandmaine.gov>, jim claiborn <anxietyshrink@gmail.com>

Thank you for giving me the time to read my message. I have been a resident of the Stroudwater area for the past thirteen years. I want to register my opposition to the proposed zoning changes for the development of Camelot Farms from R1 to R3.

Maine is an old state. Residents of Maine are an average of 45 years old. Females in Portland average 50 years. In our neighborhood, the average is much higher. Most of the residents of Partridge Road and Circle are retired or nearing retirement. Most of the residents have owned their houses for more than twenty years. They have owned these houses with the promise that once they were unable to care for the houses or themselves, they would be able to sell their homes to finance the next steps in their retirement.

The Stroudwater neighborhood is attractive to new buyers because of the wooded back yards, views of the river and the historic sense that permeates the area. The proposed development of Camelot Farms will radically alter the ambiance of this neighborhood, making it less attractive to potential buyers. If residents of this area were younger, the threat to the value of their homes might have less impact given that that they have more years to compensate for the loss.

In our small neighborhood, that's not the case. Loss of value of the residents' most important asset can negatively affect their remaining years. I think this is a critical factor to be considered by the planning board when weighing the benefits and risks of changing the zoning.

The residents of Partridge Road and Circle have earned your consideration. They are teachers and businessmen who have given back to Portland in many, many ways. We owe them the ability to maintain their retirement assets as was always promised them.

Thank you for your attention.

Sincerely,

Carolyn Claiborn

24 Partridge Circle

Portland, Maine 04102

Portland Maine | Yes. Google's good here.

James Dealaman <jdealaman@portlandmaine.gov>

Oppose Re-Zoning of Camelot Farms

1 message

Lisa McLaughlin <torrey@maine.rr.com> Tue, Feb 28, 2017 at 11:34 AM
To: shukriaw@portlandmaine.gov, planningboard <planningboard@portlandmaine.gov>
Cc: stroudwatervillageassociation@gmail.com

Dear Portland Planning Board Members,

I am writing to express my strong opposition to the re-zoning of the Camelot Farms area of Stroudwater Village from R-1 to R-3. Although I will not be able to attend the planning board meeting this afternoon, I agree with my neighbors who will be there to present concerns. Please give this matter your careful consideration and work for us to preserve the character and environmental integrity of the village. Thank you,

Lisa McLaughlin
30 Partridge Road
Portland ME 04102

Dear Chairperson Boepple,

We are concerned that the Planning Board's process of reviewing Camelot Holdings LLC's ("Camelot Holdings") request to rezone 1700 Westbrook Street is not meaningful. To the contrary, the process appears to be arbitrary and capricious. Indeed, it appears to be inconsistent with the goals of encouraging orderly growth and development in appropriate areas of our community and of preventing sprawl and development in flood plains. Moreover, it does not appear to be mindful of protecting critical natural resources, agricultural resources, and outdoor recreation opportunities. The most recent example that illustrates our concern involves the Planning Board's failure to follow through on one of its requests to Camelot Holdings.

1700 Westbrook Street is the last large, undeveloped parcel of land in Portland. It is a 44-acre farm nestled against the Stroudwater River. Approximately 15 of those acres lie within the flood plain of the river. It is also surrounded by the community of Stroudwater which is zoned R-1. In general, the purpose of the city's zoning ordinances is to decrease congestion, prevent over-crowding of land, avoid undue concentration of population, and preserve the character of existing zones and the value of property therein. The purpose of the R-1 residential zone in particular is to provide lower density residential development in outlying areas of the city along traffic corridors.

On February 28, the Planning Board held a public workshop on the question of whether to grant Camelot Holdings' application to have 1700 Westbrook Street rezoned from R1 to R3. Assuming a rezoning to R3, Camelot Holdings had submitted a preliminary site plan which depicted 96 homes and green space which included a Shoreland Overlay Zone where building would be prohibited under any zoning designation. At the February workshop, the Planning Board requested that Camelot Holdings supply the Planning Board with plans which depict a build-out using an R1 zoning plan as well as an R2 zoning plan and which retain the same green space area shown in its preliminary site plan using R3 zoning. Michael Barton, the representative for Camelot Holdings, agreed to the Planning Board's request. Camelot Holdings failed, however, to honor the request and to submit the plans required by the Planning Board to reach a considered decision.

The Planning Board has not pressed Camelot Holdings for a response, and we are concerned that this indicates a lack of genuine interest in alternatives that better accommodate the purposes of zoning laws, plans, and ordinances. At this time, we ask that Camelot Holdings submit the plans which the Planning Board expressly requested and that the public have an opportunity to comment on those plans at a workshop before a public hearing and vote for rezoning occurs.

Sincerely,

Name: Eva Frank Eva Frank
Address: 100 Partridge Circle
Date: 5/5/17

Cc: Shukria Wiar
Honorable Brian Batson

Dear Chairperson Boepple,

We are concerned that the Planning Board's process of reviewing Camelot Holdings LLC's ("Camelot Holdings") request to rezone 1700 Westbrook Street is not meaningful. To the contrary, the process appears to be arbitrary and capricious. Indeed, it appears to be inconsistent with the goals of encouraging orderly growth and development in appropriate areas of our community and of preventing sprawl and development in flood plains. Moreover, it does not appear to be mindful of protecting critical natural resources, agricultural resources, and outdoor recreation opportunities. The most recent example that illustrates our concern involves the Planning Board's failure to follow through on one of its requests to Camelot Holdings.

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The Planning Board has not pressed Camelot Holdings for a response, and we are concerned that this indicates a lack of genuine interest in alternatives that better accommodate the purposes of zoning laws, plans, and ordinances. At this time, we ask that Camelot Holdings submit the plans which the Planning Board expressly requested and that the public have an opportunity to comment on those plans at a workshop before a public hearing and vote for rezoning occurs.

Sincerely, Michael Archibald

Name: Michael Archibald
Jason Dionne
Address: 126 Stroudwater Rd.
Portland ME 04102
Date: 5/2/17

Dear Chairperson Boepple,

We are concerned that the Planning Board's process of reviewing Camelot Holdings LLC's ("Camelot Holdings") request to rezone 1700 Westbrook Street is not meaningful. To the contrary, the process appears to be arbitrary and capricious. Indeed, it appears to be inconsistent with the goals of encouraging orderly growth and development in appropriate areas of our community and of preventing sprawl and development in flood plains. Moreover, it does not appear to be mindful of protecting critical natural resources, agricultural resources, and outdoor recreation opportunities. The most recent example that illustrates our concern involves the Planning Board's failure to follow through on one of its requests to Camelot Holdings.

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Sincerely,

Name: Elwood J. Howard, Gilbert Twitchell
Address: 28 Roundabout Lane, Portland
Date: May 1, 2017

Elwood J. Howard
Gilbert Twitchell

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely, Mark Sadler

Name: Mark Sadler
Address: 120 Partridge Circle Portland, ME
Date: 5/4/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: William W. Brown
Address: 132 PARTRIDGE CIRCLE + 6 PARTRIDGE ROAD
Date: 5/3/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: MARTHA H. JOHNSTON BRIAN W FARR
Address: 1457 Westbrook Street
Date: May 3, 2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Marc Hodroff
Address: 48 Partridge Circle
Date: 5/2/17

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Sincerely,

Name: Mirka Paul
Address: 1603 Westbrook St.
Date: 5.2.17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

James T. Mooney

Name: James T. Mooney
Address: 54 Stroudwater Road
Date: 5.2.17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: MARY DAVIS
Address: 1666 Westbrook St Portland
Date: 5/2/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Ian Macleod
Address: 2 Stroud Water Rd
Date: 5/2/17

Cc: Shukria Wiar
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Sincerely,

Name: Mark O'Brien
Address: 207 Cook St #4
Date: 5/2/17

Cc: Shukria Wiar
Honorable Brian Batson

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Name: Bree Simmons
Address: 207 Coyle St #4 Portland, ME 04103
Date: 5/2/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Andrea C. Hawkes Andrea C Hawkes
Address: 1181 Westbrook St.
Date: 1 May 2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: David E. Hanson
Address: 47 Roundabout Ln
Date: May 2, 2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Linda Lambrix
Address: 1465 Westbrook St.
Date: 5/2/2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Kimberly Keney

Name: KIMBERLY KENNEY
Address: 21 ROUNDABOUT PTLD
Date: 5/3/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely, Martha B McEvoy

Name: Martha B McEvoy
Address: 89 Partridge Circle
Date: 5/1/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Arthur J. McEvoy

Address: 89 Partridge Street, Portland

Date: 5/2/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Roger Hinchliffe

Karen Soderberg Hinchliffe

H Roger Hinchliffe
1221 Westbrook St.
Portland, ME 04102-1929

Date: May 2, 2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Kim W Wilson
Address: 1364 Westbrook ST
Date: 4/30/2017

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Robert A. Chiarello Jr.
Address: 1353 Westbrook Street
Date: April 30, 2014
rachese38@gmail.com

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: Luis Millones
Address: 1375 Westbrook St
Date: 4/30/17

Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Name: XIAO JUN HUANG

Address: 18 SPAR LN. PORTLAND

Date: 05/3/2017

Cc: Shukria Wiar
Honorable Brian Batson

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Name: Eugenia O'Brien
Address: 1376 Westbrook 04102
Date: 4/30/17

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Cc: Shukria Wiar
Honorable Brian Batson

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Sincerely,

Jeanne Shrum

Name: JEANNE SHRUM
Address: 1405 WESTBROOK ST, PORTLAND ME 04102
Date: 4/30/2017

Cc: Shukria Wiar
Honorable Brian Batson

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Name: Eva Frank Eva Frank
Address: 100 Partridge Circle
Date: 5/5/17

Cc: Shukria Wiar
Honorable Brian Batson

Google Groups

Camelot Farm

Brian Batson <bbatson@portlandmaine.gov> May 9, 2017 9:26 AM
Posted in group: **Planning Board**

Ms. Boepple and members of the Planning Board,

I am writing in regard to the potential vote tonight on the rezoning of Camelot Farms. Unfortunately I do not believe I will be able to attend the meeting as I am obligated to my Health and Human Services meeting at a conflicting time. As an elected leader, I am obligated to represent my constituents to the very best of my abilities and be a vessel of communication for the concerns of the neighborhoods. I have been pleased to see the improvements made on the part of the developer by working with the neighborhood and incorporating ROS into the plan. I would feel comfortable saying the plan today is demonstrably better than it was day 1. With that being said, at this time I cannot support the plan as is presented. For myself, it greatly comes down to the risks not outweighing the benefits. Potential environmental impacts cannot be excluded, no matter how diligent a developer states they plan on being. I recently walked the farm land and was surprised at the consistently steep and uneven topography which is not depicted in any arial shot I have seen- inducing even further cause for concern regarding runoff into the Stroudwater River. In addition, the US Fish & Wildlife Services has this land listed as high value habitat for grassland as I observed many animals grazing the land as I walked it. These are concerns associated with development in general, which I understand may not be fair or realistic for some from a planning perspective. In an ideal world I would love to see this land preserved, that may not be the most feasible expectation with the family having the right to sell to whomever they please. However, early in the process I reached out to Maine Farmland Trust and the Land Bank regarding this parcel and both expressed interest in conservation if some supplemental funding could be facilitated. That is a conversation I would be interested in continuing if this plan does not go through. If the land is to be developed, I speak for myself and many I represent in saying there is serious concern with the volume of homes being proposed. The price range targeted for these homes, on the lot size they're on, is drastically higher than any young professional family I know would be able to afford. If the plan were unable to come to fruition anyone could come buy out the land and be able to build on R3 without the work and communication this current developer utilized. Unsustainable Traffic volume and the safety of commuters on an already overwhelmed road is a factor I hope will be carefully observed by any making decisions regarding this buildout. I commend the efforts on both sides of communication between the developer and residents. I thank you all on the Planning Board for your numerous workshops and your patient attentiveness in listening to the concerns of the neighborhood. At this time I believe land conservation or a more conservative development reflective upon the neighborhood would be the best avenue for the residents of Stroudwater. Thank you for your time.

Respectfully,

Brian Batson
Portland City Council District 3
bbatson@portlandmaine.gov
www.brianbatson.org
(207) 632-0247

PC45

RICHARD R. FARNSWORTH
55 OLD MAST ROAD

PORTLAND, MAINE 04102

Ms. Boepple, Chair

Portland City Planning Committee

Re: Camelot Farms

Dear Ms. Boepple:

I have assumed a relatively low profile in the course of the recent few months primarily because I not only have my hands full as a member of the Education and Cultural Affairs Committee of the legislature but because I was hoping that some acceptable resolution could be reached between the neighbors that are more directly affected and the developers. Unfortunately the latter does not seem to be in the offing.

As a resident of Stroudwater for nearly 25 years I have driven past Camelot Farms many thousands of times and admired the cattle that were pasturing there or the many turkeys that sometimes caused to come to a halt on Westbrook St. While I certainly understand the family's right to sell the property at a fair market value, I was disappointed that the developers that wish to purchase the land have proposed development that would, as I see it, not only have a negative impact on the environment but would create an enormous traffic burden on Westbrook St., a street that is already feeling the pressures of the large development on String St. in Westbrook. This issue alone seems to place a large CAUTIONARY FLAG on the project.

At this point in time I believe that changing the zoning to accommodate this type of development would not be wise for either the neighborhood or the environment. What we need is a more balanced type of development or the setting of this property aside for environmental and recreational purposes.

Thank you for considering this input into this increasingly complex situation.

Sincerely:

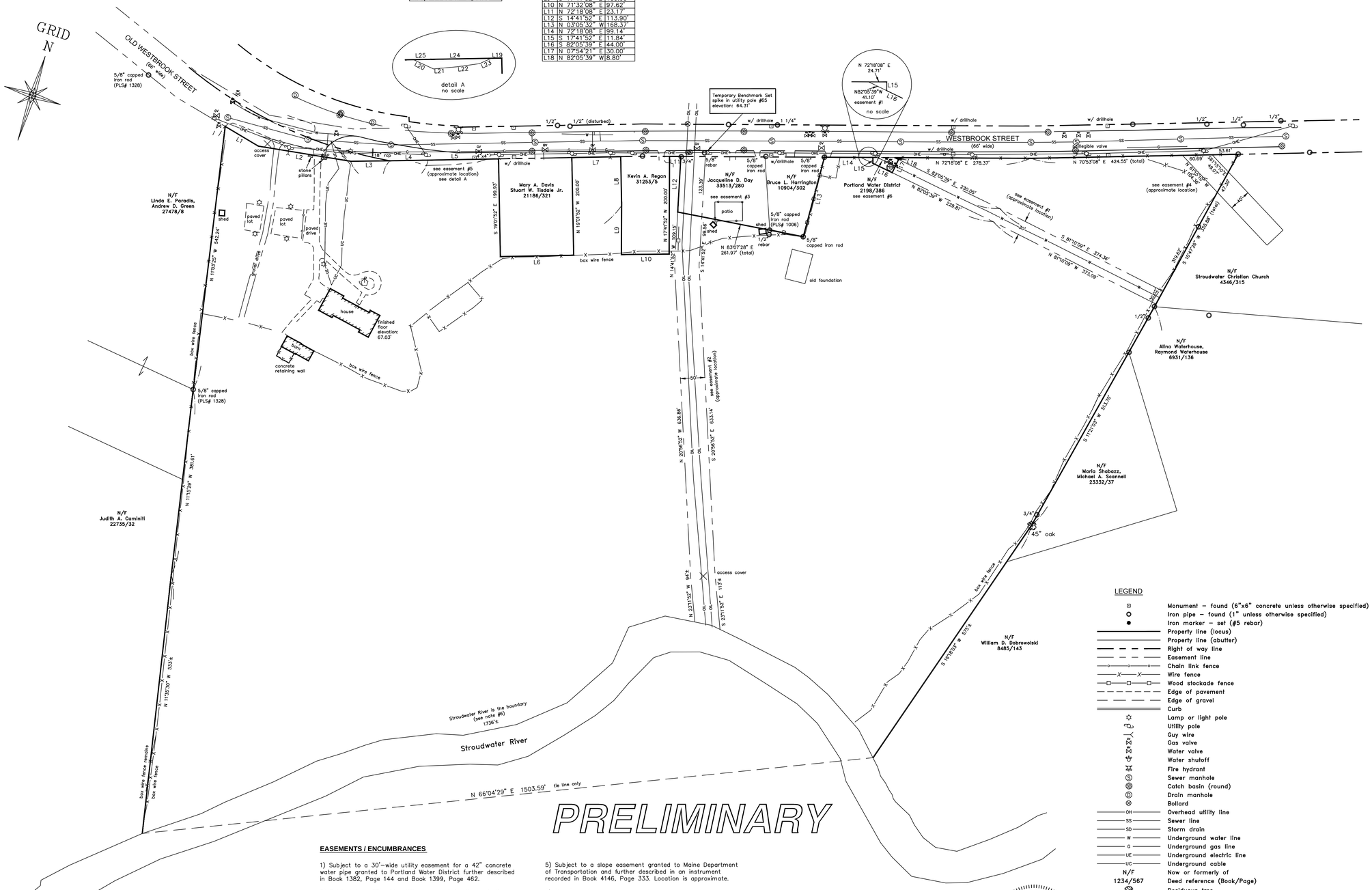
Richard R. Farnsworth

Representative

House District 37

LINE	BEARING	DISTANCE
L19	N 70°59'53" E	22.32'
L20	S 89°19'13" E	32.23'
L21	N 70°24'26" E	53.05'
L22	N 66°49'59" E	50.75'
L23	N 55°42'46" E	25.10'
L24	S 70°59'53" W	122.27'
L25	S 71°00'32" W	35.95'

LINE	BEARING	DISTANCE
L1	S 77°11'28" E	78.57'
L2	N 81°20'32" E	191.58'
L3	N 71°18'01" E	80.71'
L4	N 71°00'32" E	77.60'
L5	N 70°59'53" E	144.59'
L6	N 70°58'08" E	150.00'
L7	N 70°58'08" E	100.00'
L8	S 19°01'52" E	100.29'
L9	S 17°41'52" E	100.00'
L10	N 71°32'08" E	97.62'
L11	N 72°18'08" E	23.17'
L12	S 14°41'52" E	113.90'
L13	N 03°05'32" W	168.37'
L14	N 72°18'08" E	99.14'
L15	S 17°41'52" E	111.84'
L16	S 82°05'39" E	44.00'
L17	N 07°54'21" E	30.00'
L18	N 82°05'39" W	8.80'



EASEMENTS / ENCUMBRANCES

1) Subject to a 30'–wide utility easement for a 42" concrete water pipe granted to Portland Water District further described in Book 1382, Page 144 and Book 1399, Page 462.

2) Subject to a 50'–wide utility easement for three pipelines further described in instruments recorded in Book 1655, Page 294 and Book 2954, Page 772.

3) Subject to an easement for a sewer pipe granted by Ruby H. Young to Frederick A. Butts and Marie Butts in a deed recorded in Book 2236, Page 405. (Location unknown).

4) Subject to an easement for drainage granted to Maine Department of Transportation and further described in an instrument recorded in Book 4146, Page 333. Location is approximate.

5) Subject to a slope easement granted to Maine Department of Transportation and further described in an instrument recorded in Book 4146, Page 333. Location is approximate.

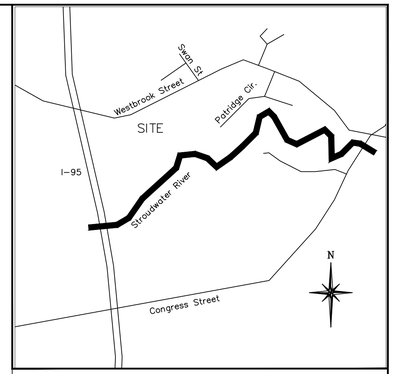
6) Benefiting from an easement for access reserved in a deed recorded in Book 2198, Page 386.

CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

David E. Titcomb, P.L.S. #1273

STATE OF MAINE · DAVID E. TITCOMB #1273 · PROFESSIONAL LAND SURVEYOR



VICINITY MAP

No Scale

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

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

3) Elevations are based on NAVD88 datum. Benchmark is a spike in utility pole #65 on Westbrook Street as shown. Elevation: 64.31'.

4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

5) Property lies within Zone X and Zone A based on FIRM Community #230051 Panel #0012 C, dated December 8, 1998. Zone X is defined as an area of 500–year flood; area of 100–year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100–year flood. Zone A is an area with no base flood elevation determined.

6) The location of Stroudwater River is approximate based on aerial imagery.

PLAN REFERENCES

1) Plan of a Standard Boundary Survey made for Onex Company by Nadeau & Lodge, Inc., dated February 21, 2003 and revised through October 9, 2003.

2) Second Amended Subdivision Plat of Portland Technology Park made for City of Portland by SGC Engineering LLC, dated September 29, 2011, revised through March 8, 2016 and recorded in Plan Book 216, Page 63.

3) Portland Water District 42" Concrete Pipe Line Right of Way Plans prepared by Harry Fuller, dated August 1931 and recorded in Plan Book 20, Page 39. (Location is approximate).

4) Portland Pipe Line Co. Survey of Property of Ruby H. Young, dated October 8, 1941 prepared by Francis A. Griffin and recorded in Plan Book 27, Page 37. (Location is approximate).

5) Stroudwater Woods made for S.&E. Cimino by Owen Haskell, Inc. dated October 25, 1979 and recorded in Plan Book 125, Page 21.

6) Partial Boundary Survey for Andrew D. Green by Lewis & Wasina, Inc. dated December 10, 2004 and revised through December 14, 2004 and recorded in Plan Book 205, Page 299.

7) Plan of Property made for Advent Christian Church of Portland by H.I. & E.C. Jordan dated October 18, 1979 and recorded in Plan Book 125, Page 10.

8) Plan of Property made for Theodore and Therese Barris by Wayne T. Wood dated January 1994 and revised through January 27, 1994, unrecorded.

AREA

2,001,875 s.f., 46.0 acres

OWNER OF RECORD

Onex Company
14598/346

LEGEND

- Monument – found (6"x6" concrete unless otherwise specified)
- Iron pipe – found (1" unless otherwise specified)
- Iron marker – set (#5 rebar)
- Property line (locus)
- Property line (abutter)
- Right of way line
- Easement line
- Chain link fence
- Wire fence
- Wood stockade fence
- Edge of pavement
- Edge of gravel
- Curb
- Lamp or light pole
- Utility pole
- Guy wire
- Gas valve
- Water valve
- Water shutoff
- Fire hydrant
- Sewer manhole
- Catch basin (round)
- Drain manhole
- Bollard
- OH — Overhead utility line
- SS — Sewer line
- SD — Storm drain
- W — Underground water line
- G — Underground gas line
- UE — Underground electric line
- UC — Underground cable
- N/F — Now or formerly of
- 1234/567 — Deed reference (Book/Page)
- Deciduous tree
- Existing building

SCALE IN FEET
100 0 100 200
1" = 100'

PLAN OF
Camelot Farm
1700 Westbrook Street — Portland, Maine

MADE FOR
Diversacorp LLC
5 Stone Pony Circle — Saco, Maine

JOB #216100	DATE: 11/16/2016	SCALE: 1" = 100'
BOOK #897		
216100.dwg		
FILE #9856		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

R-3 OPEN SPACE
ZONE CHANGE CONCEPT PLAN

SPACE AND BULK STANDARDS				
ZONE:	R-1	R-2	R-3	R-5a
MINIMUM LOT SIZE	15,000 SF	10,000 SF	6,500 SF	6,000 SF (2 AC PRUD)
MINIMUM LOT AREA PER DWELLING UNIT	–	–	–	1,600 SF
MINIMUM STREET FRONTAGE	75'	50'	50'	50'
FRONT YARD	25'	25'	25'	25'
REAR YARD – PRINCIPAL	25'	25'	25'	25'
REAR YARD – ACCESSORY	5'	5'	5'	5'
SIDE YARD	16'	16'	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	–	15'	–
MAXIMUM LOT COVERAGE	20%	20%	35%	30%
MINIMUM LOT WIDTH*	100'	80'	65'	60'
MAXIMUM BUILDING HEIGHT	35'	35'	35'	35' (55'**)
MAXIMUM ACCESSORY HEIGHT	18'	18'	18'	18'
MINIMUM RECREATIONAL OPEN SPACE PER DWELLING UNIT	–	–	300 SF**	200 SF**

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**APPLIES TO PRUD OR MULTIFAMILY DEVELOPMENTS OF 4 OR MORE DWELLING UNITS.

LOT SUMMARY					
	R-1 BUILDOUT	R-2 BUILDOUT	R-3 BUILDOUT	R-3 OPEN SPACE	R-5a OPEN SPACE
CAMELOT FARMS	80	104	160	91	70
WESTBROOK STREET	4	4	5	4	7
OPEN SPACE LOTS	0	1	1	4	0
TOTAL	84	109	166 (180 UNITS)	99 (113 UNITS)	77 (137 UNITS)
SURFACE SUMMARY					
OPEN GREEN SPACE	0 AC	0 AC	0 AC	24.67 AC (44%)	21.62 AC (39%)
NET IMPERVIOUS INCREASE	7.58 AC	9.09 AC	12.60 AC	8.10 AC	9.73 AC
WETLANDS IMPACT	3.79 AC (27%)	3.85 AC (27%)	3.67 AC (26%)	0.25 AC (2%)	0.80 AC (6%)

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED OPEN SPACE
	LOT AREA
	WATER BODIES

STROUDWATER RIVER

RESOURCE PROTECTION ZONE

PRUD LOT – 13 UNITS

SHORELAND OVERLAY ZONE

PATRIDGE CIRCLE

WESTBROOK STREET

OLD WESTBROOK STREET

MAINE TURNPIKE (I-95)

100 0 100 200

SCALE: 1" = 100'

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM APP	WHS 12/9/16
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 5/29/17

DRAWING NAME: SITE PLAN – AERIAL R-3 OPEN SPACE CONCEPT

PROJECT NAME: CAMELOT FARMS

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN BY ANY OTHER PARTY, WITHOUT THE PRIOR WRITTEN CONSENT OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-11

R-3 FULL BUILDOUT
ZONE CHANGE CONCEPT PLAN

SPACE AND BULK STANDARDS				
ZONE:	R-1	R-2	R-3	R-5a
MINIMUM LOT SIZE	15,000 SF	10,000 SF	6,500 SF	6,000 SF (2 AC PRUD)
MINIMUM LOT AREA PER DWELLING UNIT	–	–	–	1,600 SF
MINIMUM STREET FRONTAGE	75'	50'	50'	50'
FRONT YARD	25'	25'	25'	25'
REAR YARD – PRINCIPAL	25'	25'	25'	25'
REAR YARD – ACCESSORY	5'	5'	5'	5'
SIDE YARD	16'	16'	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	–	15'	–
MAXIMUM LOT COVERAGE	20%	20%	35%	30%
MINIMUM LOT WIDTH*	100'	80'	65'	60'
MAXIMUM BUILDING HEIGHT	35'	35'	35'	35' (55'**)
MAXIMUM ACCESSORY HEIGHT	18'	18'	18'	18'
MINIMUM RECREATIONAL OPEN SPACE PER DWELLING UNIT	–	–	300 SF**	200 SF**

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**APPLIES TO PRUD OR MULTIFAMILY DEVELOPMENTS OF 4 OR MORE DWELLING UNITS.

LOT SUMMARY					
	R-1 BUILDOUT	R-2 BUILDOUT	R-3 BUILDOUT	R-3 OPEN SPACE	R-5a OPEN SPACE
CAMELOT FARMS	80	104	160	91	70
WESTBROOK STREET	4	4	5	4	7
OPEN SPACE LOTS	0	1	1	4	0
TOTAL	84	109	166 (180 UNITS)	99 (113 UNITS)	77 (137 UNITS)
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WETLANDS IMPACT	3.79 AC (27%)	3.85 AC (27%)	3.67 AC (26%)	0.25 AC (2%)	0.80 AC (6%)

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED OPEN SPACE
	LOT AREA
	WATER BODIES

STROUDWATER RIVER
RESOURCE PROTECTION ZONE
PRUD LOT – 15 UNITS
SHORELAND OVERLAY ZONE
PATRIDGE CIRCLE
WESTBROOK STREET
OLD WESTBROOK STREET
MAINE TURNPIKE (I-95)

100 0 100 200
SCALE: 1" = 100'

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
FINAL APP	WHS	2/14/17
WORKSHOP III	WHS	3/29/17

DRAWING NAME: **SITE PLAN – R-3 FULL BUILDOUT CONCEPT**
PROJECT NAME: **CAMELOT FARMS**
CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

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FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
3-27-17
PROFESSIONAL ENGINEER

DRAWING NO.
C-12

R-2 FULL BUILDOUT
ZONE CHANGE CONCEPT PLAN

SPACE AND BULK STANDARDS				
ZONE:	R-1	R-2	R-3	R-5a
MINIMUM LOT SIZE	15,000 SF	10,000 SF	6,500 SF	6,000 SF (2 AC PRUD)
MINIMUM LOT AREA PER DWELLING UNIT	–	–	–	1,600 SF
MINIMUM STREET FRONTAGE	75'	50'	50'	50'
FRONT YARD	25'	25'	25'	25'
REAR YARD – PRINCIPAL	25'	25'	25'	25'
REAR YARD – ACCESSORY	5'	5'	5'	5'
SIDE YARD	16'	16'	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	–	15'	–
MAXIMUM LOT COVERAGE	20%	20%	35%	30%
MINIMUM LOT WIDTH*	100'	80'	65'	60'
MAXIMUM BUILDING HEIGHT	35'	35'	35'	35' (55'**)
MAXIMUM ACCESSORY HEIGHT	18'	18'	18'	18'
MINIMUM RECREATIONAL OPEN SPACE PER DWELLING UNIT	–	–	300 SF**	200 SF**

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**APPLIES TO PRUD OR MULTIFAMILY DEVELOPMENTS OF 4 OR MORE DWELLING UNITS.

LOT SUMMARY					
	R-1 BUILDOUT	R-2 BUILDOUT	R-3 BUILDOUT	R-3 OPEN SPACE	R-5a OPEN SPACE
CAMELOT FARMS	80	104	160	91	70
WESTBROOK STREET	4	4	5	4	7
OPEN SPACE LOTS	0	1	1	4	0
TOTAL	84	109	166 (180 UNITS)	99 (113 UNITS)	77 (137 UNITS)
SURFACE SUMMARY					
OPEN GREEN SPACE	0 AC	0 AC	0 AC	24.67 AC (44%)	21.62 AC (39%)
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WETLANDS IMPACT	3.79 AC (27%)	3.85 AC (27%)	3.67 AC (26%)	0.25 AC (2%)	0.80 AC (6%)

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED OPEN SPACE
	LOT AREA
	WATER BODIES

STROUDWATER RIVER
RESOURCE PROTECTION ZONE
SHORELAND OVERLAY ZONE
PATRIDGE CIRCLE
WESTBROOK STREET
OLD WESTBROOK STREET
MAINE TURNPIKE (I-95)

100 0 100 200
SCALE: 1" = 100'

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 3/29/17

DRAWING NAME: SITE PLAN – R-2 FULL BUILDOUT CONCEPT
PROJECT NAME: CAMELOT FARMS
CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 BANFORD ST PORTLAND, MAINE 04102
(207) 775-2855

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FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
REGISTERED PROFESSIONAL ENGINEER
3-27-17

DRAWING NO.
C-21

R-1 FULL BUILDOUT
EXISTING ZONE CONCEPT PLAN

SPACE AND BULK STANDARDS				
ZONE:	R-1	R-2	R-3	R-5a
MINIMUM LOT SIZE	15,000 SF	10,000 SF	6,500 SF	6,000 SF (2 AC PRUD)
MINIMUM LOT AREA PER DWELLING UNIT	–	–	–	1,600 SF
MINIMUM STREET FRONTAGE	75'	50'	50'	50'
FRONT YARD	25'	25'	25'	25'
REAR YARD – PRINCIPAL	25'	25'	25'	25'
REAR YARD – ACCESSORY	5'	5'	5'	5'
SIDE YARD	16'	16'	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	–	15'	–
MAXIMUM LOT COVERAGE	20%	20%	35%	30%
MINIMUM LOT WIDTH*	100'	80'	65'	60'
MAXIMUM BUILDING HEIGHT	35'	35'	35'	35' (55'**)
MAXIMUM ACCESSORY HEIGHT	18'	18'	18'	18'
MINIMUM RECREATIONAL OPEN SPACE PER DWELLING UNIT	–	–	300 SF**	200 SF**

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**APPLIES TO PRUD OR MULTIFAMILY DEVELOPMENTS OF 4 OR MORE DWELLING UNITS.

LOT SUMMARY					
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LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED OPEN SPACE
	LOT AREA
	WATER BODIES

STROUDWATER RIVER
RESOURCE PROTECTION ZONE
SHORELAND OVERLAY ZONE
PATRIDGE CIRCLE
WESTBROOK STREET
OLD WESTBROOK STREET
MAINE TURNPIKE (I-95)

100 0 100 200
SCALE: 1" = 100'

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM APP	WHS 12/9/16
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 5/26/17

DRAWING NAME: **SITE PLAN – R-1 FULL BUILDOUT CONCEPT**
PROJECT NAME: **CAMELOT FARMS**
CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

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

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
REGISTERED PROFESSIONAL ENGINEER
3-27-17

DRAWING NO.
C-31

R-5a
ZONE CHANGE CONCEPT PLAN

SPACE AND BULK STANDARDS				
ZONE:	R-1	R-2	R-3	R-5a
MINIMUM LOT SIZE	15,000 SF	10,000 SF	6,500 SF	6,000 SF (2 AC PRUD)
MINIMUM LOT AREA PER DWELLING UNIT	–	–	–	1,600 SF
MINIMUM STREET FRONTAGE	75'	50'	50'	50'
FRONT YARD	25'	25'	25'	25'
REAR YARD – PRINCIPAL	25'	25'	25'	25'
REAR YARD – ACCESSORY	5'	5'	5'	5'
SIDE YARD	16'	16'	16'	16'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	–	–	15'	–
MAXIMUM LOT COVERAGE	20%	20%	35%	30%
MINIMUM LOT WIDTH*	100'	80'	65'	60'
MAXIMUM BUILDING HEIGHT	35'	35'	35'	35' (55'**)
MAXIMUM ACCESSORY HEIGHT	18'	18'	18'	18'
MINIMUM RECREATIONAL OPEN SPACE PER DWELLING UNIT	–	–	–	200 SF**

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**APPLIES TO PRUD AND MULTIFAMILY DEVELOPMENTS OF 4 OR MORE DWELLING UNITS.

LOT SUMMARY						
	R-1	R-1 OS	R-2	R-3 BUILDOUT	R-3	R-5a
CAMELOT FARMS	80	47	94	160	91	70
WESTBROOK STREET	4	4	4	5	4	7
OPEN SPACE LOTS	0	0	1	1	4	0
TOTAL	84	51	99	166	99	77 (137 UNITS)
SURFACE SUMMARY						
OPEN GREEN SPACE	11.48 AC (21%)	28.46 AC (51%)	16.12 AC (29%)	16.79 AC (30%)	30.85 AC (55%)	21.62 AC (39%)
NET IMPERVIOUS INCREASE	7.58 AC	4.30 AC	8.13 AC	11.86 AC	7.22 AC	9.73 AC
WETLANDS IMPACT	3.79 AC (27%)	0.84 AC (6%)	3.67 AC (26%)	3.67 AC (26%)	0.25 AC (2%)	0.80 AC (6%)

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED OPEN SPACE
	LOT AREA
	WATER BODIES

LOT BREAKDOWN	
SINGLE-FAMILY	67
DUPLEX	4 (8 UNITS)
3-FAMILY	2 (6 UNITS)
14-UNIT	2 (28 UNITS)
PRUD	2 (28 UNITS)

STROUDWATER RIVER

RESOURCE PROTECTION ZONE

SHORELAND OVERLAY ZONE

PATRIDGE CIRCLE

WESTBROOK STREET

OLD WESTBROOK STREET

MAINE TURNPIKE (I-95)

100 0 100 200

SCALE: 1" = 100'

FINAL APPLICATION
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
WORKSHOP III	WHS 3/27/17

DRAWING NAME: **SITE PLAN – R-5a CONCEPT**

PROJECT NAME: **CAMELOT FARMS**

CLIENT: CAMELOT HOLDINGS, LLC
KENNEBUNK, MAINE 04043

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

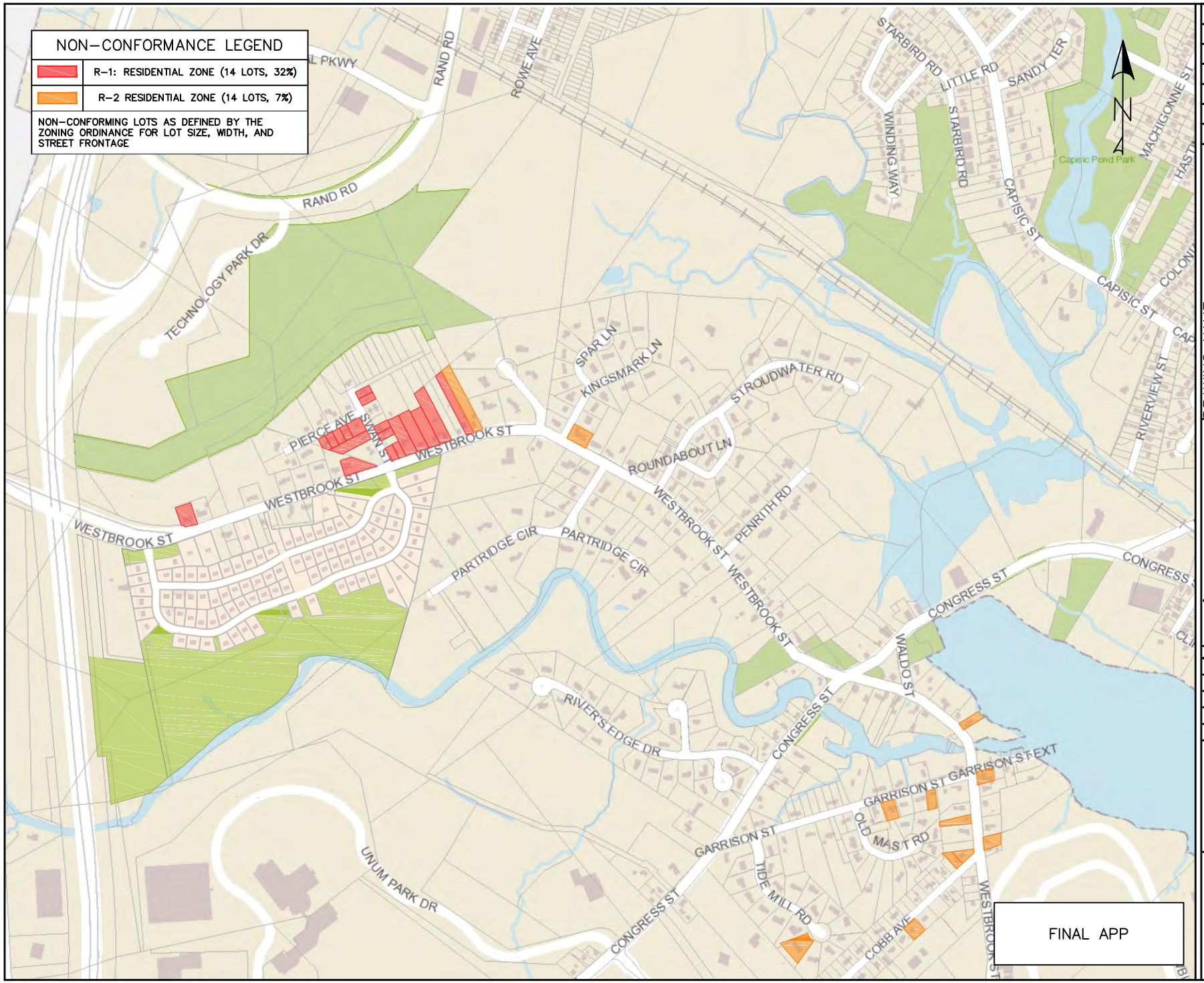
ACORN ENGINEERING, INC.
ENGINEERING
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
3-27-17
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-41

Plan 7



ISSUED FOR	BY DATE
FINAL APP	WHS 2/14/17
WORKSHOP III	WHS 3/28/17
	REV. DATE

DRAWING NAME: PARCEL EXHIBIT

PROJECT NAME: CAMELOT FARMS SUBDIVISION

CLIENT: CAMELOT HOLDINGS, LLC

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

FILE:	CIVIL 1079
JN:	1079
SCALE:	1":800'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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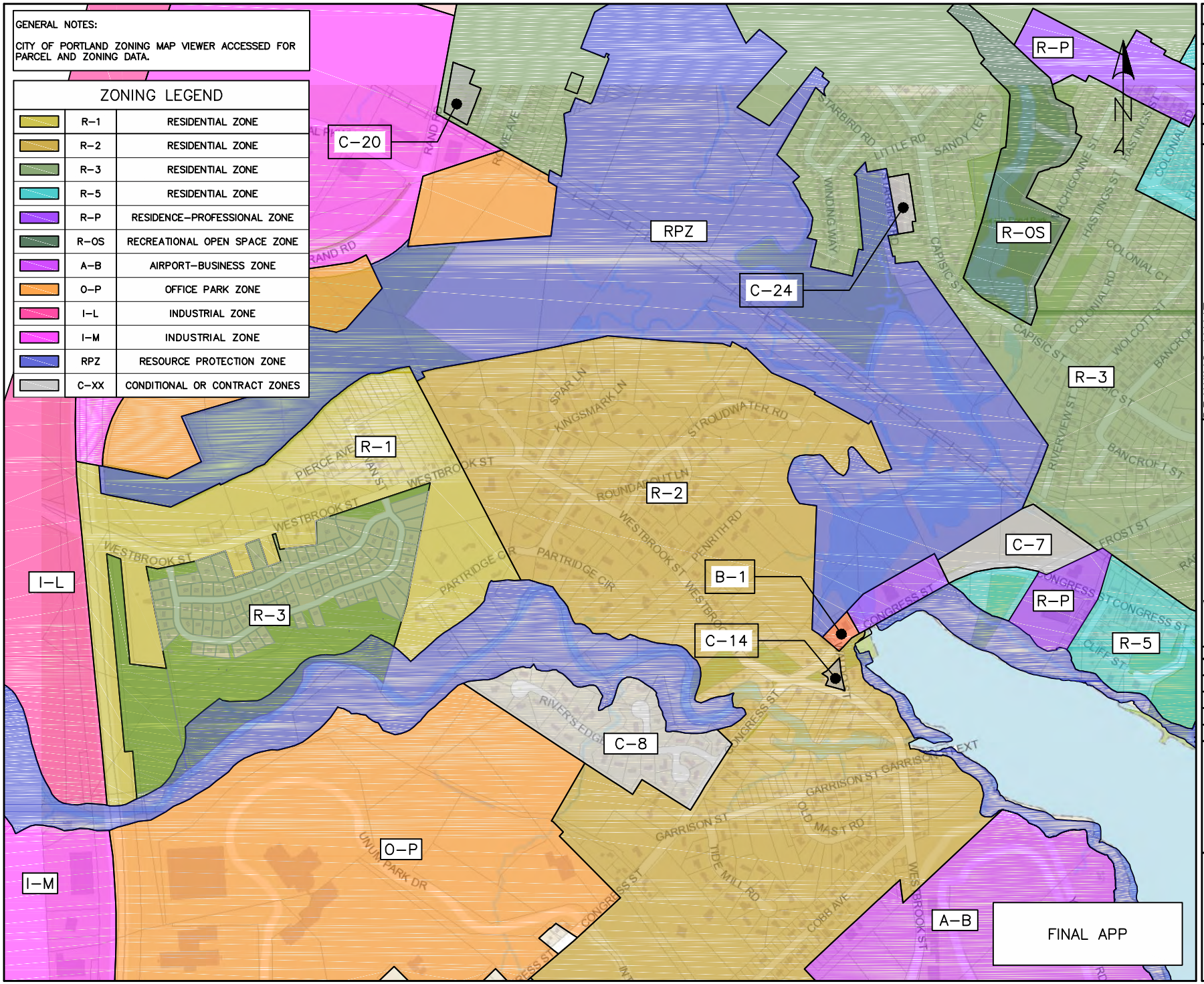
DRAWING NO.

EX-2



ISSUED FOR	BY DATE
FINAL APP	WHS 2/14/16
	REV. DATE

DRAWING NAME: ZONING EXHIBIT

PROJECT NAME: CAMELOT FARMS SUBDIVISION

CLIENT: CAMELOT HOLDINGS, LLC

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

FILE:	CIVIL 1079
JN:	1079
SCALE:	1":900'
DESIGN BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

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DRAWING NO.

EX-3

ZONING MAP
R-3 ZONE CHANGE
REV. 4/13/17

F-H OVERLAY

WESTBROOK ST

WESTBROOK ST

WESTBROOK ST

R-3

R-1

R-2

PARTRIDGE CIR

PARTRIDG

ROS

RPZ

I-M

C-8

O-P

ACORN
ENGINEERING, INC