

PLANNING BOARD

Tuesday, April 8, 2025 at 4:30 PM
Room 24 (Ground Level of City Hall) and
Zoom



MEMBERS

Brandon Mazer, Chair
David Silk, Vice Chair
Michael Fox
Nicholas Messina
Kelsey Robertson
Austin Smith
Joseph Zamboni

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AGENDA:

WORKSHOP - 4:30 PM

1. **ROLL CALL AND DECLARATION OF QUORUM**
2. **COMMUNICATION AND REPORTS**
3. **REPORT OF ATTENDANCE AT THE MEETING HELD ON MARCH 25, 2025**

Workshop

385 Congress Street: Fox, Mazer, Messina, Silk, Smith, and Zamboni present.

4. **REPORTS OF DECISIONS AT THE MEETING HELD ON MARCH 25, 2025**

- i. There were no public hearing items on the agenda to report on.

5. **NEW BUSINESS**

- i. Major Site Plan; 1584 Forest Avenue; Acre Properties, Applicant. The Planning Board will hold a hybrid workshop to consider a major site plan application to facilitate the development of a 50-unit multi-family development with 50 off-street parking spaces on property located at 1584 Forest Avenue, to be accessed via Belfort Street. The subject property totals 66,650 square feet and is zoned RN-5 Residential and B-1 Neighborhood Business. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-003161-2024.
- ii. Major Site Plan and Subdivision; 1877 Congress Street; GreenMars Real Estate Services, Applicant. The Planning Board will hold a hybrid workshop to consider a major site plan and subdivision application to facilitate the development of a 13-lot subdivision, and the construction of thirteen 10-unit residential buildings, developed as a conservation residential development. The subject property totals approximately 4.04 acres and is zoned RN-1 Residential. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-003020-2024.

To: Chair Brandon Mazer & Members of the Planning Board
From: Eric Freeman
Date: April 4, 2025
Re: 1584 Forest Avenue
Project ID: PL-003161-2024
CBL: 299 D027
Meeting Date: April 8, 2025

I. INTRODUCTION

Acre Properties has submitted a Major Site Plan application for the construction of two three-story residential buildings, each containing 25 units, for a total of 50 residential units. The proposal includes 50 off-street, on-site parking spaces at 1584 Forest Avenue, located in the Residential RN-5 zone and B-1 Neighborhood Business zone.

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 13.6. Additionally, this application is required to meet the City of Portland's inclusionary zoning requirements outlined in Section 17.2 of the City's Land Use Code.

The Planning and Urban Development Department mailed 138 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 28, and 29, 2025 editions of the Portland Press Herald. The notices sent to property owners regarding this workshop incorrectly stated that a portion of the site is located in the B-2 Community Business zone, when it is actually in the B-1 Neighborhood Business zone.

Applicant: Acre Properties

Applicant Representative/Engineering Firm: Gorrill Palmer Engineering



Figure 1: Project Rendering

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Site Plan	Section 13.6
Inclusionary Zoning	Section 17.2
Multifamily Design Review Standards	Section 9.1 City of Portland Design Manual (I)

<i>Project Data</i>	
Existing Zoning	RN-5
Property Size	66,560 SF
Existing Use	Undeveloped area. Grass and wooded area
Proposed Development Program	Two three-story, 25-unit multifamily buildings with 50 parking spaces and site landscaping.

III. EXISTING CONDITIONS AND SURROUNDING AREA

The subject property is located near the intersection of Forest Avenue and Belfort Street in the Riverton neighborhood. The site has frontage on both Forest Avenue and Belfort Street. The site is bounded to the north by a multifamily home owned by the applicant, to the south and east by single-family homes along Belfort Street and to the west by the Talbot School, which also houses the Riverton Community Center; a public recreation facilities and a branch of the Portland Public Library. A conservation easement held by the Maine Department of Parks & Recreation exists between the site and the Talbot School driveway. The site is currently undeveloped and extensively vegetated, with an area of grassed open space and parking area serving patrons of Moran's Market along the property's Forest Avenue frontage, and a cleared, unimproved area accessible off of the Talbot School driveway, that is currently being utilized informally for boat and equipment storage. .

The surrounding neighborhood is comprised mostly of single-family homes, small-scale multifamily dwellings and neighborhood businesses.



Figure 2: The existing site and surrounding neighborhood



Figure 3. Street View image of the site at the location of the proposed driveway

IV. PROPOSED DEVELOPMENT

The proposed development involves the construction of 50 multifamily residential units in two three-story buildings, each containing 25 units. Each building would have a footprint of approximately 7,600 square feet and would include a lobby, bicycle storage for up to 13 bicycles and shared laundry facilities. Each building would have multiple entrances providing direct access to parking areas and shared open spaces. In total, there would be 20 one-bedroom and 30 two-bedroom units. Each unit would be provided with one off-street parking space.

Primary vehicular access to the site would be provided via a 20-foot wide two-way driveway connecting to Belfort Street. This driveway would lead directly to the 50-space parking area, which will be located between the two proposed residential buildings, and the existing homes located to the east of the project site. A direct pedestrian connection to Forest Avenue would be provided via an ADA-accessible 6-foot wide walkway. This walkway would be illuminated and lead to a transit stop on the west side of Forest Avenue, which would be installed by the applicant.

The site would feature a shared patio area located between the two residential buildings that would include open seating, tables and landscaping. Additional site landscaping and open space areas are also proposed, and these would include a mixture of existing mature trees, bushes and low-profile landscaping. Plantings would also be used to help buffer buildings and parking areas from surrounding properties.

The development would be served by a 2-inch domestic water service and 6-inch fire service, both of which would connect into an existing water line that runs along Belfort Street. The development would also connect into an existing 8-inch gravity sewer main that runs along Belfort Street. Stormwater treatment

would be provided on-site using sand filters and a stone drip edge. Electrical utilities would be extended from Belfort Street via an underground conduit.

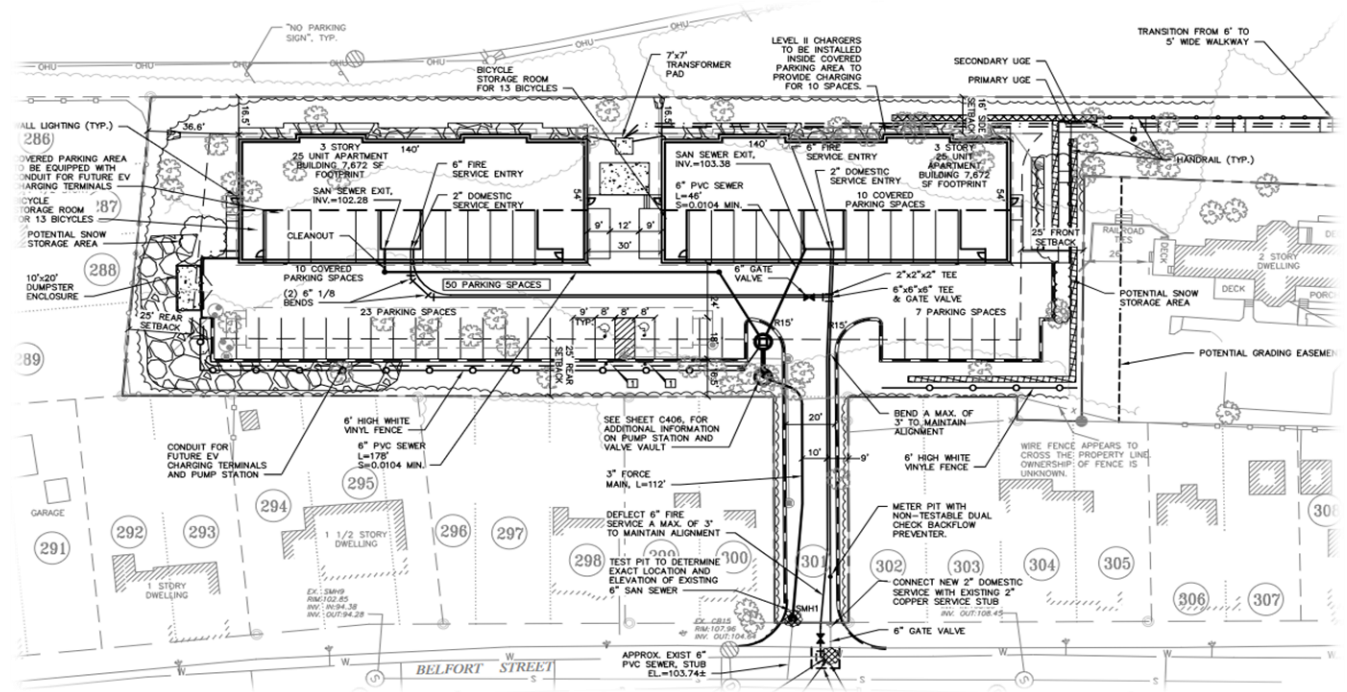


Figure 4: Overall Site Plan

V. RIGHT, TITLE, & INTEREST

The applicant has demonstrated sufficient right, title and interest to the parcel involved in this application. The subject lot was conveyed together with associated rights and easements to Acre Properties on May 31, 2022. Conveyance of this parcel is recorded in the Cumberland County Registry of Deeds Book 39465, Page 257. Full Right, Title and Interest documentation is included as attachment C.

VI. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a letter of support from Androscoggin Bank indicating that the applicant has financial standing to complete the application as presented. Full financial capacity documentation is included as attachment D.

Gorrill Palmer Engineering is an established firm that has demonstrated experience developing projects of a similar scale throughout Maine and New England.

VII. ZONING ANALYSIS

The site is located within the Residential Neighborhood 5 (RN-5) zone with the front portion of the lot located along Forest Avenue zoned B-1 Neighborhood Business. Relevant sections of the RN-5 purpose statement include:

RN-5: “To accommodate existing areas of the city characterized by a residential neighborhood environment of multi-family dwellings at relatively high density, exhibiting a pattern of larger lots and setbacks, as well as generally taller building heights”

As submitted, this application is consistent with the RN-5 zoning requirements. A zoning analysis of the proposed project is provided in the table below:

	Required	Proposed
Lot Size	None	66,560 SF
Maximum Height (ft)	55 ft.	47 ft.
Minimum Street Frontage	50 ft.	73 ft (Forest Avenue)
Maximum Building Length	180 ft.	140 ft.
Area Per Dwelling Unit	1,200 SF	1,331 SF
Front Setback	25 ft.	29.5 ft.
Rear Setback	25 ft.	36 ft.
Side Setback	16 ft	16.5 ft.
Open Space	30%	43%
Lot Coverage	60%	24%

A. Inclusionary Zoning

As outlined in Section 17.2.3 of the City of Portland’s Land Use Code, this application is subject to Inclusionary Zoning standards and is required to provide at least 25% (13) of the units as workforce housing. The applicant has indicated that they intend to provide the required 13 workforce housing units on-site to meet inclusionary zoning requirements. The City is requesting that the applicant provide additional information related to the proposed affordable units, including the designation of specific units within the development as the required workforce units. Additionally, the applicant will be required to enter into an affordable housing agreement (AHA) with the City to ensure that designated workforce units are maintained as units affordable to households earning no more than 80% of the area median income (AMI) for a period of at least 30 years.

VIII. SITE PLAN STANDARDS (Section 13.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland’s Site Plan Ordinance, Section 13.6. Staff comments are below.

1. Transportation Standards (Section 13.6.1)

A. Impact on surrounding street systems

Primary vehicular access to the site would be provided via a 20-foot driveway connecting the development to Belfort Street. Belfort Street is a 30-foot-wide local street with on-street parking provided on both sides of the street. It serves as the only point of access for approximately 75 homes on Belfort, Verrill and Iffley Streets. Belfort Street intersects with Forest Avenue approximately 350 feet northeast of the proposed driveway. The intersection of Belfort and Forest is unsignalized.

At the request of Staff, the applicant has provided a traffic study conducted by Gorrill Palmer

Engineering. This study focused on the intersection of Belfort Street and Forest Avenue. The traffic study included the following information:

- A trip generation estimate was performed, indicating that the project would generate 28 trips during the peak hour. A Traffic Movement Permit (TMP) is not required for this application based on the anticipated trip generation.
- A turning movement count at the intersection of Belfort Street and Forest Avenue conducted between 7 AM and 9 AM on Wednesday, February 26 and between 2 PM and 6 PM on Tuesday, February 25.
- A capacity analysis was performed at the Forest Avenue/Belfort Street intersection. The analysis indicates that little delay is estimated for vehicles turning onto Forest Avenue.
- A review of safety data indicated two crashes were reported in the vicinity of the Belfort Street intersection during a three-year period from 2021 to 2023.
- There were 16 pedestrians that crossed Forest Avenue during the 2pm to 6pm study time.
- Sight distance was measured for vehicles turning from Belfort Street onto Forest Avenue. Acceptable sight lines of 400 feet or greater are provided.
- The applicant has noted that driveway and sidewalk conditions along Belfort Street are poor.

The City's third-party traffic consultant has asked that the applicant will need to address how Belfort Street and the intersection of Forest Avenue would perform during peak times. Left turn movements from Forest Avenue onto Belfort Street are a particular concern. Additionally, Staff has noted that the section of Belfort Street between Forest Avenue and the planned driveway is only 30 feet wide, with on-street parking on both sides. The width of the right-of-way creates choke points within travel lanes where vehicles are parked on both sides of Belfort Street. Additional traffic analysis and input on sight circulation concerns from the applicant will be necessary..

The full traffic report is included as attachment J

B. Access and circulation

Each building will feature four entrances. A lobby entrance, a parking entrance and two side entrances. Side entrances will provide direct access to the shared courtyard area, parking lot and trash enclosures.

The development would provide direct pedestrian access between the proposed buildings and Forest Avenue through a 6-foot wide illuminated pedestrian walkway. This walkway would feature an ADA-accessible ramp to account for approximately 8 feet of grade change between Forest Avenue and the proposed residential buildings. The applicant is not proposing a pedestrian connection from the site to Belfort Street or the Talbot School driveway.

Staff have requested the following updates be made to improve pedestrian access and circulation to the site:

- Extend the pedestrian walkway to connect directly with the sidewalk and transit shelter on Forest Avenue
- Provide a pedestrian connection to Belfort Street along the proposed driveway. Not providing a sidewalk in this location would force pedestrians into the driveway creating potential conflicts with vehicles.
- Staff encourage the applicant to explore the possibility of providing a pedestrian connection directly to the Talbot School. However, A conservation easement held by the Maine Department of Parks & Recreation exists between the site and the Talbot School driveway. Impacts within this easement area would incur a financial penalty. City staff intend to coordinate further with the applicant and the School Department to consider a direct pedestrian connection between the site and the Talbot School/Riverton Community Center property.
- That the applicant install fencing along both sides of the driveway entrance connecting to Belfort Street to prevent vehicle headlights from shining into abutting residential properties.

C. Public transit access

This site is directly serviced by METRO's Route 2 along Forest Avenue. The applicant is proposing to install a transit shelter pad on Forest Avenue with a direct pedestrian connection to the site. Per the site plan requirements the applicant will be responsible for installing a transit shelter in coordination with METRO and the city.

D. Parking

This application would provide 50 off-street surface parking spaces at a ratio of one space per residential unit. Each building would have 10 covered parking spaces on the ground floor. Parking areas will be screened from surrounding properties by fencing and plantings. The applicant will be required to ensure that fencing and robust planting is installed to prevent headlight impacts to abutting properties. A total of 10 parking spaces will be equipped with Level-2 EV chargers, with an 25 additional spaces being proposed to be EV-Ready, with conduit laid for future EV charging equipment as needed.

As outlined in Table 18-A of the Land Use Code, this application is required to provide one bicycle parking space per two dwelling units (25 spaces). This application proposes storage for up to 26 bicycles, with a secure bike room located on the ground floor of each building.

E. Transportation demand management (TDM)

Not applicable. This application does not require a TDM Plan.

2. Environmental Quality Standards (Section 13.6.2)

A. Preservation of significant natural features

The applicant has provided a report from the Maine Ecological Services Field Office of the Department of the Interior, which states that the site does not feature significant wetlands or critical habitat for endangered species. The existing site is undeveloped, featuring wild grass areas and stands of mature trees. The applicant has provided a landscape plan detailing which mature trees of 10" DBH or greater are being preserved and removed. 22 of the existing 71 mature trees (31%) will be preserved. The full Ecological Services report is included as attachment F.

The applicant has provided a Low-Impact Development (LID) assessment. Planning Staff and peer reviewers will provide comments on the LID assessment in advance of a future meeting. The LID assessment is included as attachment L.

B. Site landscaping and buffers

The site will feature a mixture of new trees, bushes and low-profile plantings. New trees will be planted along the perimeter of the site and parking area to provide additional screening from surrounding homes. The shared courtyard area will feature perennial plantings and bushes to provide privacy for residents utilizing the space.

Staff have requested additional information related to parking lot landscaping and solar reflectivity of hardscaped areas. The applicant has provided a landscaping plan included as attachment 7



Figure 5: The site as seen from The Talbot School Driveway

C. Water quality/storm water management/erosion control

The project results in the creation of more than 1,000 square feet of new impervious surface and is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The applicant has submitted a full stormwater management plan demonstrating compliance with both Section 5 of the Technical manual and Maine DEP chapter 500 standards. This application will result in the creation of approximately 37,177 square feet of new impervious area.

Stormwater Treatment will be accomplished using a subsurface sand filter and stone drip strips to provide for stormwater management on the site. Per the stormwater management report, these systems have been sized to provide the required level of treatment on the site. The site will be regraded to minimize stormwater flows onto surrounding parcels.

3. Public Infrastructure and Community Safety Standards (Section 13.6.3)

A. Consistency with City Master Plans

Not applicable. There are no City Master Plans that apply to this application.

B. Availability and capacity of public utilities

The site will be served by a 2" domestic water service line extending from an existing stub on Belfort street. Sewer service will be provided by a connection to an existing 8" gravity sewer main on Belfort Street.

The applicant has provided ability to serve letters from Central Maine Power and Portland Water district.

4. Site Design Standards (Section 13.6.4)

A. Massing, ventilation, and wind impact

The proposed buildings are taller than many buildings in the neighborhood, but their location relative to surrounding homes mitigates massing and wind impacts.

B. Shadows

The proposed buildings are taller than many buildings in the neighborhood, but are set back sufficiently to avoid shadow impacts to surrounding homes. Furthermore, the proposed buildings are bellowing 65 feet in height, which is the threshold for triggering a shadow study.

C. Snow and ice loading

The location of the two residential buildings are not anticipated to impact snow and ice clearing on abutting properties or public rights-of-way. The applicant has detailed snow storage locations on the plans provided.

D. View corridors

Not applicable. This application is not within a protected view corridor.

E. Historic resources

Not applicable. This application is not within a historic district.

F. Exterior lighting

The site will feature full cutoff / dark sky compliant light fixtures to minimize light spillover. Both buildings will feature wall-mounted lighting to provide lighting for the parking area. The pedestrian walkway connecting to Forest Avenue will have pole-mounted illumination. A full photometric plan has been included as attachment 11. The applicant should ensure that lighting of the parking area underneath the building does not create extensive light pollution through the evening.

G. Noise and vibration

HVAC, air handling units, and other necessary equipment will be installed at the rear of the property away from abutting homes. Given the location of the proposed buildings, the placement of HVAC generators and other equipment is not anticipated to interfere with abutting residential

properties.

H. Signage and wayfinding

No wayfinding signage is proposed as part of this application.

I. Zoning-related design standards

This application was subject to a design review as outlined in the City of Portland Design Manual section (i) (*two-family, multi-family, lodging houses, bed and breakfasts and emergency shelters*) design standards. A design memo was provided to the applicant by Planning Staff on January 22, 2025.

Design recommendations included:

- A change of materiality within the parking area to better define pedestrian access through the site
- Reorienting the lobby of building A to front the shared courtyard area.
- Additional screening of HVAC equipment
- Extending the pedestrian walkway to connect directly with Forest Avenue

A full design review is included as attachment S1



Figure 6: Front and Rear Building Elevations

IX. **NEIGHBORHOOD MEETING & PUBLIC COMMENT**

The applicant held a neighborhood meeting on February 5, 2025 at 5:30 PM. The in-person meeting was held at the Talbot Community School at 1600 Forest Avenue. 40 members of the public were in attendance. Public comment centered on:

- Traffic on Belfort Street

- The intersection of Belfort Street and Forest Avenue
- Landscaping and vegetative screening from surrounding homes
- Massing and visual impact

A full sign-in sheet and meeting minutes are included as attachment R.

X. NEXT STEPS

Staff will continue to review resubmitted plans and documents to ensure the proposed project complies with all applicable standards, and specifically:

1. Address any outstanding Staff comments
2. Address additional comments from the Planning Board.
3. Prepare final plan submission.
4. Schedule and hold planning board public hearing

XI. ATTACHMENTS

Public Comment

PC1-33

Report Attachments

S1. Design Review Memo

S2. Applicant Response to Comments

Applicants Submittal

- A. Cover Letter
- B. Site Plan Checklist + Agent Authorization
- C. Title, Right, or Interest
- D. Financial Capacity
- E. Zoning Analysis
- F. Site Figures and Wildlife Inventory
- G. Utility Correspondence
- H. Stormwater Report
- I. Zoning Analysis Table
- J. Traffic Evaluation
- K. Geotechnical Study
- L. LID Assessment
- M. Erosion Control Report
- N. Wastewater Application
- O. Environmental, Natural and Historic Correspondence
- P. Conservation Agreement
- Q. Cost Estimate Performance Guarantee
- R. Neighborhood Meeting Package
- S. Architectural Elevations and Rendering

Plans

1. Cover Sheet
2. Site and Utility Plan
3. Grading and Erosion Control Plan
4. Drainage Plan
5. Subsurface Sand Filter Plan
6. Drip Strip Details
7. Landscaping Plan
8. Lot Split and Topographic Survey
9. Building Elevations
10. Floor Plans
11. Photometric Plan + Lighting Cut Sheets
12. Fire Truck Turning Figure
13. Outlet Details
14. Site Details 1
15. Utility Details 1
16. Utility Details 2
17. Erosion Control Details
18. Erosion Control Notes
19. Pump Details

Design Review

Planning and Urban Development Department



Subject: 1584 Forest Avenue
Zone: RN-5 Residential Zone
Date of Review: Wednesday, January 22, 2025
Review: Land Use Code Chapter 13.6.4.I Design standards
Reviewer(s): Eric Freeman (Planner); Natasha Kypfer (Senior Planner); Sean King (Urban Designer)
Project ID: PL-003161-2024

I. INTRODUCTION

The project at 1584 Forest Avenue for 50 residential units was reviewed according to the *City of Portland Design Manual* section (i) two-family, ***multi-family***, lodging houses, bed and breakfasts and emergency shelters design standards.

II. DESIGN REVIEW COMMENTS: bold text denotes recent updates met, red text denotes standards not met which require resubmission.

Section (i) Multiple-family.

1. *The exterior design of the proposed structures, including architectural style, façade 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;*

Staff comment: Staff finds the proposed three-storied multi-family building design is compatible with the nearest residential neighborhood that includes variation in roof pitch, arrangement of windows and trim detailing. Staff recommends additional façade variation with building projections along the south (Belfort Street) elevation for Building A and B to provide greater articulation for this prominent façade facing abutting properties and the street. In addition, Staff requests that the applicant provide exterior façade materials and label onto the architectural elevations.

Staff recommends the relocation of Lobby A in Building A that would provide building entry access at the shared courtyard to provide greater visibility of primary building entries. In addition, Staff recommends the relocation of Building A bike room at the east facade and accommodate a door entry to allow pedestrians to access at proposed walkway. Staff recommends a door entry along the west façade of Building B allow pedestrians to access at proposed walkway.

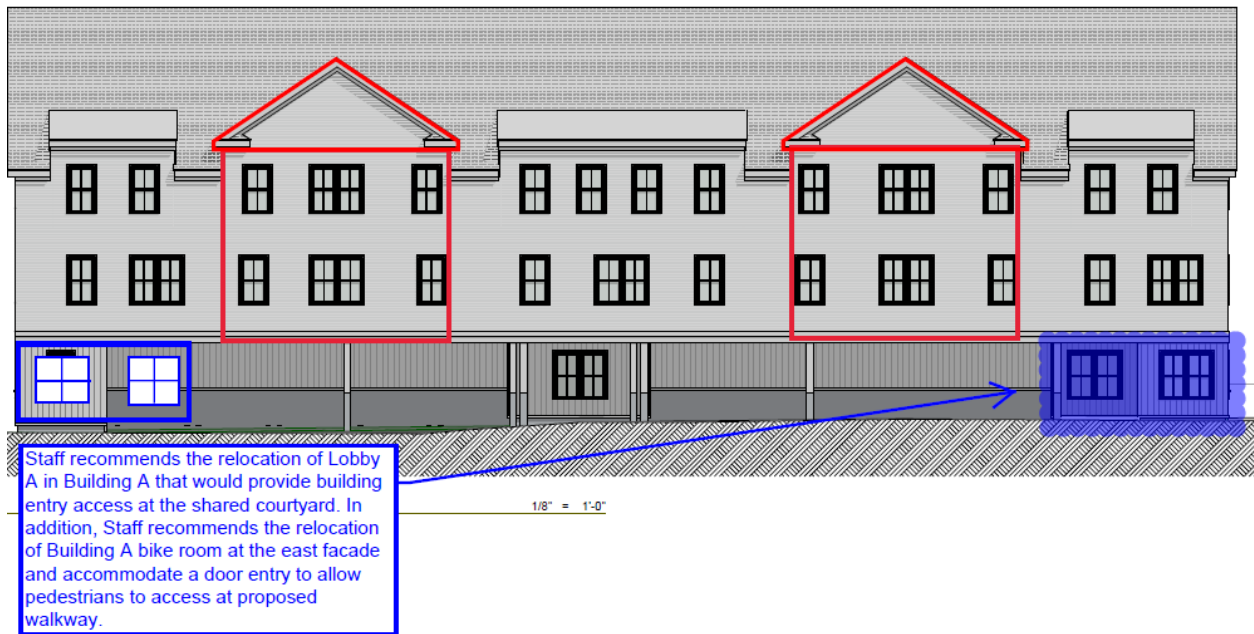


Figure A – Staff diagram onto south (Belfort Street) elevation

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

Staff comment: The proposed development with two multi-family buildings are significantly setback from the street due to the existing lot configuration. Staff prefers that the applicant provide an accessible route with additional site lighting to connect pedestrians to Forest Avenue. An alternative approach to be verified and acceptable by Dept. of Public Works is to shift proposed drive aisle to construct a walkway and extend the sidewalk at Belfort Avenue.

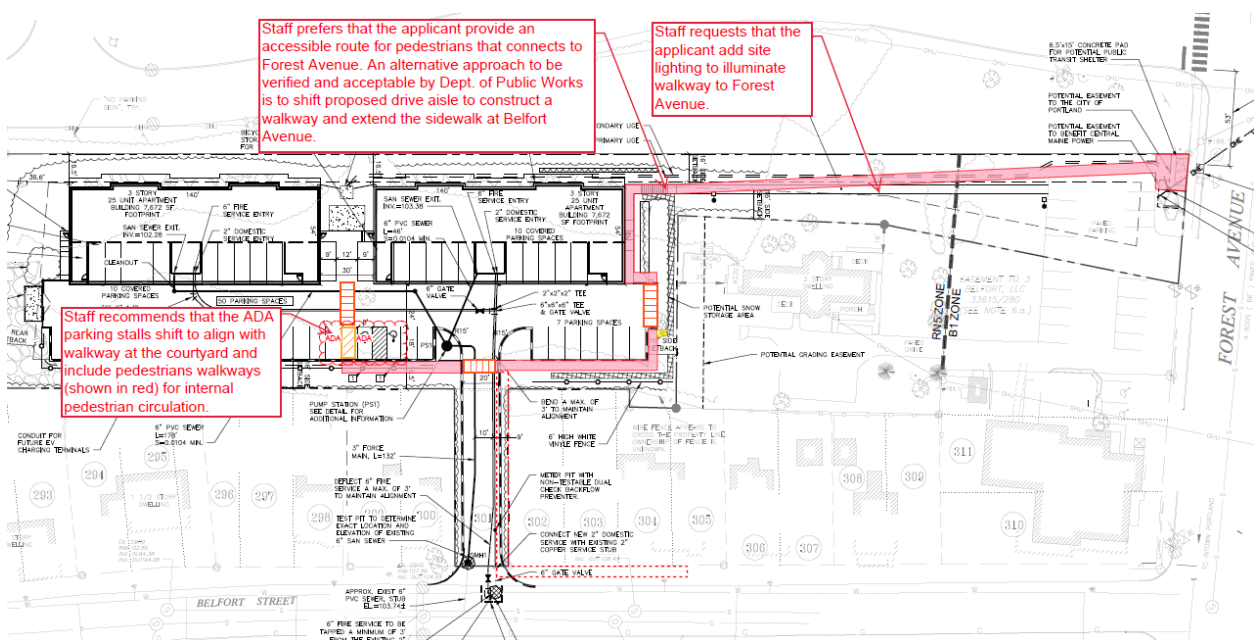


Figure B – Staff diagram onto Site and Utility plan to include areas in red as new walkways for internal circulation, orange as crosswalks, and yellow as ADA stalls

3. *Open space on the site for all multi-family development shall be integrated into the development site. Such open space in a multi-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: Staff finds that open space is integrated into the site by the shared courtyard with seating and landscaping around portions of the site's perimeter. **Staff recommends additional screening at the HVAC units located at the rear of the property abutting the public schoolyard property. In addition, Staff requests that the applicant consider a pedestrian walkway to connect residents to the abutting public schoolyard property.**

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: Staff finds that the proposed dwellings provide ample windows and sufficient storage areas within each unit.

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: Staff finds that the 6-foot white vinyl fence provides sufficient screening for parked vehicles and sufficient landscape screening at the parking lot drive lane from adjacent properties.



300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515 | GorrillPalmer.com

February 25, 2025

Eric Freeman, City Planner

City of Portland
389 Congress Street
Portland, ME 04101

Subject: Proposed Residential Development
1584 Forest Avenue, Portland, ME
Project Review Letter

Dear Eric:

On behalf of **ACRE Properties**, our office is pleased to provide this letter to respond to comments received by the City of Portland staff in response to our initial submission of a Major Site Plan Application for two, three-story, 25-unit, multi-family dwellings located at 1584 Forest Avenue. Additionally, Acre Properties hosted a Neighborhood Meeting at Gerald E. Talbot Community School on February 5th, 2025, which began at 5:30 PM. Comments made by the public during the Neighborhood Meeting were noted and are included in this letter. For ease of reference, we have repeated the comments made by the City of Portland Staff and the public below in *italics*, followed by our responses in **bold**.

Staff Comments Received January 31st, 2025: Site Plan Review Standards (Sec. 14.6):

Transportation Standards (Sec. 14.6.1):

Impact on Surrounding Street Systems:

The applicant shall conduct a traffic study with the following scope:

- An evaluation of conditions at the Forest Avenue/ Belfort Street intersection. This shall include an evaluation of traffic operations, safety conditions, pedestrian conditions, sight distance and access management conditions.*

Response: Due to the time of year, a traffic evaluation at the Forest Avenue/Belfort Street intersection was not able to be completed prior to the anticipated Planning Board Workshop date of March 11, 2025. Traffic counts are scheduled to be completed at the intersection the week of February 24th as directed by City Staff. Acre Properties intends to provide a traffic study report for the Forest Avenue/Belfort Street intersection prior to the next Planning Board Meeting.

- An evaluation of the pros and cons of providing an access directly to the Riverton School driveway so that access to the traffic signal on Forest Avenue should be performed. The alternatives analysis shall include access scenarios including access only to Belfort Street, access only to the school driveway and access to both the school driveway and Belfort Street.*

Response: To provide access directly to the Riverton School driveway, an easement would be required. The Gerald E. Talbot Community School site (Parcel 299 D046001) is subject to a Land & Water Conservation Fund Agreement therefore the property owner doesn't have sufficient right, title or interest to this area and it is subject to restrictions that limit the City's ability to grant any form of easement for access. Refer to the Land & Water Conservation Fund Agreements included in Attachment 1 of this letter.



- *Include Technical Manual Standard details for connection to Belfort Street. Is there a reason the curb radius needs to be as large as is proposed?*

Response: The technical manual standard details for connection to Belfort Street have been reviewed. However, as shown on Sheet T1 included as Attachment 12 of the initial Major Site Plan Application submission, the curb radius was increased to allow for emergency vehicle access.

Access and Circulation:

4. Provide vehicle turning templates for the parking area.

Response: Please refer to Sheet T2 included in Attachment 2 for the vehicle turning movement within the parking area. The vehicle used to create the movement was designed to replicate a typical mid-size vehicle with dimensions of 6' wide x 16' long.

5. Provide an accessible pathway out to Belfort Street for pedestrians with a connection to the existing Belfort Street sidewalk.

Response: For the following reasons, an accessible pathway out to Belfort Street for pedestrians, with a connection to the existing Belfort Street sidewalk does not appear to be practical:

- A. The Belfort Street access is only a 30-foot right-of-way with a 20-foot wide driveway with curbing proposed. With grading, the sidewalk along the access driveway would be limited to 3-4' wide which doesn't appear sufficient for this type of development.
- B. It is the intention of the project to promote public transportation via the public transit shelter proposed at the Forest Avenue frontage of the site therefore it is more practical to have direct access from the development to the shelter and or near-by facilities.

6. Make the proposed walkway to Forest Ave ADA compliant.

Response: The proposed walkway to Forest Avenue has been revised to be ADA compliant. The modification included rerouting the walkway and providing ADA compliant ramps with handrails. An additional retaining wall was also required to accommodate grading requirements. Refer to Plan Sheet C102 of the revised plans.

Environmental Quality Standards (Sec. 14.6.2):

Preservation of Significant Natural Features and Landscape Preservation:

- *The applicant will need to document which mature trees (10" DbH or greater) are being removed.*

Response: On February 19, 2025, the existing trees with a 10" DbH or greater on-site were surveyed and located. Trees greater than 10" DbH are depicted on the revised plans.



Site Landscaping and Buffers:

- *Architectural renderings should reflect site plan conditions and show a vegetated buffer along the school driveway frontage.*

Response: The architectural rendering has been revised to reflect the site plan conditions by showing the existing tree line (at a conceptual level due to limitations in computer software) which will be preserved to the greatest extent practical which is included in Attachment 3.

- *The architectural renderings show sections of the western property line with no landscape buffer between the school driveway and rear of the property; if that is the intention please include tree plantings in the landscape that meet the Technical Manual street tree spacing of 25-35' between trees to provide a visual buffer from the driveway.*

Response: As mentioned above, the rendering has been revised to reflect the existing tree line which will be preserved to the greatest extent practical. One tree, as shown on revised Sheet L100, was added to the westerly property line to supplement the existing buffering. Refer to the revised rendering included in Attachment 3 and the revised plan set for additional information.

Public Infrastructure and Community Safety Standards (Sec. 14.6.3):

Public Utilities:

- *This project is required to meet the City's new Low Impact Development standards. Please refer to section #3 of the technical manual. The applicant will need to fill out the LID scoring tool and provide a narrative describing compliance with the standard.*

Response: As the development is subject to Major Site Plan review, it shall be evaluated using the low impact development scoring tool, which is provided as Attachment 4 heron. As shown in the spreadsheet, the proposed development meets the minimum points required for approval with a score of 90.

- *Show Catch Basin Locations on Site plan.*

Response: The Site and Utility Plan (Sheet C101) has been revised to show catch basins and stormdrain piping (see revised plan set).

- *DPW is concerned with the proposed stormwater outfall and sump pump discharges being directed at and impacting neighboring downstream abutting properties (15 Empire Way and 57 Belfort Street). The applicant should look into connecting the site's stormwater discharges into the municipal storm drain system in Belfort Street to alleviate this potential issue. DPW would support a section of the Belfort storm drain being replaced and re-plumbed at a lower elevation by the applicant to facilitate a new connection from this development site.*

Response: A connection to the municipal system was investigated and determined to be impractical due to the natural grading of the site and the required elevations of the stormwater system. The flows out of the sump pump are anticipated to be minimal as they only are intended to pump groundwater flow within the foundation drains. Upstream flows are also captured by the proposed drip strips, which have been sized to limit the amount of runoff resulting from the project. Based on the HydroCAD modeling, the proposed stormwater management systems are anticipated to reduce the peak flow rates to the downstream property.



- *This project requires a wastewater capacity application. Please submit to DPW for review and authorization.*

Response: A wastewater capacity application was submitted to DPW at the time of the initial submission. Based on communications with the DPW, the application is still under review as of February 14, 2025. The applicant will continue to coordinate with the DPW to obtain approval for the proposed development and will forward approvals upon receipt. Refer to Attachment 5 for the wastewater capacity application and associated email proof.

- *Add a note to the plans stating the contractor will need to schedule a water resources inspector to inspect the proposed force main/gravity sewer transition manhole (SMH-1) connection to the existing 6" PVC sewer stub in Belfort Road.*

Response: This note has been added to Sheet C101, Site and Utility Plan (see revised plan set).

- *This project will require a comprehensive ESC plan in accordance with section 12 of the Technical Manual. Please review this technical manual standard and update the ESC plan as necessary. The planning department should add the following condition of approval to the project's site plan approval letter and the applicant should be aware of the required ESC inspection and reporting requirements for this project.*

Response: The Grading and Erosion Control Plan (sheet C102) depicts the erosion control BMPs to be implemented during construction. This includes the use of silt fencing, catch basin inlet protection, and a stabilized construction entrance. The contractor may elect to use bark filter berms, stone check dams, and other erosion control BMPs as necessary. Erosion control BMPs are detailed on Sheet C404, and Erosion Control Notes are provided on Sheet C405. Inspection and reporting requirements have been added to the Erosion Control Plan "Inspection and Construction Monitoring" section in accordance with Chapter 12 of the Technical Manual. Please see revised Erosion Control Report included in Attachment 8 for additional information.

Zoning Comments

- *Lot 299 D027001 is considered a through-lot based on the definition found in Article 3 of the City of Portland Land Use Code. This definition classified these lots as: a lot that fronts upon two parallel streets, or which fronts upon two streets which do not intersect at the boundaries of the lot.*
- *Because Forest Ave and Belfort St do not intersect at the boundaries of 299 D027001 this lot is considered a through-lot, not a corner lot.*
- *Article 7 of the land use code states in the definition for lot line, front, that in the case of a through lot both lot lines separating the lot from a street right-of-way are considered front lot lines. That being said, the definition of setbacks, front provides further clarification as to how setbacks shall be applied to through lots. This definition states that in the case of through lots in residential zones (which 299 D027001 is primarily in) one frontage shall meet the front setback requirement. The applicant may decide which frontage will meet which setback.*
- *Regarding the rear, Article 7 provides a definition for lot line, rear. This definition states that for "triangular or irregularly shaped lots" the rear lot line will be parallel to and at a maximum distance from a front lot line. Because of this, the property line closest to and parallel to Empire Way will be*



considered a rear lot line and will have rear setback requirements applied to it. The ~66ft lot line perpendicular to Forest Ave will be considered an interior side property line and will have an interior side setback applied to it.

Response: As noted above, the subject parcel is considered a through-lot. The setbacks have been revised to reflect the appropriate requirements and do not affect the building location. Refer to the table below, as well as revised Sheet C101, Site and Utility Plan (see revised plan set).

Dimensional Standards For RN-5		
	Required	Provided
Minimum Lot Area	1200 S.F./UNIT MIN. 40,000 S.F.	1,331 SF/Unit
Minimum Street Frontage	50 FT	72 FT
Maximum Lot Coverage	60%	23%
Landscaped Open Space Ratio	30%	43%
Building Setbacks		
Front (Minimum)	25 FT	29.5 FT
Rear (Minimum)	25 FT	36.6 FT
Side (Minimum)	16 FT	16.5 FT
Maximum Structure Height	55 FT	47 FT
Maximum Building Length	180 FT	140 FT

Design Standards (Sec. 14.6.4):

Section (i) Multiple-family:



Figure A – Staff diagram onto south (Belfort Street) elevation



- *Staff recommends the relocation of Lobby A in Building A that would provide building entry access at the shared courtyard to provide greater visibility of primary building entries.*

Response: This configuration was investigated early in the design phases and found to be an impractical use of the site given the 15' grade drop across the lot. With this configuration the buildings need to be at the same finish floor elevation, which would require additional (and taller) retaining walls, create unnecessary challenges for drainage and stormwater management systems, and increase soil disturbance and earthwork operations onsite.

- *In addition, Staff recommends the relocation of Building A bike room at the east facade and accommodate a door entry to allow pedestrians to access at proposed walkway.*

Response: As mentioned above, the change location of the lobby and bike room is not practical with grading for parking under the building.

- *Staff recommends additional façade variation with building projections along the south (Belfort Street) elevation for Building A and B to provide greater articulation for this prominent façade facing abutting properties and the street.*

Response: It appears that projections on the upper part of the elevation will build a hierarchy on the façade that can't be extended to the ground because it is interrupted by the open space for parking below. The projection will call attention to how these bays don't relate to the structural column spacing that is required for the parking spaces. For aesthetic purposes, it appears that the horizontality of the façade is better in this instance.

The main façade, or most publicly visible façade, is apparent on the Gerald E. Talbot School side as the entry side façade is set back from Belfort Street such that it will not be as publicly visible from the street without the abutting dwellings in the foreground. As stated by City Staff, the design is compatible with the neighborhood. For this instance, it appeared to be more practical to divide the façade on the Gerald E. Talbot School side because the vertical elements would originate at the ground level. Lastly, overhang projection would appear to cause issues with mail deliveries as typical UPS truck is 13'6" tall, and any projection will start at 8'-6" to 10'-0".

- *In addition, Staff requests that the applicant provide exterior façade materials and label onto the architectural elevations.*

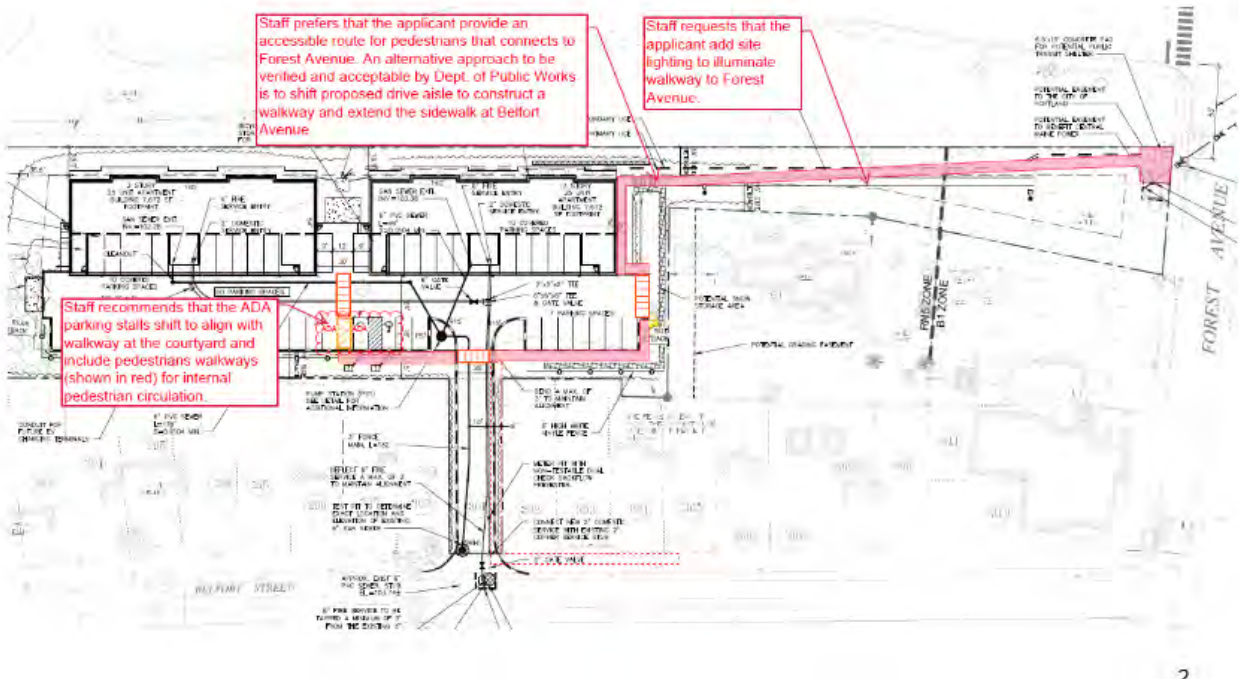
Response: The building façade features white vinyl siding and white PVC trim as shown on the revised elevation (see Attachment 3).

- *Staff recommends a door entry along the west façade of Building B allow pedestrians to access at proposed walkway.*

Response: Entry points to both buildings are provided at the front lobbies and both sides of the buildings via the proposed walkways. See attached plans for additional information.



- Staff prefers that the applicant provide an accessible route with additional site lighting to connect pedestrians to Forest Avenue. An alternative approach to be verified and acceptable by Dept. of Public Works is to shift proposed drive aisle to construct a walkway and extend the sidewalk at Belfort Avenue.



Response: The walkway to Forest Ave has been revised to meet ADA requirements as depicted on the site plans. The modification included rerouting the walkway and providing ADA compliant ramps with handrails. An additional retaining wall was also required to accommodate grading requirements.

- Staff recommends additional screening at HVAC units located at the rear of the property abutting the public schoolyard property. In addition, Staff requests that the applicant consider a pedestrian walkway to connect residents to the abutting public schoolyard property.

Response: As shown on the site plans, there is an existing buffer of mature trees that would screen the building from the schoolyard property. The small gap in the existing tree line will be supplemented with an American Basswood tree to provide a more robust buffer. Refer to the revised Sheet L1, Landscaping Plan, included in the plan set for additional information. To reiterate above, the Gerald E. Talbot School property is subject to a Land & Water Conservation Fund Agreement therefore the property owner doesn't have sufficient right, title or interest to this area and it is subject to restrictions that limit the City's ability to grant any form of easement for access.



Staff Comments Received February 7th, 2025: Site Plan Review Standards (Sec. 14.6):

Environmental Quality Standards (Sec. 14.6.2):

Water Quality, Stormwater Management and Erosion Control:

- The project is required to provide for stormwater management in compliance with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 standards. The Applicant has provided a subsurface sand filter and three stone drip strips to provide for stormwater management on the site. Per the stormwater management report, these systems have been sized to provide the required level of treatment on the site, and will manage flows with a slight increase at some of the evaluated points of interest. We have the following comments on the proposed stormwater management systems.*
- For the Flooding Standard, the Applicant has shown slight increases in flow for Study Points 2 and 3 from the stormwater model. I agree that the increases that are shown are small, and the changes to the areas draining to these study point are minor, and shouldn't result in impacts to drainage. The City has raised concerns about drainage from site impacting neighboring properties. While the model shows a reduction in flow for Study Point 1, there will now be discharges from the site's stormwater system to outfall points on the site which could have impacts on adjacent properties. I have the following comments relative to the grading and model associated with the site's stormwater systems.*

Response: The original stormwater report modeled stormwater runoff using rainfall data for York County. Rainfall storm intensities have been reduced to reflect the MaineDEP Chapter 500 data for Cumberland County (see revised stormwater report included in Attachment 7).

- Additional clarification is needed on the modeling of the proposed drip strips. The elevations used within the model generally do not correlate to the elevations on the plan. In addition, the model seems to include a foot of storage above the 18-inch stone reservoir depth and over a larger area than the drip strip. Please clarify how this storage works relative to the buildings and areas adjacent to the drip strips. It is not clear where this additional storage is located, and the potential for impact on the adjacent property.*

Response: Grades on the west side of the buildings were raised to allow for gravity flow from the drip strips. The elevations of the top of reservoir layers for the drip strips were raised to match the lowest point of the drip strip surface (see revised stormwater report). Given the limitations in HydroCAD software, the drip strips had to be modeled as a flat system. The modeling for the ponds was designed conservatively by setting the top of the reservoir layer at the lowest point. The foot of storage above the reservoir layer was necessary to model the scenario where the drip strip is fully saturated, and runoff is no longer being absorbed by the drip strip. In this scenario, runoff flows over the drip strips (modeled as a broad crested weir at the top of the reservoir layer, as noted earlier this is a conservative elevation) and into a ditch to the west of the buildings, and ultimately to POI 1. This "storage" is negligible as evidenced by the 0.01' ponding depth in the 25-year storm in this layer.

- With the proposed outlet from Drip Strip #1 to the northwest, additional grading clarification is needed to ensure that the runoff will be directed as planned, and will not cause any drainage issues within the adjacent Riverton school property or the property located to the south. The stormwater model includes reaches to represent the swale along the property line.*



Based on a review of the grading plan, there may be a need for some additional grading on the school property to ensure stormwater is directed where intended.

Response: Based on ground survey and field reconnaissance, the area east of the Riverton access drive generally drains to the east onto the subject parcel. As shown in the modeling, runoff within these reaches build up to a flow depth between 1"-2", and the edge of the access drive appears to be 4"-6" above the bottom of this ditch. Therefore, the proposed development is not anticipated to impact the Riverton School Property.

- *Similar to the northwest property edge, along the southeast property, the area will also be regraded, directing stormwater from this strip of the site towards the adjacent properties where it wasn't previously directed. Riprap is shown along portions of this area that will help prevent erosion issues, but I'd recommend the applicant evaluate the drainage on this entire area, considering flow from the level lip spreader and the areas that is now graded to act as a swale to ensure that it will not impact the adjacent properties.*

Response: In the pre-development condition, area from the neighboring properties drains towards the subject lot and ultimately to POI 1. Based on field reconnaissance, the majority of flow drains to the southeast corner of the lot where it drains to POI 1 via a shallow, wooded swale located in the eastern portion 15 Empire Way. The area draining to this swale will be reduced, which reduces the impact to abutting properties adjacent to the area. Additionally, areas that were previously draining to this swale are being collected by the proposed stormwater management system, which passes through a chamber system and a level spreader to distribute and reduce the intensity of peak flows. Therefore, erosion and adverse impacts from stormwater runoff are not anticipated.

- *The plans do not show any internal drainage structures within the covered parking for the buildings. It is noted that drainage within these areas would require an oil-water separator and would be directed to the sewer and not to the stormwater.*

Response: The covered parking spaces are graded to drain to the stormwater treatment facilities for treatment. The use within the covered and uncovered parking areas are the same, and that covered spaces would effectively reduce the potential contaminants that would be transported by stormwater runoff (as there would be no direct runoff in covered areas). Therefore, we are of the opinion that an oil water separator is not required.

Public Comments Received at Neighborhood Meeting on February 5th, 2025:

The following comments, in *italics*, were made by public attendees during the Neighborhood Meeting held at the Gerald E. Talbot Community School located at 1600 Forest Avenue in Portland, ME. In total, the meeting lasted approximately 1.5 hours, beginning at 5:30 PM and ending around 7:00 PM. Included in Attachment 6 is a Neighborhood Meeting summary package including the notice letter sent, the sign-in sheet, meeting minutes, and the official Neighborhood Meeting Certification, signed. Please note that there were approximately seventy-six (76) attendees at the meeting, however, not all participants were willing to sign-in. Our response to each comment recorded is provided below, in **bold**.



- *Fifty (50) parking spaces are not enough for fifty (50) units. Where are the extra cars going to park?*

Response: The City of Portland does not require a minimum number of parking spaces, only a maximum limit of 2 parking spaces per unit. Ultimately, Acre Properties, through affordable housing, can propose more than 50-units on site but opted out of doing so to provide at least one parking space per unit. There is a minimum bicycle parking space requirement which has been met utilizing interior storage. It is the intent of this project to promote public transportation in correspondence with the City's Master Plan via the proposed public transit shelter.

- *Does the water and sewer mains have the capacity to serve the development? The Belfort Street sewer was upgraded within the last 10 years.*

Response: As part of the Major Site Plan Application process, Acre Properties has received the Portland Water District's ability to serve the development which was included in the initial submission. A Wastewater Capacity Application for the development was submitted to the City of Portland's Public Works Department (DPW) on February 14, 2025. The City of Portland's DPW will ultimately need to confirm it's capacity and approve the sewer layout.

- *Why two buildings and not just one?*

Response: Per the dimensional requirements in the RN-5 zone, there is a maximum building length of 180' therefore the development required two buildings.

- *What characteristics will the fence have?*

Response: Currently, the fence is proposed to be a white vinyl fencing.

- *Why can't vehicles enter/exit the site from Forest Avenue rather than Belfort Street.*

Response: The Applicant's frontage at Forest Avenue is subject to an easement as recorded in the Cumberland County Registry of Deeds under Book 33615, Page 280 therefore Acre Properties does not have rights to construct a driveway from Forest Avenue.

- *Why is the proposed development not required to do a traffic study?*

Response: The proposed development does not warrant a MaineDOT traffic movement permit based on the forecast increase of traffic volume during peak hours. However, the development is still subject to City of Portland requirements. City Staff requested that an evaluation of conditions at the Forest Avenue/Belfort Street intersection which will be completed by Gorill Palmer prior to the final site plan meeting. Gorill Palmer will continue to coordinate with Staff to satisfy the traffic requirements of the City.

- *What is the size of each unit?*

Response: Generally, the one-bedroom units are approximately 500 square-feet and the two bedroom units are approximately 602 - 740 square-feet.

- *What benefit do you see this having?*

Response: It is intended that fifty additional units in Portland will help towards the housing shortage that is a rising issue in the Southern Maine region. Approximately 25% of those units (13 units), will be



affordable housing at 80% of the Area Median Income (AMI). In correspondence with the City's master plan, public transportation is being promoted as part of this development with a public transit shelter proposed at the Forest Avenue frontage.

- *There's already limited green space in the neighborhood, this development will worsen that.*

Response: The subject property is privately owned and if the public previously utilized the space for recreational purposes, it was not in their rights. It is not anticipated that the development will have a direct impact on existing green space such as the recreational fields at the abutting property (Gerald E. Talbot Community School). Based on our review of the Major Site Plan requirements, there is no specific green space requirement.

- *Will car headlights be directed at the abutting dwellings when parking?*

Response: Buffering in correspondence with the Major Site Plan requirements has been provided via a 6-foot-high vinyl white fence and landscaping to prevent vehicle headlights from emitting onto the abutting dwellings.

CLOSURE

We look forward to your review of this response package which includes revisions to accommodate the staff and public comments received to date. Acre Properties and their representative(s) plan to attend the Planning Board Workshop scheduled for March 11, 2025. Please do not hesitate to contact our office if additional information is required, or if you have any questions about the information being submitted.

Sincerely,

GORRILL-PALMER

Douglas Reynolds, PE
Project Manager
Phone: 207-772-2515
dreynolds@gorrillpalmer.com

Attachments:

Attachment 1 – Conservation Fund Agreement
Attachment 2 – Vehicle Turning Figure
Attachment 3 – Revised Architectural Elevation and Rendering
Attachment 4 – LID Scoring Worksheet
Attachment 5 – Wastewater Capacity Application
Attachment 6 – Neighborhood Meeting Package
Attachment 7 – Revised Stormwater Report
Attachment 8 – Revised Erosion Control Report
Revised Plan Sheets



300 Southborough Drive, Suite 200, South Portland, ME 04106
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December 4, 2024

Kevin Kraft, Director

Planning & Urban Development
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

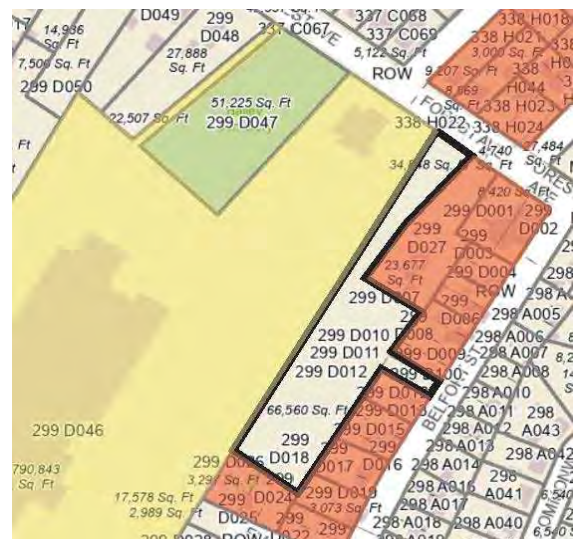
Subject: Major Site Plan Application
Applicant – Acre Properties
The Belfort Landing at 1582 Forest Avenue, Portland, Maine 04103
Parcel: 299, D1011001

Dear Mr. Kraft:

On behalf of **Acre Properties** (Applicant), our office is pleased to submit the Major Site Plan Application with supporting material for a proposed residential development at 1582 Forest Avenue. The applicant is proposing to construct two, three-story, multi-family dwellings, each with a building footprint of approximately 7,672 square feet. Currently, each dwelling will consist of 25 units for a total of 50 units combined. Approximately 25% of the total unit count (13 units) will be affordable housing at 80% of the Area Median Income (AMI). As the development includes greater than five dwelling units, the site qualifies for Major Site Plan Application and approval from the Planning Board in accordance with Table 14-A of the City of Portland's ReCode Land Use Zoning Ordinance. For clarity purposes, at the time of this application submittal, the City of Portland's ReCode Land Use Zoning Ordinance and associated ReCode Zoning Map has not been finalized therefore the "Final Draft for Planning Board Review" issue was utilized.

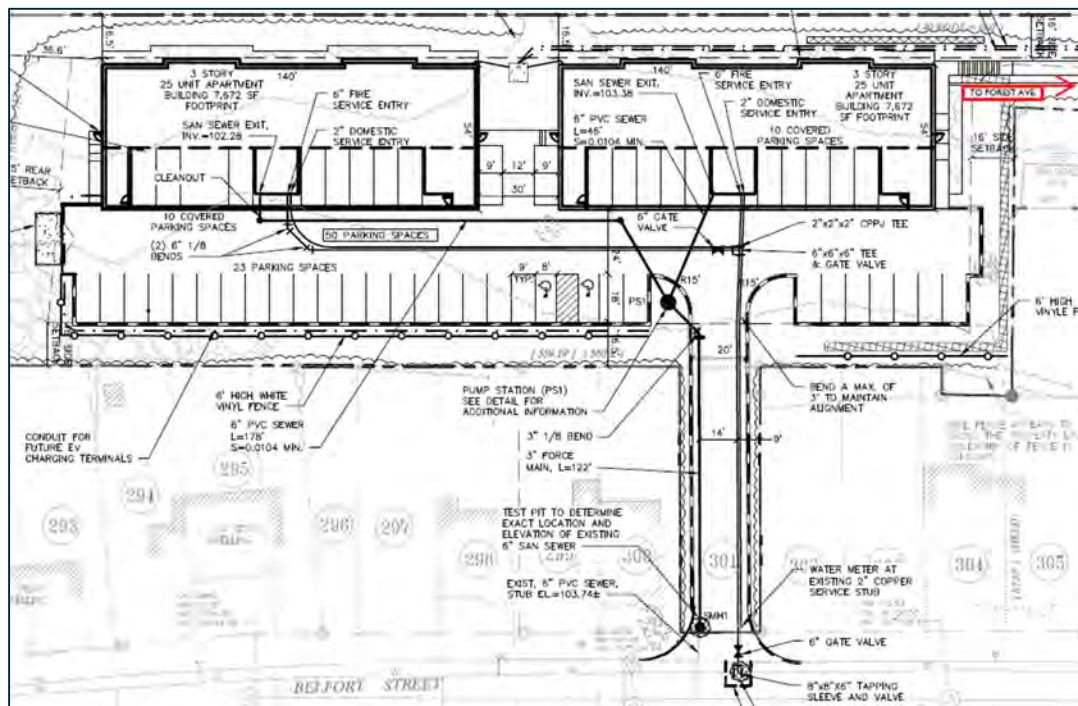
Project Overview

Based on the Lot Boundary and Topographic Survey issued July 5, 2022, and performed by Northeast Civil Solutions, the project site is 66,560 S.F. +/- . The City of Portland identifies the property on the Maine Parcel Viewer as Parcel 299, Lot D1011001. As shown in the snippet to the right from said Parcel Viewer, the project site, outlined in black, directly abuts the Gerald E. Talbot Community School site, overlayed in yellow for reference, and residential properties, overlayed in red. Acre Properties (Applicant) currently owns the site as described in the recorded deed at the Cumberland County Registry of Deeds under Book 39465, Page 256. A copy of the deed is included in Attachment 2 of this submission. Currently, the property consists of mostly wooded area with the central portion of the site



appearing to be previously cleared and compacted by vehicles. A paved parking lot, shared with the abutting property identified on the City of Portland's Map Viewer as Parcel 299, Lot D027001, exists at the northerly portion of the site. This abutting property is also owned by the Applicant. The existing parking lot will not serve the proposed development but may allow pedestrian access to Forest Avenue.

The project will consist of constructing two, three-story, multi-family dwellings, each with a building footprint of approximately 7,560 square feet. Generally, both dwellings will contain 25 units for a total of 50 units. The dwellings will be supported by fifty parking spaces, twenty (20) of which will be covered spaces on the ground level of the buildings, and two as designated ADA spaces. As shown in the figure below, the buildings will be located at the south westerly portion of the property. Each building is proposed to have four entrances, one main entrance at the front of the building, two side entrances, and another entrance via the ground floor parking.



The site is proposed to be accessed with a two-way, 20-foot-wide driveway via Belfort Street with pedestrian access available from Forest Avenue by sidewalk. Around 72-feet of frontage exists along Forest Avenue. Utilities for the project will extend from Belfort Street and will include two, 2" domestic water services, a 6" fire service, a 6" gravity sewer service, 3" force main service, and underground power and communication services. Stormwater runoff will be in compliance with the City's stormwater management standards to reduce the predeveloped peak discharge to the greatest extent practicable. The project will ultimately create 34,177 square-feet of impervious area, with the remainder of the site consisting of vegetated developed area.

Zone Requirements

On November 4, 2024, the City of Portland Council voted unanimously to adopt ReCode, Portland's first comprehensive rewrite of the entire land use code and zoning map in over 50 years. At the time of this application, the new ReCode Land Use Zoning Ordinance and associated Zoning Map are issued as "*Final Draft for Planning Board Review*". Although the Final Land Use Zoning Ordinance and Map has not been published, it is anticipated that no major revisions that affect our project site will be made from the Final Draft referenced for this application. As shown in the snippet below, the project site, approximately outlined in black, is split between two zones, RN-5 (orange) and B-1 (pink).



Residential Neighborhood 5 (RN-5) Zone:

Multi-family dwellings are a permitted use in the RN-5 zone in accordance with *Chapter 6 – Use Standards*. No dwelling structures are proposed within the B-1 portion of the property, therefore the RN-5 dimensional and performance standards will mostly apply.

6.8 Performance Standards

Applicable performance standards for the proposed project are provided in italics below, with responses following.

***6.8.2 Discharges:** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the Public Health Authority or by the Public Works Authority. No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the Department of Public Works in accordance with Chapter 24 of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24.*

No discharge will be permitted into the ground as part of this project. It is intended that the site will be served by public sewer.

6.8.4 Exterior lighting: *All exterior lighting shall be designed and installed with full cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties in accordance with the City of Portland Technical Manual.*

Exterior lighting information provided by Swaney Lighting Associates, Inc., in accordance with the City's of Portland's Ordinance and Technical Manual, is included in Attachment 10.

6.8.6 Noise:

- A. *No use shall be operated so as to generate recurring noises that are unreasonably loud, cause injury, or create a nuisance to any person of ordinary sensitivities.*
- B. *The maximum permissible sound level of any continuous, regular, or frequent source of sound produced by an activity shall be as shown in Table 6-H.*

Based on MaineDEP regulations, the proposed project is a "development producing a minor noise impact" and does not require a full noise study. Given the nature of the proposed development, the project is not anticipated to generate a significant amount of noise. During the construction phase, noises may exceed the maximum permissible sound levels set forth by the City of Portland, as allowed per Section F. Exemptions. The project will be required to meet the applicable local requirements for noise after construction.

6.8.7 Odor: *It shall be a violation of this article to create an odor nuisance. An odor nuisance shall be considered to exist when 10 confirmed complaints relating to odors of such intensity and character as to be detrimental to the public health and welfare occur in an area within two separate 24-hour periods. The 10 confirmed complaints must originate from 10 different households in a residential zone, or from 10 different individuals in a commercial or industrial zone.*

It is not anticipated that the proposed development will create any unpleasant odors warranting a complaint.

6.8.12 Waste disposal:

- A. *All solid waste disposal, including materials which might cause fumes or dust, or constitute a fire hazard if stored outdoors, shall be only in fully enclosed, covered containers or receptacles. In all nonresidential zones except for the industrial zones, such containers or receptacles shall be within designated, screened areas.*
- B. *Containers or receptacles shall not leak or otherwise permit liquids or solids to escape from the container or be transferred beyond lot boundaries by natural causes or forces. Areas attracting large numbers of insects or vermin are prohibited.*

The applicant has retained White Rock Sanitation (Gorham, ME) to collect solid waste from the site during the construction phase (see Attachment 8 for proof of ability to serve). White Rock Sanitation will also provide trash and recycling services for the residential development post construction. A dumpster enclosure is proposed on-site as shown in the attached plan set.

7.3 Dimensional Standards

The following table outlines the Dimensional Standards for the site within the RN-5 zone, as well as applicable portions of the B-1 zone.

Dimensional Standards For RN-5		
	Required	Provided
Minimum Lot Area	1200 S.F./UNIT MIN. 40,000 S.F.	1,331 SF/Unit
Minimum Street Frontage	50 FT	72 FT
Maximum Lot Coverage	60%	23%
Minimum Landscaped Open Space Ratio	30%	43%
Building Setbacks*		
Front (Minimum)	25 FT	312 FT
Rear (Minimum)	25 FT	36 FT
Side (Minimum)	16 FT	16.5 FT
*Building mounted mechanical equipment may encroach into a required setback to an RN zone by no more than 50% of the width of such required setback.		
*Parking spaces may be located within a required interior side or rear setback.		
Maximum Structure Height	55 FT	47 FT
Maximum Building Length	180 FT	140 FT
Dimensional Standards For B-1		
	Required	Provided
Minimum Street Frontage	20 FT	72 FT

Based on our review of the Performance and Dimensional Standards, it is the projects intent to satisfy all applicable code provisions.

Site Plan Application Submission Requirements

In accordance with Section 13-6 – Site Plan Review Standards of the City of Portland Land Use and Development Code, the following information is provided.

13.6.1 Transportation standards

A. Impact on surrounding street systems:

The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not:

1. *Create or aggravate any significant hazard to safety on the surrounding street network.*

Given the residential nature of the development, loading and unloading is expected to be minimal. One off-street parking space per unit, two of which are ADA accessible, have been provided in efforts to reduce congestion on Belfort Street and the surrounding area. For internal pedestrian circulation, a walkway is

provided to Forest Avenue, which is a principal arterial roadway. The applicant is also providing a potential public transit shelter at Forest Avenue to support transit traffic. Bicycle storage in accordance with Table 18-A of the Off-Street Parking & Loading Requirements has been provided in the interior of each building which can be accessed from the outside garage area.

As required in the Technical Manual, the proposed access point on Belfort Street, a Local Street, is over 300 feet from the intersection with Forest Avenue, an Arterial Street. The posted speed limit at the access point of the proposed development is 25 MPH. In accordance with the MaineDOT's Chapter 299, Highway Driveway and Entrance Rules, the sight distance at the center of the proposed access drive appears to be greater than 200 feet. Crash data was studied using the MaineDOT's Public Crash Query Tool Map and it appears that no high crash locations are within the immediate area. Furthermore, Timothy McNeill of the MaineDOT was contacted regarding the latest three-year crash history for the surrounding area, as well as collision diagrams for high crash locations. The data provided by the MaineDOT, which is included in Attachment 11, confirmed that there are no high crash locations within the project site area.

2. Substantially increase congestion on any street without mitigation proportionate to the level of impact.

The forecast increase in traffic volume during peak hours was studied and it was concluded that the AM Peak Trip Generation would be 20 and the PM Peak Trip Generation would be 42. Based on this, it is expected that the proposed residential development will have a minimal impact on the operations of the adjacent roadway network and does not require a MaineDOT traffic movement permit.

B. Access and circulation

1. In general

a. All development subject to this article shall provide safe and reasonable access and internal circulation for all users of the site and shall comply with the transportation systems and street design standards of the Technical Manual.

It is the intent of the project to provide safe and reasonable access and internal circulation for all users of the site and be in compliance with the transportation systems and street design standards of the Technical Manual. ADA parking is provided with an accessible route from the ADA spaces to the main entrances of both dwellings.

b. Shared circulation, parking, and transportation infrastructure shall be provided to the extent practicable, with utilization of joint curb cuts, walkways, service alleys, bus pull-out areas, and related infrastructure shared with abutting lots and roadways. Easements for access for abutting properties and shared internal access points at property lines shall be provided where possible to facilitate present or future sharing of access and infrastructure.

Due to the residential use, vehicular circulation, parking, and transportation infrastructure are not proposed to be shared with abutting properties. However, the applicant is proposing a public transit shelter at the northerly portion of the site, which directly abuts the Gerald E. Talbot Community School property, owned by the City of Portland. It is anticipated that an easement to the City of Portland for

Metro services will be required. Additionally, there is a portion of an existing parking lot at the northerly limit of the site. This parking lot currently serves Moran's Market (3 Belfort LLC) and is part of an Easement Deed recorded in the Cumberland County Registry of Deeds under Book 33615, Page 280. The project intends to abide by the referenced Easement Deed and the existing parking lot will be independent of the proposed residential development. See the site and utility plan on Sheet C101 for the potential easements.

c. Continuous internal walkways shall be provided between existing or planned public sidewalks adjacent to the site, transit stops and street crossings, and building entrances on the site.

An approximately 5-foot wide bituminous walkway exists on Forest Avenue, which abuts the northerly portion of the project site. To accommodate pedestrian traffic flow, a 5-foot wide bituminous walkway is proposed on site from the residential dwellings toward the existing sidewalk on Forest Avenue.

d. Where the site abuts or includes an existing or planned publicly accessible trail, a connection to or integration of such trail shall be provided to the extent practicable, including rights of public access.

The site does not abut nor include an existing established or planned publicly accessible trail.

e. Points of access and egress shall be located to avoid conflicts with turning movements and traffic flows.

The development provides a 20-foot wide primary access driveway in accordance with the Technical Manual with a single ingress lane and single egress lane. Within the parking lot area, 24-foot wide drive aisles are provided. Belfort Street is a low volume, low speed (25 MPH) roadway and no conflicts are expected with other turning vehicles.

2. Curb and sidewalks

a. All development shall provide curb and sidewalks along all frontages, installed to specifications as described in the transportation systems and street design standards of the Technical Manual.

Curb and sidewalk exists along Forest Avenue at the frontage of the site. A walkway is proposed to that existing sidewalk.

b. Where sidewalks already exist but are in substandard condition, they shall be repaired or replaced in conformance with Chapter 25 of the City of Portland Code of Ordinances and the transportation systems and street design standards of the Technical Manual

The existing sidewalk on Forest Avenue appears to be in good condition and ADA compliant therefore no reconstruction is proposed.

c. An applicant may request a waiver from sidewalk installation requirements if they meet two or more applicable waiver criteria as listed below:

i. There is no reasonable expectation for pedestrian usage coming from, going to, and

traversing the site.

ii. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of pedestrian oriented infrastructure.

iii. A safe alternative walking route is reasonably available, for example, by way of a sidewalk on the other side of the street that is lightly traveled.

iv. The reconstruction of the street is specifically identified and approved in the first or second year of the current Capital Improvement Program (CIP) or has been funded through an earlier CIP or through other sources.

v. The street has been constructed or reconstructed without sidewalks within the last 24 months. vi. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

vi. Strict adherence to the sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

The Applicant is not intending to request a waiver of this standard.

d. An applicant may request a waiver from curb installation requirements if they meet two or more applicable waiver criteria as listed below:

i. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost.

ii. The reconstruction of the street is specifically identified and approved in the first or second year of the current CIP or has been funded through an earlier CIP or through other sources.

iii. The street has been rehabilitated without curbing in the last 60 months and the proposed use and design of the site does not necessitate the installation of curbing.

iv. Strict adherence to the curb requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

v. Runoff from the development site or within the street does not require curbing for stormwater management

The Applicant is not intending to request a waiver of this standard.

C. Public transit access

1. All residential development consisting of 20 or more dwelling units and all commercial and institutional developments of at least 20,000 square feet gross floor area shall provide a transit shelter adjacent to or within the public right-of-way along its frontage, or at a nearby high-volume transit stop without a transit shelter, when the following criteria are met:

a. The development is proposed along an existing public transit route on a principal or minor arterial roadway, as shown in the Federal Street Classification Map.

b. The nearest existing transit shelter on the route is more than ¼ mile from the site, measured along rights-of-way.

2. Transit facilities shall be connected to the public sidewalk system.

3. All or some of this standard may be waived if the review authority determines that the development is not anticipated to generate public transit usage due to particular characteristics of the development or proposed use.

A public transit shelter is proposed on-site at the back-side of the existing sidewalk along Forest Avenue. The public transit shelter is proposed to be abutting the adjacent property, 1600 Forest Avenue (Gerald E. Talbot Community School), currently owned by the City of Portland. It is intended that the proposed transit shelter will require an easement to benefit the City of Portland as shown on the Site and Utility plan on Sheet C101 of the attached plan set.

D. Parking

1. Vehicular parking

a. Developments shall comply with the parking standards of Article 18.

b. Where provided, parking spaces and aisles shall not be located in front and corner side yards, unless the applicant can demonstrate that site constraints preclude the location of parking elsewhere on the site.

c. Where provided, parking spaces and aisles shall meet applicable dimensional standards as detailed in the transportation systems and street design standards of the Technical Manual.

The applicant has demonstrated compliance with the above requirements set forth in the ordinance for the proposed parking. Please refer to the Site and Utility Plan on Sheet C101 of the attached plan set for further information.

2. Bicycle parking

a. All development shall provide secure bicycle parking in accordance with the parking requirements of Article 18 and the transportation systems and street design standards of the Technical Manual.

b. The review authority may reduce the required number of bicycle parking spaces if it is determined, based on evidence submitted by the applicant, that the proposed development is expected to generate reduced demand for bicycle parking due to particular site characteristics or proposed uses.

As required per Table 18-A of the referenced Ordinance, secure bicycle parking spaces have been provided in the interior of each building which can be accessed from the outside garage area. Refer to the Architectural Plans within Attachment 5 for additional information.

3. Snow storage

a. All developments shall include areas for snow storage or provide an acceptable snow removal plan.

b. Snow storage areas may not encroach on adjacent properties, public ways, and pedestrian walkways, and shall not be located where they would adversely impact the functionality of stormwater management systems. Landscaping in designated snow storage areas shall be such that it can withstand the snow pile.

The applicant has demonstrated compliance with the above requirements set forth in the ordinance. Please refer to Sheet C101 of the attached plan set for snow storage locations.

4. Electric Vehicle (EV) charging. All development shall meet applicable EV standards as provided in Section 1 of the Technical Manual.

In accordance with Section 1 of the Technical Manual, at least 10 spaces are equipped with Level 2 EV Chargers, with 25 spaces served with sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment. Refer the Site and Utility Plan on Sheet C101 of the attached Plan Set for additional information.

E. Transportation Demand Management (TDM)

1. The following types of development shall design and implement a Transportation Demand Management (TDM) plan:

a. All commercial, institutional, or mixed use developments of 50,000 square feet or more in total floor area.

b. All commercial or institutional uses designed to accommodate 100 or more employees or, for educational institutions, 100 or more students.

2. The TDM Plan shall comply with the standards for transportation studies and plans as contained in the Technical Manual.

A TDM plan does not appear to apply to this project.

13.6.2 Environmental quality standards

A. Preservation of significant natural features

- 1. All development shall preserve and protect significant natural features by incorporating the principles of Low-Impact Development (LID) in accordance with the LID standards of the Technical Manual.*
- 2. Where complete preservation of significant natural features substantially compromises development of the site as otherwise permitted by zoning, the review authority may reduce the requirement in accordance with the LID standards of the Technical Manual provided that the applicant implements preservation measures to the extent practicable and demonstrates compliance with applicable state and federal regulations.*
- 3. The site plan shall include adequate measures to protect significant natural features to be preserved from construction impacts, in accordance with the LID standards of the Technical Manual.*

The project site consists of mostly wooded area with the central portion of the site appearing to be previously cleared and compacted by vehicles. As shown in the National Wetland Inventory map within Attachment 4, there appears to be no delineated wetlands on-site. The site was laid out to preserve the existing tree line to the greatest extent possible. Retaining walls are proposed to prevent soil erosion and create usable space on existing, challenging sloped terrain, as well as reduce the cut/fill efforts.

Efforts have been made by the applicant to contact the State of Maine's Department of Inland Fisheries & Wildlife for information regarding any threatened, endangered, and special status wildlife or fisheries species and/or habitats within the project area. At this time, the State of Maine's Natural Areas Program was also contacted regarding the presence of any unusual natural areas within the project site. A response from the State of Maine's Natural Areas Program was received on November 14, 2024 indicating that "there are no rare botanical features documented specifically within the project area". No response has been received by the Maine's Department of Inland Fisheries & Wildlife at this time, however, the response can be forwarded upon receipt. Environmental correspondences are included within Attachment 9.

B. Site landscaping and buffers

1. On-site landscaping.

- a. All development subject to this article shall provide a minimum of one shade tree consisting of species identified on the City of Portland Recommended Tree list or six plantings, defined as one shrub, one ornamental grass, and/or three perennials, per 5,000 square feet of lot area in accordance with the landscaping standards of the Technical Manual.*
- b. Existing vegetation to be preserved on the site may be counted towards this requirement as described in the landscaping and landscape preservation standards of the Technical Manual.*
- c. Where site constraints prevent the planting of required shade trees or plantings at the development site, the reviewing authority may approve an alternative as described in the*

landscaping standards of the Technical Manual.

The applicant has demonstrated compliance with the above landscaping requirements set forth in the ordinance. Please refer to Sheet L100 of the attached Plan Set for further information.

2. Buffers and screening

a. Loading and servicing areas, trash and recycling areas, storage areas, and roof- and ground-mounted utility structures, except for renewable energy systems, shall be screened from view from public sidewalks, streets and adjacent properties by dense evergreen and deciduous landscaping, fencing, architectural screening products, masonry walls, building walls, or a combination thereof.

b. Where immediately visible from the right-of-way, surface parking areas shall be screened with dense evergreen and deciduous landscaping, fencing, or masonry wall in accordance with the landscaping standards of the Technical Manual.

c. For nonresidential development abutting a residential zone, an evergreen, densely landscaped buffer of not less than 10 feet in depth and six feet tall is required along the side abutting the residential zone. In cases where architectural fencing is used, the depth of the landscaped buffer may be reduced, so long as the fencing is at least six feet in height and a mix of evergreen and deciduous trees spaced no further than 20 feet apart is planted abutting the residential zone.

d. All residential development shall provide and/or preserve evergreen vegetated buffers where necessary to buffer the development from detrimental impacts of existing surrounding development.

As previously mentioned, the project site consists of mostly wooded area with the central portion of the site appearing to be previously cleared and compacted by vehicles. The proposed dwelling structures sit approximately 170 feet from the edge of Belfort Street and approximately 315 feet from the sidewalk on Forest Avenue. It is the projects intent to preserve the existing wooded area to the greatest extent possible, as shown with the proposed tree line in the Landscaping Plan on Sheet L100 of the provided Plan Set. The preserved tree line is anticipated to continue as a buffer to the existing Gerald E. Talbot Community School site from the mounted utility structures on the back of the proposed dwellings. A 6-foot-high white vinyl fence is proposed along the parking spaces at the easterly portion of the site for a buffer between the abutting residential properties and the proposed parking area. The dumpster area is proposed to be enclosed with fencing. Arborvitae trees are also proposed for landscaping and buffering requirements. Refer to Sheets C101 and L100 of the attached Plan Set for additional information.

3. Parking and vehicle display lot landscaping

a. Developments with more than five parking spaces shall include at least one tree for every 750 square feet of uncovered asphalt parking area (including drive aisles), planted in landscaped islands to screen, shade, and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as described in the landscaping standards of the Technical Manual.

b. Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty parking spaces.

c. Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the review authority, the reviewing authority may approve an alternative as described in the landscaping standards of the Technical Manual.

The applicant has demonstrated compliance with this standard as reiterated above in *Section 2, Buffers and Screening*. Please refer to Sheets C101 and L100 of the attached plan set for further information.

4. Non-vehicular hardscape. All uncovered paving for non-vehicular use, including pathways and patios, must either have a minimum Solar Reflective Index (SRI) of 33 initially and 28 once aged three years or include one tree for every 750 SF of asphalt paving.

The applicant is aware of this requirement and intends that pathways will be paved with materials adequate for a minimum Solar Reflective Index (SRI) of 33 initially and 28 once aged three years.

5. Street trees

a. All development shall include one street tree per 25-35 linear feet of frontage along a city right-of-way or private roadway as specified in the landscaping standards of the Technical Manual. The provision of measures to enhance tree survival (such as raised planters, irrigation, and structural soils as recommended by the City Arborist) shall be required.

b. Where the applicant can demonstrate that site constraints prevent the planting of required street trees in the city right-of-way, the review authority may permit an alternative subject to the landscaping standards of the Technical Manual.

c. Where the proposed development includes the removal of an existing street tree determined by the City Arborist to be a heritage or feature mature tree, the applicant shall be required to contribute to the Tree Fund at the designated rate in the Technical Manual so that the total replacement cost is significantly higher than planting a new street tree/contributing for a new street tree.

The applicant has demonstrated compliance with this standard as reiterated above in *Section 2, Buffers and Screening*. Please refer to Sheets C101 and L100 of the attached plan set for further information.

C. Water quality, stormwater management, and erosion control

1. All development shall be designed to minimize total area of impervious surface on the site and both the volume and rate of runoff from the lot. Provisions for stormwater management shall demonstrate the following:

a. Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or redirected so as to create ponding on, or flooding of, adjacent lots.

b. Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot or City

property following the improvement can be handled on the adjacent lot or City property without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot or City property.

c. Any increase in volume or rate of stormwater draining from the lot into the City's storm sewer system can be accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.

The proposed stormwater management system has been designed to minimize peak flow rates to the greatest extent practicable. In addition, the applicant intends to pay the compensation fee to meet the Urban Impaired Stream Standard as outlined in the Stormwater Management Report (see Attachment 6). The applicant is proposing the use of a large subsurface sand filter, and three drip strip systems to treat and detain runoff. The proposed stormwater management system has been designed to detain runoff from upstream properties to minimize post-development flow rates. Through the use of these systems, peak flow rates to the downstream abutting properties to the south are reduced. However, small portions (950 SF total) of new impervious area are unable to be captured and as a result, produce minor increases (less than 0.2 cfs) to the municipal stormwater systems located on Forest Ave and Belfort Street. Additional details are included in the Stormwater Management Report (see Attachment 6) and Erosion and Sedimentation Control Report (see Attachment 7).

2. All development shall comply with the stormwater management standards of the Technical Manual.

The Applicant acknowledges that the development shall comply with the stormwater management standards of the Technical Manual. Additional details are included in the Stormwater Management Report (see Attachment 6).

3. Development shall not pose a risk of groundwater contamination either during or post-construction, as described in the stormwater management and water supply standards of the Technical Manual.

The proposed development does not pose a risk of groundwater contamination either during or post-construction.

4. Applicants shall demonstrate that subsurface and/or any adjacent slope conditions are suitable to support the development, and where determined necessary, shall prepare a geotechnical study to demonstrate that the development as designed will not adversely impact the development site or any abutting property. Soil surveys and/or geotechnical studies shall be prepared in accordance with the requirements of the Technical Manual.

Summit Engineering Services performed soil borings on-site and has provided the associated Exploration Location Plan and Boring Logs. These are included as Attachment 13 heron. Based on the Boring Logs, the subsurface conditions appear suitable to support the development.

13.6.3 Public infrastructure and community safety standards

A. Consistency with City master plans

- 1. All developments shall be designed so as to be consistent with City Council-approved master plans and facilities plans and with off-premises infrastructure.*
- 2. The site plan shall include suitable easements, rights, and improvements to connect or continue off-premises public infrastructure as may be required by the review authority.*

It is the projects intent to be consistent with the City of Portland's Plan 2030. An easement to benefit the City of Portland is proposed at the on-site public transit to allow for connection with the existing sidewalk on Forest Avenue. The public transit is proposed to support the City's goal to develop an efficient system of public facilities and services for anticipated growth and economic development. In efforts to accommodate the State's goal of encouraging and promoting affordable decent, housing opportunities, approximately 25% of the total unit count (13 units) will be affordable housing at 80% of the Area Median Income (AMI).

B. Public safety and fire prevention

- 1. All development shall incorporate the following public safety principles for Crime Prevention through Environmental Design (CPTED) into site design to enhance the security of public and private spaces and to reduce the potential for crime:*
 - a. Natural surveillance that promotes visibility of public spaces and areas.*
 - b. Access control that promotes authorized and/or appropriate access to the site.*
 - c. Territorial reinforcement that promotes a sense of ownership and responsibility through environmental design.*

In accordance with the CPTED guidelines, the site lighting has been designed to the City's standards as outlined in Section 12 of the Technical Manual to enable full observation of the site during both day and night. The layout of the site has been designed as to clearly guide the movement of vehicles and pedestrians along predictable paths.

- 2. All developments shall be designed to provide adequate emergency vehicle access to the site and comply with the Public Safety standards of the Technical Manual.*

The primary site access point will be from Belfort Street. The site has been designed with a 20-foot wide access drive and 24-foot wide drive aisles that provide emergency vehicle access to both dwellings in the form of a hammerhead. Minimal reversing will be required to exit the site. A turning movement graphic, replicating a fire truck, is provided on Sheet T1 of the attached Plan Set.

There is an apparent active hydrant that exists at the Forest Avenue property frontage, which is within 500 feet of the proposed dwelling structures. Both dwellings will be equipped with automatic fire sprinkler systems.

C. Public utilities

1. The development shall not overburden sanitary sewers and storm drains, water lines or supply, or other public infrastructure and utilities. Development shall provide adequate utility infrastructure on-site and in connection to surrounding locations and facilities.

Water*: A 2" copper service stub exists on-site at Belfort Street. This service appears to have been installed in 2012 and is still available. The applicant is proposing a 2" domestic service from the existing stub via a water meter to service both dwellings, as well as a 6" fire service from the existing 8" ductile iron water main in Belfort Street, which will split on-site to service each building separately. A letter was sent to the Portland Water District requesting to confirm their ability to serve the project. The response received from the Portland Water District, confirming their ability to serve, is included within Attachment 8.

Sewer*: On Belfort Street, there is an existing 8" gravity sewer with a 6" gravity service stub for the project site. This service appears to have been installed in 2012 and is still available. The applicant is proposing to use the 6" gravity service stub to a terminus manhole within the City of Portland's right-of-way. The sewage is anticipated to gravity flow from each building to a 6-foot pumpstation on-site, then be pumped via 3" force main to the terminus manhole mentioned above. A letter was sent to the City of Portland's Public Works Department requesting to confirm the City's ability to serve this project. It is our understanding that a response from the Public Works Department indicating the ability to service will be determined as part of the Staff Review of the project.

Solid Waste*: Solid waste generated on-site during and after construction is anticipated to be serviced by White Rock Sanitation. An email indicating that White Rock Sanitation will have the ability to serve the proposed development is included in Attachment 8.

*Refer to the Site and Utility Plan on Sheet C101 of the attached Plan Set for additional information.

2. Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant, or complexity of revising existing overhead facilities.

The applicant has corresponded with Katherine Dumont, a three-phase power advisor at Central Maine Power (CMP) for the layout of electrical services. Electrical and communication services are anticipated to be extended via overhead from the pole within the right-of-way at 1597 Forest Avenue, across Forest Avenue, to a new utility pole located at the northerly portion of the site. Electrical conduits will then be installed underground from the set utility pole. Final service locations and easements will be determined by CMP and coordinated by the Applicant.

3. All sanitary sewer lines, storm drains, water lines, and other utilities proposed as part of the development shall be designed to conform with the sanitary sewer and storm drain and water supply standards of the Technical Manual.

All utilities proposed as part of the development have been designed to conform with the standards set forth in the Technical Manual.

4. All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and the sanitary sewer and storm drain standards of the Technical Manual.

The applicant has proposed connecting into the existing sanitary sewer line on Belfort Street in accordance with the City Code and Technical Manual.

5. All residential development of 20 units or more, commercial development, and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics, and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets, and adjacent properties.

An exterior dumpster enclosure has been provided by the Applicant in accordance with these standards. Please see Sheet C101 of the attached plan set.

13.6.4 Site design standards

A. Massing, ventilation, wind, and heat impact

1. The bulk, location, or height of proposed buildings and structures shall not result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces.

The proposed buildings are not to cause a reduction in ventilation to abutting structures or make changes to the existing wind climate that would result in unsafe wind conditions for users of the site and/or adjacent public spaces. The apparent nearest abutting structure is approximately 55 feet away from the easterly dwelling.

2. Development shall locate all HVAC venting mechanisms to direct exhaust away from public spaces and residential properties directly adjacent to the site.

HVAC venting mechanisms are proposed to be at the back of the buildings, on the north westerly portion of the site. This portion of the site does not face any residential properties.

3. In proposed buildings or additions with an aggregate roof area greater than 2,000 square feet, measured horizontally, and, for residential projects, greater than nine residential units, a minimum of 75% of the roof area must meet the following "cool roof" Solar Reflective Index (SRI) standards: a. Roofs with a slope less than 2:12: SRI of 82+ (initial)/64+ (3-year aged) b. Roofs with a slope greater than 2:12: SRI of 25+ (initial)/25+ (3-year aged) Roof areas covered by shade structures with an SRI of 39+, including photovoltaic panels that shade the roof, area considered exempt from roof area calculations for the purposes of this standard.

The roof is proposed with an 8:12 slope therefore requires to meet the “cool roof” Solar Reflective Index (SRI) of 25+ (initial). The applicant is intending to use a CertainTeed Landmark Solaris *Cool Roof* in Solaris Crystal Gray to accommodate this requirement. Refer to the Cut Sheets and Product Brochure annexed to the Architectural Plans included within Attachment 5.

B. Shadow: All development over 65 feet in height shall be designed to avoid and/or mitigate the adverse impacts of shadows cast by new structures or building additions from falling on publicly accessible open space in accordance with the shadow standards of the Technical Manual.

The proposed development is not over 65 feet in height, therefore this standard is not applicable.

C. Snow and ice loading: All development shall be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties or public ways.

Snow storage in accordance with this ordinance have been provided to prevent significant amounts of accumulated snow and ice from falling onto adjacent properties or public ways.

D. View corridors: The massing, location, and height of development shall not substantially obstruct public view corridors identified in the City of Portland Design Manual.

The proposed development does not appear to obstruct any public view corridors as identified in the City of Portland Design Manual.

E. Historic resources

1. When a development affects a designated landmark or lies within a designated historic district or historic landscape district, such development shall be required to obtain historic preservation approval under Article 16.

The project site and abutting properties do not appear to be within a designated historic district or historic landscape district therefore it is not intended that the project will affect any designated landmark.

2. All development shall document and protect state or local archaeological resources known to exist or discovered on the site.

a. Protection may include leaving archaeological resources untouched beneath a new development through adaptation of foundation design or architectural layout.

b. Where the applicant can demonstrate that complete protection is not feasible, the applicant shall excavate and document archeological resources. Such measures shall be conducted in consultation with the City’s historic preservation program and Maine Historic Preservation Commission. For resources of state significance, excavation and documentation shall be conducted by a qualified professional, in coordination with Maine Historic Preservation Commission. Local archeological resources may or may not be recognized by the Maine Historic Preservation Commission as significant and shall include the following:

i. Original seawall structure located landward of Commercial Street.

ii. Inactive historic family cemetery plots.

iii. Historic railroad beds including but not limited to the Portland Lewiston interurban railroad.

iv. Original structure and/or landforms associated with the Cumberland and Oxford Canal.

V. Buried portions of colonial and post-colonial period structures or built features located on the Portland Peninsula predating the Great Fire of 1866.

vi. Pre-colonial occupation sites identified by shell middens or other evidence.

vii. Sites listed or eligible for listing on the National Register of Historic Places.

c. In order to preserve archeological resources, the review authority may waive standards listed in the City of Portland Technical Manual where necessary if it is determined that such a waiver would not jeopardize the health, safety, or welfare of the development's occupants, the public, or the natural environment.

Based on the National Register of Historic Places, the project site and abutting properties are not considered historic places. Additionally, the Applicant has made efforts to contact the State of Maine Historic Preservation Commission requesting information on the presence of any nearby structure or area with historical, architectural, or archeological significance as defined by the National Historic Preservation Act of 1966. No response has been received by the State of Maine Historic Preservation Commission at this time, however, the response can be forwarded upon receipt. Refer to Attachment 9 for the respective correspondence.

F. Exterior lighting

1. Site lighting

a. All exterior site lighting shall be full cutoff with no light emitted above the horizontal plane or spilled onto adjacent properties. Illumination levels shall be adequate but not excessive for the safety, comfort, and convenience of occupants and users of the site, and shall conform to the lighting standards of the Technical Manual.

b. Where light from a proposed development may adversely impact adjacent residential properties, exterior lighting shall employ building side shielding.

2. Architectural and specialty lighting.

a. Architectural and specialty lighting of such features as architectural details, monuments, public art, or other site features shall be designed to illuminate specific details or attributes only and shall meet the lighting standards of the Technical Manual.

b. Up-lighting by any method is prohibited except for public buildings and parklands; clock towers and steeples; landscape features; designated historic landmarks; flags of state, federal, or national

jurisdictions; and public art. Such light fixtures, brackets, conduits, and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the lighting standards of the Technical Manual.

3. Street lighting. All development shall provide municipal street lighting adequate for the safety and comfort of pedestrians, bicyclists, and motorists and, where applicable, conforming to specific lighting district requirements as specified in the street lighting standards of the Technical Manual.

Exterior lighting information provided by Swaney Lighting Associates, Inc., in accordance with the City's of Portland's Ordinance and Technical Manual, is included in Attachment 10.

G. Noise and vibration: *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 be located to the interior of the site, away from abutting properties.*

HVAC equipment will meet applicable state and federal emission requirements. The equipment is proposed to be on the back of the buildings, at the north westerly portion of the site which does not directly abut any surrounding residential properties.

H. Signage and wayfinding

1. On-site directional traffic signage may be provided to enable users to safely and easily navigate into, around and out of the site.

2. Signage shall not adversely affect visibility at intersections on or off the site.

Appropriate signage has been provided for the development. Please see Sheet C101 of the attached plan set for proposed signage.

I. Design standards

1. Development of certain types and/or proposed in certain zones, as specified in the City of Portland Design Manual, shall meet the design standards of the Design Manual in order to ensure that building and site design contribute to and enhance the goals and policies for specific zones within the city. The City of Portland Design Manual is incorporated by reference as part of this Land Use Code.

It is the intent of the design to be architecturally compactible with the residential buildings in the surrounding neighborhood as required by the City of Portland's Design Manual.

2. If the development is located in a historic district or associated with a historic landmark, the standards of Article 16 shall supersede.

The proposed development is not located in a historic district or associated with a historic landmark as mentioned above.

Closure

The Project Team looks forward to the Department's review of this Major Site Plan Application. If you have any questions with regards to the submission material or need additional copies, please contact our office.

Sincerely,

GORRILL-PALMER



Douglas E. Reynolds, PE

Project Manager

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Attachments: 1 – Site Plan Checklist & Agent Authorization
2 – Evidence of Title, Right, or Interest
3 – Financial Capacity
4 – Project Site Figures
5 – Architectural Plans
6 – Stormwater Management Report
7 – Erosion and Sedimentation Control Report
8 – Utility Correspondence
9 – Environmental, Natural, and Historic Resource Correspondence
10 – Photometric Plan and Lighting Cut Sheets
11 – Traffic Reports
12 – Fire Truck Turning Figure
13 – Geotechnical Study
14 – Cost Estimate for City of Portland Performance Guarantee
Plan Set

cc: Alexander Coupe, Acre Properties

ATTACHMENT 1

SITE PLAN CHECKLIST & AGENT AUTHORIZATION

Alexander Coupe
27 Cypress Street
Portland, Maine 04103

November 26, 2024

Subject: Agent Authorization
 Residential Development
 1582 Forest Avenue, Portland, Maine 04103
 Parcel: 299, D1011001

To Whom It May Concern:

Alexander P Coupe, President of Acre Properties, authorizes Gorrill-Palmer to execute development permit applications on behalf of Acre Properties for the referenced project.

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

Very truly yours,

Alexander Coupe

Alexander P Coupe

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

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

**At the time of application submission, please contact the Department of Public Works regarding E-911
addressing for your project.**

GENERAL APPLICATION DOCUMENTS

☒ Yes	☐ NA	Project Description Cover letter with detailed project description
☒ Yes	☐ NA	Completed Checklist (this document)
☒ Yes	☐ NA	Evidence of Right, Title, and Interest Deeds, leases, or purchase and sales agreements
☐ Yes	☒ NA	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
☒ Yes	☐ NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
☒ Yes	☐ NA	Site Plan Standards Assessment (see Section 14.6 of the land use code) Summary of project compliance with site plan standards of the land use code
☒ Yes	☐ NA	Summary of Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
☐ Yes	☒ NA	Waiver Requests (see Waiver Table) Written request for waiver describing request and compliance with applicable waiver standards
☒ Yes	☐ NA	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
☒ Yes	☐ NA	Technical Capability Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.
Please submit each document as a separate PDF file.

TRANSPORTATION

☒ Yes	☐ NA	Impact on Surrounding Street Systems (14-14.6.1(A)) Describe incremental volume of traffic impacts and mitigation measures. If needed
☒ Yes	☐ NA	Access and Circulation (14-14.6.1(B)) Identify and describe the following: - Site access and internal circulation, including ADA access - Drive-up features, if applicable - Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
☒ Yes	☐ NA	Public Transit (14-14.6.1(C)), if applicable Identify and describe the following: Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
☒ Yes	☐ NA	Off-Street Parking (14-14.6.1(D)), if applicable Identify and describe the following: - Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code - Curb cut separation and parking layout (Technical Manual, Section 1) - Construction details for bicycle racks - Management plan for snow storage and removal
☐ Yes	☒ NA	Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL		
Yes	NA	Preservation of Significant Natural Features (14-14.6.2(A)), if applicable Identify and describe the following: • High and moderate value waterfowl and wading habitat • Aquifers (for Casco Bay Islands) • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes	NA	Landscape Preservation (14-14.6.2(B)) Identify and describe the following: • Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) • Measures to protect existing vegetation during construction
Yes	NA	Site Landscaping and Buffers (14-14.6.2(C)) Identify and describe the following: • Overall landscaping approach and consistency with standards • The use of screening and buffering of service areas and between non-residential and residential uses • Existing Heritage or Feature Trees on site and measures to preserve • Compliance with street tree requirements
Yes	NA	Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D)) Identify and describe the following: • Erosion and sedimentation control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable • Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY		
Yes	NA	Consistency with City Master Plans (14-14.6.3(A)) Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes	NA	Public Safety and Fire Prevention (14-14.6.3(B)) Identify and describe the following: - Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) - Emergency vehicle access - Consistency with public safety standards (Technical Manual, Section 3)
Yes	NA	Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9) Identify and describe the following: - Electrical services, including providing underground services - Existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections
SITE DESIGN		
Yes	NA	Massing, Ventilations and Wind Impact (14-14.6.4(A)) Identify and describe the following: - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable - Bulk, location, or height impacts on adjoining structures
Yes	NA	Shadows (14-14.6.4(B)), if applicable Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes	NA	Snow and Ice Loading (14-14.6.4(C)) Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes	NA	View Corridors (14-14.6.4(D)), if applicable Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes	NA	Historic Resources (14-14.6.4(E)), if applicable Identify and describe the following: - The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district - Compliance with standards for preservation and documentation of archaeological resources

Yes	NA	Exterior Lighting (14-14.6.4(F)) Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	NA	Noise and Vibration (14-14.6.4(G)) Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	NA	Signage and Wayfinding (14-14.6.4(H)), if applicable - Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs - Provide drawings of all commercial and directional signage on site
Yes	NA	Zone-Related Design Standards (14-14.6.4(I)) Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN DRAWINGS CHECKLIST

Please upload the following **DRAWINGS** with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(s) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)

• Location of fire hydrants • Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

ATTACHMENT 2

EVIDENCE OF TITLE, RIGHT, OR INTEREST

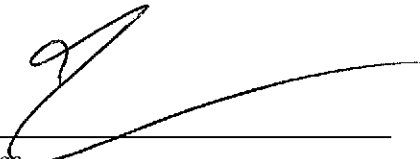
QUITCLAIM DEED

DLN:1002240195733

KNOW ALL PERSONS BY THESE PRESENTS, that, **ALEXANDER COUPE**, of Portland, Maine, for consideration paid, release to **ACRE PROPERTIES**, a Maine Corporation, with a place of business at 1326 Washington Avenue, Portland, ME 04103, the premises in the City of Portland, Cumberland County, Maine, bounded and described as follows:

See Exhibit A attached hereto

IN WITNESS WHEREOF, the said **ALEXANDER COUPE** has caused this instrument to be signed this 31 day of May, 2022.



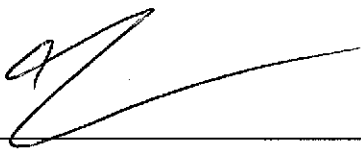
Witness



ALEXANDER COUPE

State of MAINE
County of CUMBERLAND

On May 31, 2022, personally appeared the above-named **ALEXANDER COUPE** and acknowledged the foregoing to be his free act and deed.



Notary Public/Attorney
~~Name~~

Charles H. McLaughlin
Attorney at Law

EXHIBIT A

Description of proposed "Lot B"

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

Beginning on the southwesterly side of Forest Avenue, at a # 5 rebar w/cap stamped "NCS 2080" located at the easterly corner of land now or formerly (N/F) of City of Portland;

THENCE: S 53°57'26" E, along said Forest Avenue, 72.60', to a point;

THENCE: S 42°50'22" W, through land of the Grantor, 167.22', to a proposed #5 rebar w/cap stamped "NCS 2080";

THENCE: S 33°59'26" W, through land of said Grantor, 115.16', to a proposed #5 rebar w/cap stamped "NCS 2080";

THENCE: S 57°55'04" E, through land of said Grantor, 107.22', to a proposed #5 rebar w/cap stamped "NCS 2080" on the northwesterly line of land N/F of Debra J. Fowler, as described in Book 21492, Page 098;

THENCE: S 32°50'39" W, along said Fowler, 26.00', to a point;

THENCE: N 57°55'04" W, along said Fowler, 9.96', to a point;

THENCE: S 31°34'37" W, along said Fowler, 67.73', to a 1" iron pipe;

THENCE: S 58°44'22" E, along said Fowler, 98.59', to a ¾" iron pipe on the northwesterly side of Belfort Street;

THENCE: S 31°15'38" W, along said Belfort Street, 30.00', to the easterly corner of land N/F of Leroy F. Doucette and Catherine H. Doucette; as described in Book 11388, Page 090;

THENCE: N 58°44'22" W, along said Doucette, 98.76', to a point;

THENCE: S 31°34'37" W, along said Doucette, along land N/F of James P. Spizuoco and Roxanne A. Spizuoco, as described in Book 3002, Page 069, along land N/F of Caroline M. Wagner, as described in Book 33277, Page 049, and along land N/F of Milton W. Farrin and Deanna F. Farrin et. al., as described in Book 31362, Page 298, 261.46', to the

easterly corner of land N/F of Robert J. Kutch and Laura J. Kutch, as described in Book 27093, Page 051;

THENCE: N 53°28'58" W, along said Kutch, 130.98', to land of said City of Portland;

THENCE: N 31°29'06" E, along said City of Portland, 659.48', to the POINT of BEGINNING.

The above described parcel contains 66,560 square feet, more or less.

The bearings for the above described parcel are based on Maine Coordinate System of 1983, West Zone, Grid North.

The above described parcel is subject to an easement to 3 Belfort, LLC by Bernard N. Larsen, dated November 11, 2016, recorded in Book 33615, Page 279.

The above described parcel is shown on plan entitled "Boundary Survey & Lot Split, 1582 Forest Avenue, Portland, Maine", by Northeast Civil Solutions, Inc., dated May 17, 2022, NCS Project No. 41969.01.

Being a portion of the premises conveyed to Alexander Coupe by deed of even or recent date herewith to be recorded in the Cumberland County Registry of Deeds.

ATTACHMENT 3
FINANCIAL CAPACITY



November 15, 2024

To whom it may concern,

Androscoggin Bank is engaged in early due diligence related to Alex Coupe's request to finance the construction of an affordable housing residential apartment building in Portland, ME.

While we have yet to begin our formal underwriting and approval process, Alex Coupe is an existing, well-known client of the Bank. All accounts maintained at Androscoggin Bank by Mr. Coupe have been handled satisfactorily and as agreed. Past residential construction projects financed by the Bank for Mr. Coupe have been completed as agreed and within the anticipated timeframe; therefore, we preliminarily have a reasonable level of confidence in the Borrower's capacity to execute upon the subject project.

If you should have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Buonopane', written over a light blue horizontal line.

Matt Buonopane
Vice President, Commercial Banking
Androscoggin Bank
100 Middle Street
West Tower, Suite 303
Portland, ME 04101
Office: 207-518-6327
mbuonopane@androscogginbank.com

Zone Requirements

On November 4, 2024, the City of Portland Council voted unanimously to adopt ReCode, Portland's first comprehensive rewrite of the entire land use code and zoning map in over 50 years. At the time of this application, the new ReCode Land Use Zoning Ordinance and associated Zoning Map are issued as "*Final Draft for Planning Board Review*". Although the Final Land Use Zoning Ordinance and Map has not been published, it is anticipated that no major revisions that affect our project site will be made from the Final Draft referenced for this application. As shown in the snippet below, the project site, approximately outlined in black, is split between two zones, RN-5 (orange) and B-1 (pink).



Residential Neighborhood 5 (RN-5) Zone:

Multi-family dwellings are a permitted use in the RN-5 zone in accordance with *Chapter 6 – Use Standards*. No dwelling structures are proposed within the B-1 portion of the property, therefore the RN-5 dimensional and performance standards will mostly apply.

6.8 Performance Standards

Applicable performance standards for the proposed project are provided in italics below, with responses following.

***6.8.2 Discharges:** No discharge shall be permitted at any point into any private sewage disposal system, or stream, or into the ground, of any materials in such a way or of such nature or temperature as to contaminate any water supply, or otherwise cause the emission of dangerous or objectionable elements, except in accordance with standards approved by the Public Health Authority or by the Public Works Authority. No discharge into harbor water areas shall be permitted, unless permitted by the Maine Department of Environmental Protection under a waste discharge license and as approved by the Department of Public Works in accordance with Chapter 24 of the City of Portland Code of Ordinances. All private sewage disposal or private wastewater treatment facilities shall comply with the provisions of Chapter 24.*

No discharge will be permitted into the ground as part of this project. It is intended that the site will be served by public sewer.

6.8.4 Exterior lighting: *All exterior lighting shall be designed and installed with full cut-off fixtures to direct illumination onto the site and to prevent illumination from such fixtures on neighboring properties in accordance with the City of Portland Technical Manual.*

Exterior lighting information provided by Swaney Lighting Associates, Inc., in accordance with the City's of Portland's Ordinance and Technical Manual, is included in Attachment 10.

6.8.6 Noise:

- A. No use shall be operated so as to generate recurring noises that are unreasonably loud, cause injury, or create a nuisance to any person of ordinary sensitivities.*
- B. The maximum permissible sound level of any continuous, regular, or frequent source of sound produced by an activity shall be as shown in Table 6-H.*

Based on MaineDEP regulations, the proposed project is a "development producing a minor noise impact" and does not require a full noise study. Given the nature of the proposed development, the project is not anticipated to generate a significant amount of noise. During the construction phase, noises may exceed the maximum permissible sound levels set forth by the City of Portland, as allowed per Section F. Exemptions. The project will be required to meet the applicable local requirements for noise after construction.

6.8.7 Odor: *It shall be a violation of this article to create an odor nuisance. An odor nuisance shall be considered to exist when 10 confirmed complaints relating to odors of such intensity and character as to be detrimental to the public health and welfare occur in an area within two separate 24-hour periods. The 10 confirmed complaints must originate from 10 different households in a residential zone, or from 10 different individuals in a commercial or industrial zone.*

It is not anticipated that the proposed development will create any unpleasant odors warranting a complaint.

6.8.12 Waste disposal:

- A. All solid waste disposal, including materials which might cause fumes or dust, or constitute a fire hazard if stored outdoors, shall be only in fully enclosed, covered containers or receptacles. In all nonresidential zones except for the industrial zones, such containers or receptacles shall be within designated, screened areas.*
- B. Containers or receptacles shall not leak or otherwise permit liquids or solids to escape from the container or be transferred beyond lot boundaries by natural causes or forces. Areas attracting large numbers of insects or vermin are prohibited.*

The applicant has retained White Rock Sanitation (Gorham, ME) to collect solid waste from the site during the construction phase (see Attachment 8 for proof of ability to serve). White Rock Sanitation will also provide trash and recycling services for the residential development post construction. A dumpster enclosure is proposed on-site as shown in the attached plan set.

7.3 Dimensional Standards

The following table outlines the Dimensional Standards for the site within the RN-5 zone, as well as applicable portions of the B-1 zone.

Dimensional Standards For RN-5		
	Required	Provided
Minimum Lot Area	1200 S.F./UNIT MIN. 40,000 S.F.	1,331 SF/Unit
Minimum Street Frontage	50 FT	72 FT
Maximum Lot Coverage	60%	23%
Minimum Landscaped Open Space Ratio	30%	43%
Building Setbacks*		
Front (Minimum)	25 FT	312 FT
Rear (Minimum)	25 FT	36 FT
Side (Minimum)	16 FT	16.5 FT
*Building mounted mechanical equipment may encroach into a required setback to an RN zone by no more than 50% of the width of such required setback.		
*Parking spaces may be located within a required interior side or rear setback.		
Maximum Structure Height	55 FT	47 FT
Maximum Building Length	180 FT	140 FT
Dimensional Standards For B-1		
	Required	Provided
Minimum Street Frontage	20 FT	72 FT

Based on our review of the Performance and Dimensional Standards, it is the projects intent to satisfy all applicable code provisions.

Site Plan Application Submission Requirements

In accordance with Section 13-6 – Site Plan Review Standards of the City of Portland Land Use and Development Code, the following information is provided.

13.6.1 Transportation standards

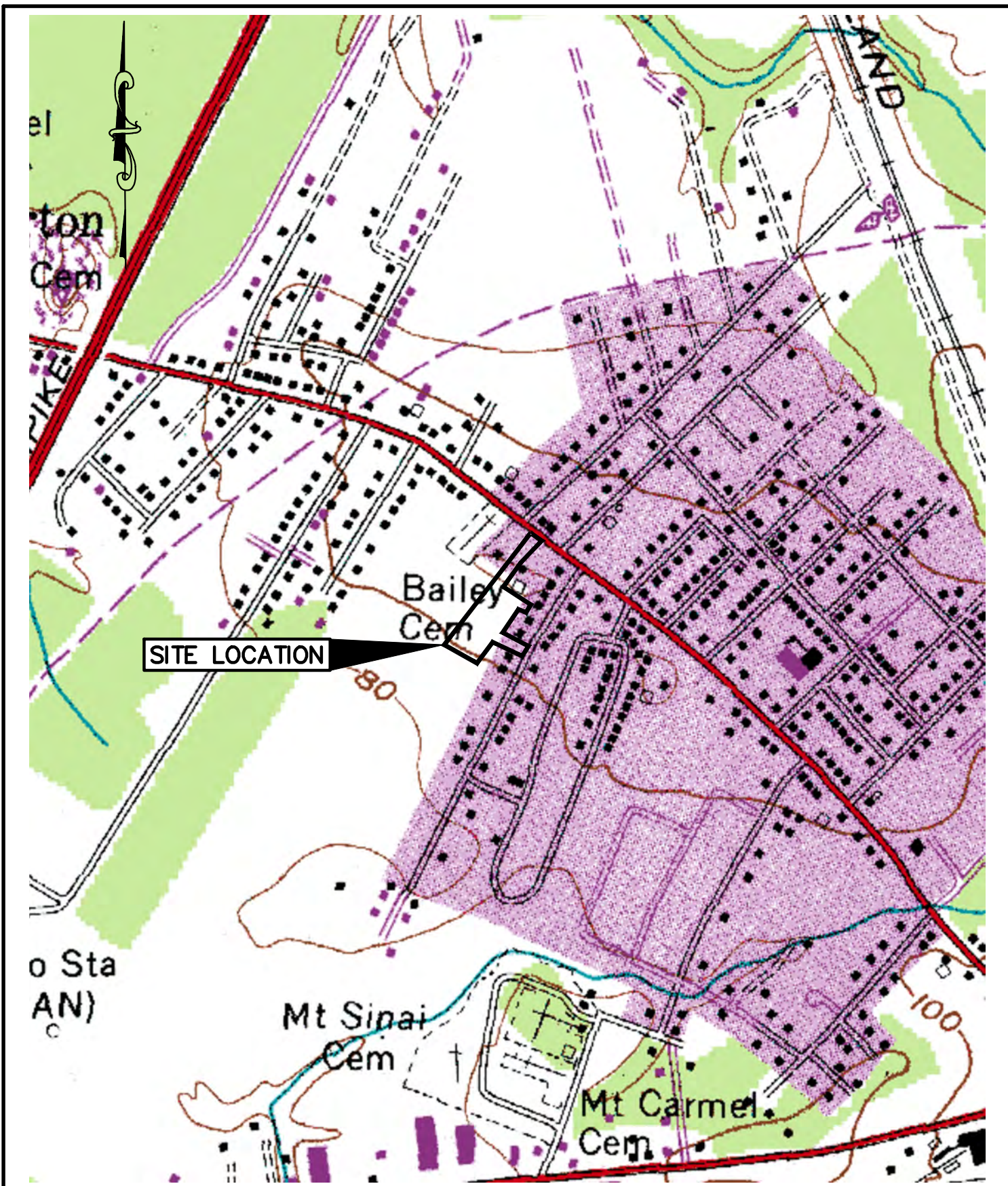
A. Impact on surrounding street systems:

The provisions for vehicular loading and unloading, parking, and vehicular and pedestrian circulation on the site and onto adjacent public streets and ways and the incremental volume of vehicular, bicycle, pedestrian, and transit traffic will not:

1. *Create or aggravate any significant hazard to safety on the surrounding street network.*

Given the residential nature of the development, loading and unloading is expected to be minimal. One off-street parking space per unit, two of which are ADA accessible, have been provided in efforts to reduce congestion on Belfort Street and the surrounding area. For internal pedestrian circulation, a walkway is

ATTACHMENT 4
PROJECT SITE FIGURES



U.S.G.S. Location Map
 Residential Development - Portland, Maine
 Portland-West, Maine-7.5 Minute Series (Topographic)

Design: EJC	Date: NOV 2024
Draft: EJC	Job No.: 4292
Checked: KN	Scale: None
File Name: 4292-LOCATION.dwg	



Relationships. Responsiveness. Results.
www.gorrillpalmer.com
 207.772.2515

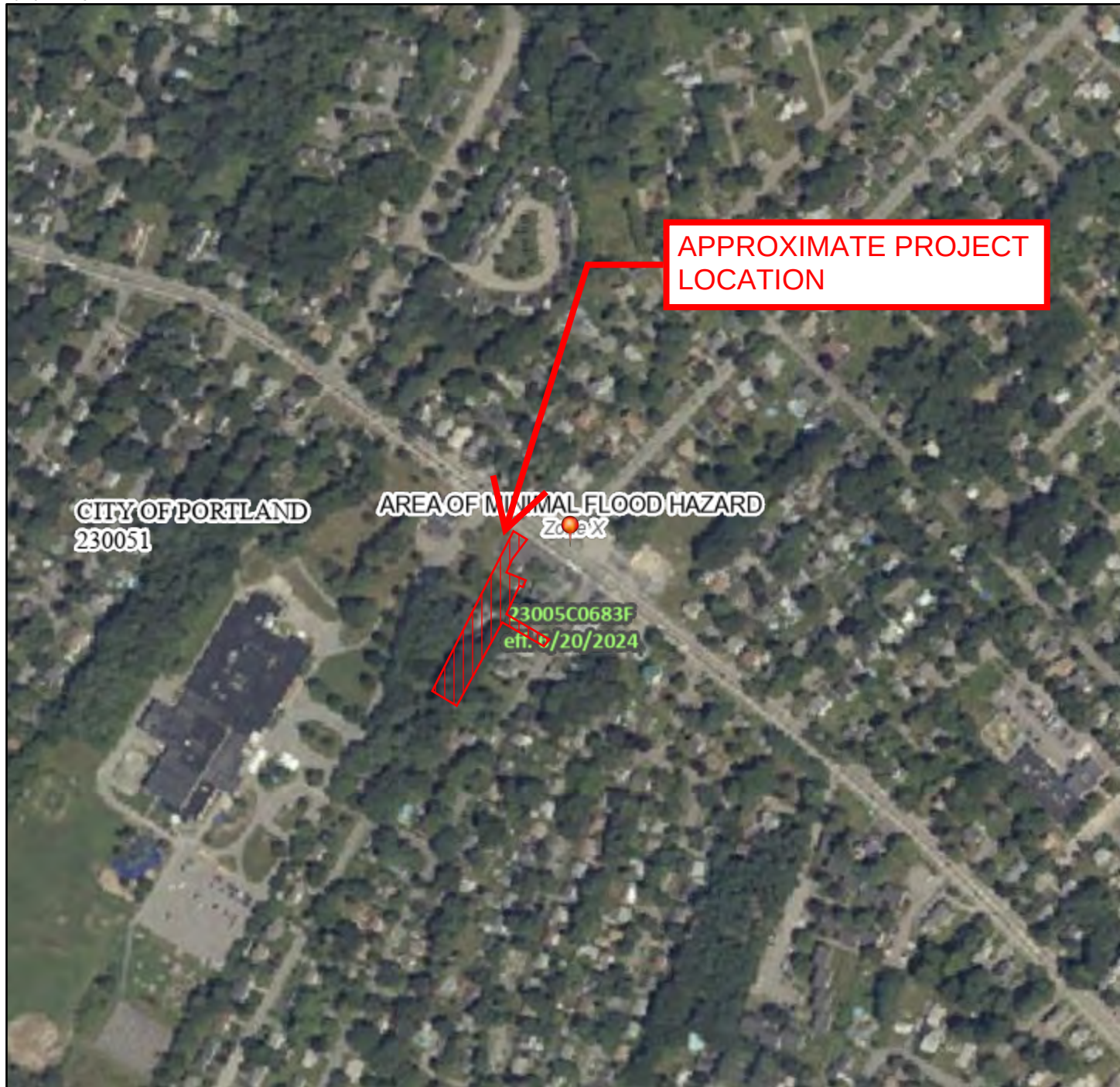
Figure

1

National Flood Hazard Layer FIRMMette



70°18'42"W 43°42'2"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/25/2024 at 2:24 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet

1:6,000

70°18'5"W 43°41'35"N



November 25, 2024

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Maine Ecological Services Field Office

P. O. Box A

East Orland, ME 04431

Phone: (207) 469-7300 Fax: (207) 902-1588



In Reply Refer To:

11/25/2024 15:21:00 UTC

Project Code: 2025-0023804

Project Name: 1582 Forest Avenue - Residential

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office

P. O. Box A

East Orland, ME 04431

(207) 469-7300

PROJECT SUMMARY

Project Code: 2025-0023804

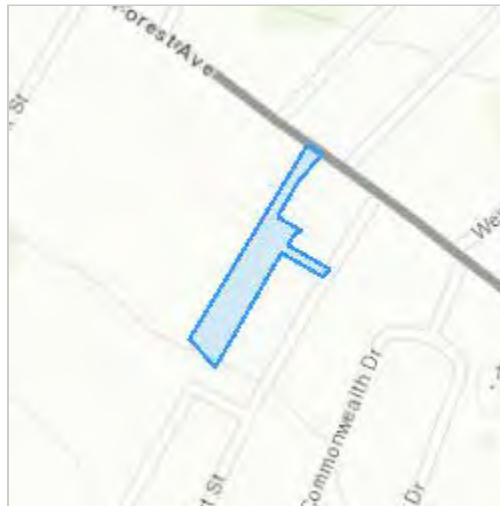
Project Name: 1582 Forest Avenue - Residential

Project Type: Residential Construction

Project Description: The project will consist of constructing two, three-story, multi-family dwellings, each with a building footprint of approximately 7,560 square feet with associated parking, sidewalk, and utility infrastructure.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.6960889,-70.30770959864248,14z>



Counties: Cumberland County, Maine

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

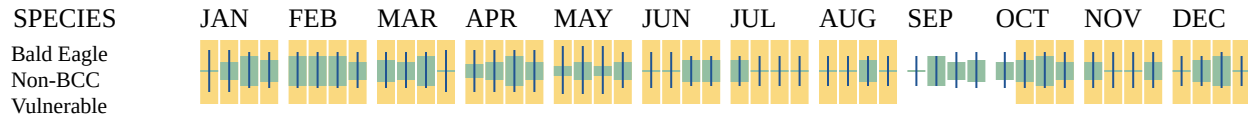
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

-
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)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Oystercatcher <i>Haematopus palliatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Blue-winged Warbler <i>Vermivora cyanoptera</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9509	Breeds May 1 to Jun 30
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643	Breeds May 20 to Aug 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	Breeds elsewhere
Kentucky Warbler <i>Geothlypis formosa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20

NAME	BREEDING SEASON
Least Tern <i>Sternula antillarum antillarum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11919	Breeds Apr 25 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler <i>Setophaga discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Purple Sandpiper <i>Calidris maritima</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9574	Breeds elsewhere
Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10633	Breeds elsewhere
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Saltmarsh Sparrow <i>Ammodramus caudacuta</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9719	Breeds May 15 to Sep 5
Scarlet Tanager <i>Piranga olivacea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11967	Breeds May 10 to Aug 10
Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere

NAME	BREEDING SEASON
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Whimbrel <i>Numenius phaeopus hudsonicus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11991	Breeds elsewhere
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

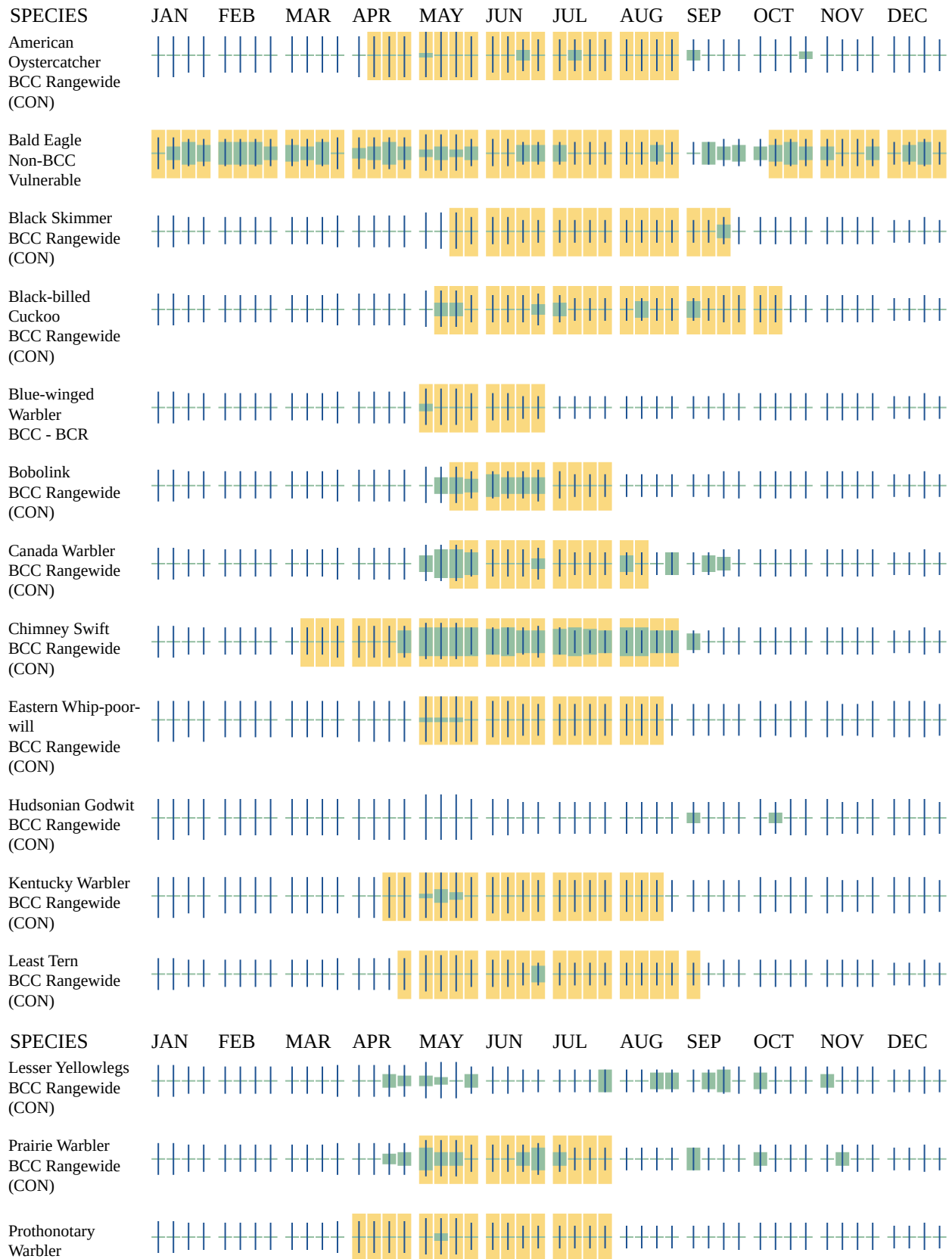
Survey Effort (|)

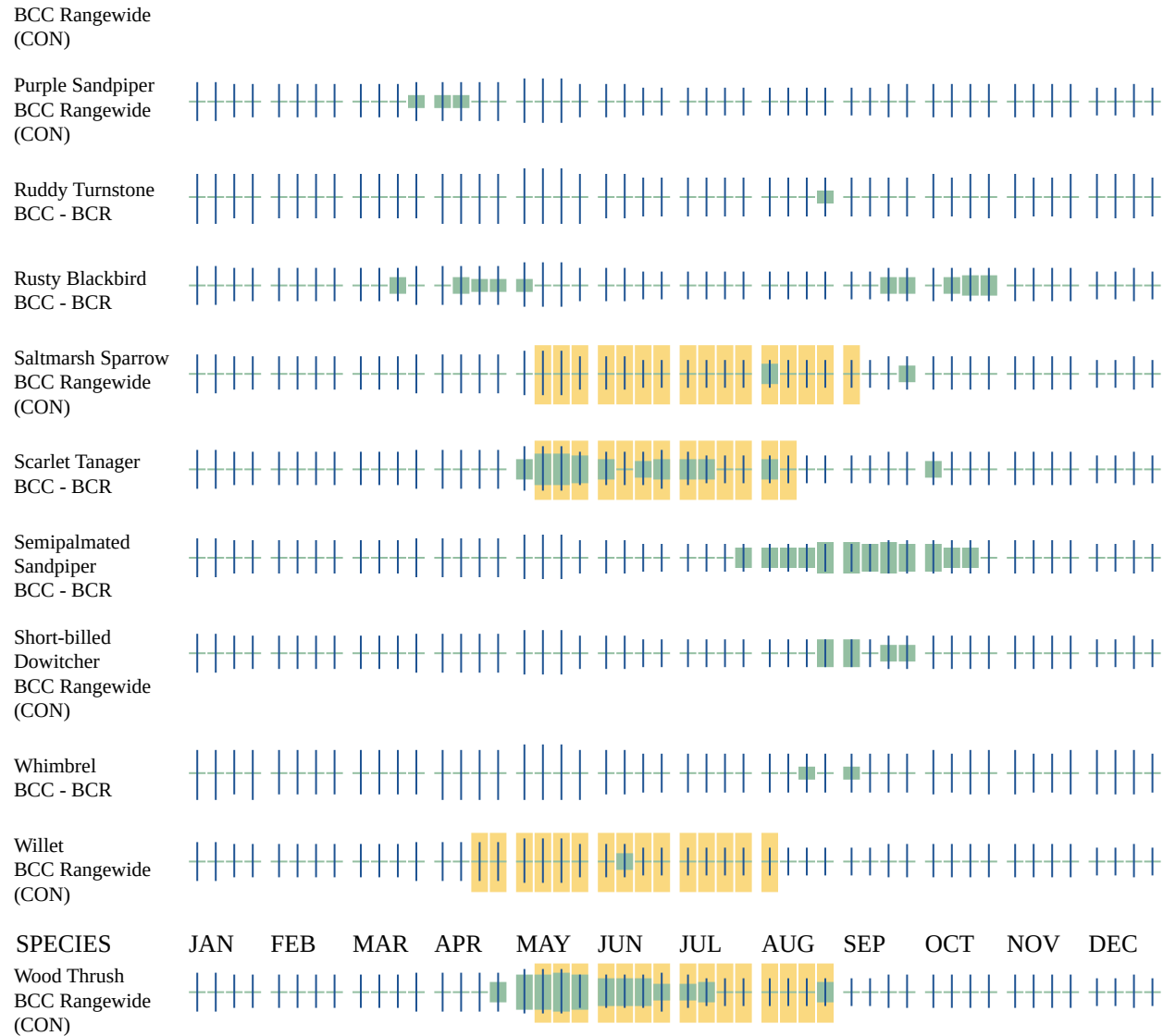
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Ethan Chadwick
Address: 300 Southborough Drive
City: South Portland
State: ME
Zip: 04116
Email: echadwick@gorrillpalmer.com
Phone: 2075955195

ATTACHMENT 8
UTILITY CORRESPONDENCE



December 9, 2024

Kassey Northrop
Gorill Palmer
300 Southborough Drive, Suite 200
South Portland, ME 04106

Re: 1584 Forest Avenue, PO
Ability to Serve with PWD Water

Dear Ms. Northrop:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on November 20, 2024. Based on the information provided per plans dated December 9, 2024, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service may be installed from the water main in Belfort Street to serve the proposed development. The service shall enter the property along its frontage on Beforst Street, no closer than 10' to any side property line.
- The existing 2-inch domestic water service in Belfort Street may be used to provide domestic service to the site. A 1-inch meter will be required. Because the length of this service line will exceed 300-feet, a meter pit will be required. The meter pit shall be located on private property within 10-20 feet of the property line at Belfort Street unless otherwise approved by PWD.
- An approved backflow prevention device (non-testable dual check on domestic service line and testable double check on fire service line) must be installed on each service line directly after the meter and before the sprinkler riser prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.
- The Portland Water District acknowledges all occupants of a multi-unit building as customers of the District. As such, all tenants of the building must be able to access the water meter. The method of access to the meter by the tenants is at the discretion of the owner of the building, provided that the tenants can freely access the meter in accordance with the Portland Water District Terms & Conditions.

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.

Existing Site Service

According to District records, the project site does currently have existing water service. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter ductile iron water main in Belfort Street and a public fire hydrant located approximately 350 feet from the site. The estimated static pressure in the area is 73 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

Kassey A. Northrop

From: White Rock Sanitation Sales <sales@whiterocksanitation.com>
Sent: Thursday, November 14, 2024 5:48 PM
To: Kassey A. Northrop
Cc: Alex Coupe
Subject: RE: 1582 Forest Ave - EV

Good evening,

I have looked over the proposal and White Rock Sanitation can indeed help support this effort. Depending on how quickly the project moves for the construction debris, we would probably use another vendor we work closely with to take care of that. I will take care of getting that locked down when the time comes. The monthly trash and recycling service won't be a problem. As Alex knows, we can get containers on site quickly when the time comes.

Per the letter, an email response was sufficient. If you need more information or have any other questions, please reach out.

Nice to meet you!

Have a great night

Thank you

*Nathan Mclean
Owner
White Rock Sanitation
PO Box 668
Gorham ME, 04038
207-303-4683*



----- On Thu, 14 Nov 2024 15:02:15 -0500 **Kassey A. Northrop <KNorthrop@gorrillpalmer.com>** wrote ---

Hi Nate,

As a formal request for your ability to serve, please see the attached letter. I look forward to your response.

Thank you,

Kassey Northrop | Civil Engineering Technician

ATTACHMENT 7
REVISED STORMWATER REPORT

STORMWATER MANAGEMENT REPORT

RESIDENTIAL DEVELOPMENT

1582 FOREST AVENUE

PORTLAND, MAINE

Prepared for

**ACRE PROPERTIES
27 CYPRESS STREET
PORTLAND, ME 04103**

Prepared by

**Gorrill Palmer
300 Southborough Drive – Suite 200
South Portland, Maine 04106
207.772.2515**

February 2024



Stormwater Management Report

Table of Contents

12.1	Overview	3
12.2	Development Description	3
12.3	Surface Water	4
12.4	General Topography	4
12.5	Flooding	4
12.6	Natural Drainage Ways	4
12.7	Alterations to Land Cover	4
12.8	Stormwater Management Control	4
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Figure

1. Soil Map

Attachments

- A. Watershed Maps (Pre, Post, Water Quality)
- B. TR-20 Calculations

Stormwater Management Report – 1582 Forest Avenue

12.1 Overview

ACRE Properties has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential development located at 1582 Forest Avenue in Portland, ME. Currently, Acre Properties is seeking a Building/Land Use Permit from the City of Portland, and a Stormwater Law Permit under the City's Delegated Review.

The proposed development is required to meet the requirements of the City of Portland Stormwater Management Plans for New Development. The proposed project is subject to a Major Site Plan Application with the City of Portland, which requires the development to meet Maine DEP Chapter 500 Stormwater Management Rules, including General, Flooding, Urban Impaired Streams standards.

Runoff from the site is tributary to Capisic Brook which is listed as an Urban Impaired Stream. Therefore, the proposed development is required to comply with the Urban Impaired Stream Standard pursuant to Maine DEP Chapter 500 Stormwater Management Rules.

12.2 Development Description

This narrative contains the stormwater management report for the construction of the project. The plans prepared by GP include the infrastructure necessary to serve the project.

Gorrill Palmer (GP) has been retained by ACRE Properties to prepare a Stormwater Management Report for the proposed residential development of two, three-story, multi-unit dwellings, each with a building footprint of approximately 7,672 square feet, associated parking areas, an access drive via Belfort Street, landscaping and stormwater treatment facilities. Based on the Lot Split and Topographic Survey and prepared by Northeast Civil Solutions, dated July 5, 2022, the project site is 66,560 S.F. +/- The City of Portland identifies the property on the Maine Parcel Viewer as Parcel 299, Lot D1011001.

In total, the proposed buildings, parking lots, and associated infrastructure will create approximately 34,177 square feet (0.78 acres) of new impervious area and 46,406 square feet (1.07 acres) of new developed area onsite. Abutting land uses include:

- North –Residential Homes and Forest Avenue
- West – Gerald E. Talbot Community School (Developed)
- South – Residential Homes and Empire Way
- East – Residential Homes and Belfort Street

Preliminary review of available data published by the State of Maine suggests that no significant habitats or protected natural resources lie within the area proposed for development. According to the National Wetland Inventory database it appears no wetlands are present on the proposed parcel.

Under the General Standard, the project is required to meet the BMP standards identified in Chapter 500 and described in Volume III of the Stormwater BMP manual. The design of this development will include a stormwater treatment system in the form of a subsurface sand filter and three drip strip systems. These

practices are described in depth under Section 12.9 Approach and Analysis for Water Quality.

The MaineDEP Basic Standard will be met as presented in the Erosion and Sedimentation Control report for this project.

12.3 Surface Water

The surface hydrology within the site conveys runoff to three Points of Interest (POIs) as shown on the Watershed Maps (see Attachment A). POI 1 is located downstream of the site to the south. POI 2 is located at the most northern part of the site and is tributary to the closed drainage system on Forest Avenue. POI 3 is a closed drainage system on Belfort Street.

No streams have been identified on or directly adjacent to the site and the site is not affected by buffers/setbacks from natural resources.

12.4 General Topography

The topography and terrain for the planned development area varies in elevation from approximately 99 to 121 feet. Most of the existing sites contain slopes ranging from approximately 2% to 10%.

12.5 Flooding

The site is not located within a mapped FEMA 100-year floodplain.

12.6 Natural Drainage Ways

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

12.7 Alterations to Land Cover

Based on field reconnaissance, the existing site is currently undeveloped with the central portion of the site appearing to be previously cleared and compacted by vehicles. Changes in land cover will include the conversion of wooded and exposed dirt areas to two residential buildings with paved parking, access drives, and landscaping surrounding the building.

12.8 Stormwater Management Control

The proposed development is required to meet the requirements of the City of Portland stormwater management requirements. Since the proposed project is subject to a Major Site Plan Application the development shall submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including the Basic, General, Flooding, Urban Impaired Stream standards. The proposed development is required to detain runoff such that the rate of flow does not exceed pre-development rates for the 2, 10, 25-year 24-hour storm to meet the requirements of MDEP. The development is anticipated to result in approximately 0.78 acres of new impervious area on-site. The Basic Standard is presented in the Erosion Control Report included in this application package. The General Standard and Flooding Standard are presented as follows.

The development will be required to meet the MDEP's water quality and quantity standards. To meet the water quality standard, the project will utilize a subsurface sand filter and three drip strip systems. The facilities will be utilized to control the post development runoff for the 2, 10, and 25-year storm events where applicable.

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

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

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

12.9 Approach and Analysis for Water Quality

The following narrative discusses the Basic Standard and General Standard of the MaineDEP Stormwater Law. The proposed development will be required to meet the Basic Standard, and BMP Standard under the General Standard. Additionally, the project is required to meet the urban impaired stream standard by which the Applicant proposes the payment of a compensation fee. Information on meeting the urban impaired stream standard can be found in Section 12.9.3 of this report. The project is not required to meet the Phosphorous Standard as the development site is not tributary to a lake watershed. Based upon review of the five recommended and approved methods for mitigating the increased frequency and duration of channel erosive flows, as required by the BMP Standards, the applicant is proposing to construct a subsurface sand filter and three drip strip systems.

The proposed development will treat no less than 95% of the impervious area and no less than 80% of the developed area in accordance with the MaineDEP Chapter 500 Section 4.C.2(a). Water quality calculations for this portion of the site are presented in Section 12.9.2 below.

12.9.1 New Developed Required Treatment

The proposed overall development will treat no less than 95% of the impervious threshold area and no less than 80% of the developed threshold area in accordance with the MDEP Chapter 500 Section 4.C.2(a). Table 1 below outlines the required treatments for this area.

TABLE 1 – PROPOSED DEVELOPMENT TREATMENT SUMMARY			
Type	Total Area (sf)	Treatment Threshold	Area Required to be Treated (sf)
Impervious	34,177	95%	32,469
Developed	46,406	80%	37,125

12.9.2 Stormwater Quality Treatment

The following section summarizes the subsurface sand filters and drip strip systems that serve as the Stormwater BMP's being utilized for the proposed development.

Subsurface Sand Filter

Subsurface Sand Filters are defined in Volume III, Chapter 7.3 of the Stormwater Management Best Management Practices Manual published by the Maine Department of Environmental Protection. The subsurface sand filter has been sized to provide the treatment of the water quality volume of at least 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area. The surface area of the filter is required to be at least 5% of the subcatchment's impervious area, plus 2% of the subcatchment's landscaped area.

The sand filter consists of 75 Stormtech SC-310 Chambers and surrounding aggregate over an 18" thick sand filter and a 12" thick underdrained drainage layer (see sheet C301 for details). An additional 50 Stormtech SC-310 Chambers without a filter layer have been incorporated into the designs to provide additional channel protection storage to meet flooding control standards.

Runoff from Subcatchment 1A will be directed into catch basins throughout the driveway and parking areas and conveyed via a stormdrain network into the pre-treatment chambers. Offsite developed areas on the abutting properties tributary to the subsurface sand filter are not required to be treated and are not included as "treated area" in these calculations. Runoff from these areas are tributary to the system for detention purposes only.

Initial stormwater flows will enter the pretreatment rows of the system. From there it will flow into the rest of the water quality chambers that are sized for the water quality volume. Stormwater will then flow vertically through a sand filter section before being collected in underdrain pipes that connect to the closed conveyance system that ultimately drains to POI 1. The subsurface sand filter section was designed in accordance with Section 7.3 of the BMP's Technical Design Manual dated May 2016 and the DEP approval letter for the Stormtech Isolator Row dated July 29, 2016. Yearly maintenance of the sand filter will include monitoring the outflow after a rainfall event to ensure the outflow time is within the required parameters.

The smaller storms which generate runoff volume equal to or less than the channel protection volume will be conveyed through the pre-treatment row, sand filter, and underdrain system. A valve will be installed on the underdrain pipe which can be field adjusted to ensure that the water quality volume drains within 24-48 hours. Larger storms will be conveyed through the pre-treatment row and through the outlet control structures. Runoff greater than the water quality volume will be conveyed over a weir or 12" pipe, set at the water quality elevation, which conveys runoff to the channel protection chambers. The chambers and stone provide storage for the 2-, 10-, and 25-year storms assuming a 40% void ratio for the stone. The following table presents the sand filter sizing and design calculations:

TABLE 2 – SUBSURFACE SAND FILTER SIZING

	Required	Provided
Impervious Area (sq. ft.)		24,667
Vegetated Area (sq. ft.)		3,667
Developed Area (Imp. + Landscaped) (sq. ft.)		28,334
Treatment Volume (cu. ft.)	2,178	2,233
Filter Surface Area (sq. ft.)	1,307	2,084
Pond Outflow (cfs)		0.03
Pond Release Time	24-48 Hours	24 Hours
1-Year Inflow		0.62
Isolator Row Chambers	6	25
WQV Elevation		104.07

Drip Strips

Drip Strip filtration will be utilized for the roof areas of both buildings on site and a portion of the developed area to the north of the buildings. The drip strips have been designed in accordance with Section 7.5 of the BMP's Technical Design Manual dated May 2016. The drip strips have been sized to provide the treatment of the water quality volume of at least 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area. The storage of the water quality volume is provided in the 18" thick reservoir layer of the drip strips, assuming a 40% void ratio for the stone.

Runoff from each subcatchment will be directed to the drip strips via overland flow. The smaller storms which generate runoff volume equal to or less than the channel protection volume will be conveyed through the 12" filter layer, and underdrain system. A valve will be installed on the underdrain pipe which can be field adjusted to ensure that the water quality volume drains within 24-48 hours. Runoff greater than the water quality volume will be conveyed away from the buildings via overland flow, or via an open grate catch basin (Drip Strip #3) to a ditch which ultimately drains to POI 1 (see sheet C302 for details).

Table 3 below shows the sizing calculations for each drip strip.

TABLE 3 – DRIP STRIP SIZING

Drip Strip #1		
	Required	Provided
Impervious Area (sq. ft.)		3,892
Vegetated Area (sq. ft.)		0
Developed Area (Imp. + Landscaped) (sq. ft.)		3,892
Treatment Volume (cu. ft.)	324	420
Pond Outflow (cfs)		0.005
Pond Release Time	24-48 Hours	24 Hours
Drip Strip #2		
	Required	Provided
Impervious Area (sq. ft.)		3,892
Vegetated Area (sq. ft.)		0
Developed Area (Imp. + Landscaped) (sq. ft.)		3,892
Treatment Volume (cu. ft.)	324	420
Pond Outflow (cfs)		0.005
Pond Release Time	24-48 Hours	24 Hours
Drip Strip #3		
	Required	Provided
Impervious Area (sq. ft.)		778
Vegetated Area (sq. ft.)		2,297
Developed Area (Imp. + Landscaped) (sq. ft.)		3,075
Treatment Volume (cu. ft.)	141	201
Pond Outflow (cfs)		0.002
Pond Release Time	24-48 Hours	24 Hours

12.9.3 Conclusion – Water Quality

Table 4 below summarizes the proposed total treatment for the proposed development, which does not include future development.

TABLE 4 – OVERALL TREATMENT FOR DEVELOPMENT		
	IMPERVIOUS	DEVELOPED
		(Impervious + Landscaped)
Area Treated by Drip Strip #1 (sf)	24,667	28,334
Area Treated by Drip Strip #2 (sf)	3,892	4,638
Area Treated by Drip Strip #3 (sf)	3,892	4,638
Area Treated by Subsurface Sand Filter (sf)	778	3,075
Total Area Treated (sf)	33,229	40,685
Area Untreated (sf)	948	5,721
Total Area (sf)	34,177	46,406
Percent Treated	97.3%	87.7%
Percent Required	95%	80%

Table 5 below summarizes the proposed total treatment for the project.

TABLE 5 – TOTAL NEW DEVELOPMENT TREATMENT SUMMARY		
	Required Treatment (sf)	Proposed Treatment (sf)
Impervious	32,469	33,299
Developed	37,125	40,685

The project provides stormwater quality treatment to meet the General Standards for Chapter 500 and will not cause degradation of the receiving waters due to the stormwater runoff from the site.

12.9.4 Urban Impaired Stream

The unnamed stream northwest of the site is categorized as an urban impaired stream and is subject to the Maine DEP Urban Impaired Stream Standards. To meet the urban impaired stream standard, the applicant proposes the payment of a compensation fee to the approved compensation fee utilization plan for the City of Portland. The resulting fee of \$7,875 was calculated based on the overall new impervious and new landscaped areas draining to all POI's. The breakdown of new impervious and developed areas and the resulting fees as outlined in MaineDEP Chapter 501 Section 3.A. (1) are provided in the table below:

TABLE 6 – URBAN IMPAIRED STREAM FEE CALCULATIONS			
Cover Type	Area (acres)	Compensation Rate (per acre)	Fee
Roof	0.36	\$5,000	\$1,800
Paved	0.43	\$12,500	\$5,375
Landscaped	0.28	\$2,500	\$1,075
Total	1.07		\$7,875

12.10 Approach and Analysis for Stormwater Quantity

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

The SCS TR-20 methodology, using the HydroCAD program, was employed by Gorrill Palmer to analyze predevelopment and post-development conditions. A 24-hour, SCS Type III storm distribution for the 2, 10, and 25-year storm frequencies was used. The corresponding rainfall amounts for these storms are 3.1", 4.6", and 5.8" respectively.

The USDA NRCS Medium Intensity Soil Survey identifies the site soils to be comprised of:

Map Symbol	Soil Type	K Value	Hydrologic Soil Group
EmB	Elmwood Fine Sandy Loam	0.32	B
WmB	Windsor Loamy Sand	0.17	A

See Figure 1 'U.S.D.A Medium Intensity Soil Survey – Map K Factor, Whole Soil' on the next page.

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

- Portland West 7.5 Minute Quadrangle Maps prepared by the U.S.G.S.
- Geotechnical Evaluation performed by Summit Geoengineering Services, Inc.
- Ground survey information from Lot Split and Topographic Survey prepared by Northeast Civil Solutions, Inc.
- Aerial photography of the project site, obtained from the Maine Office of GIS.
- Field Reconnaissance



Figure 1

12.10.1 Predevelopment Conditions

The drainage study analyzes the watersheds in the predevelopment condition as depicted on the Predevelopment Watershed Map WS1 in Attachment A.

Subcatchment 1S consists of a large portion of the property and a portion of the abutters properties which ultimately drain towards the site, and to the south beyond the site to POI 1. This area includes wooded and newly graded dirt areas onsite, and developed grassed and impervious areas on the abutters properties.

Subcatchment 2S is located along the northeast side of the lot along Forest Avenue (Route 302) and includes grassed cover, and a small portion of the existing parking lot. This subcatchment is ultimately tributary to POI 2 located along the northern corner of the property.

Subcatchment 3S is located along the southeast boundary of the lot along Belfort Street consists of a small wooded area that ultimately drains to a catch basin located on Belfort Street (POI 3).

Table 7 presents the peak flow rates at the point of interest in the predevelopment condition.

TABLE 7– PREDEVELOPMENT PEAK FLOW RATES (TYPE III 24-HR)			
Point of Interest	Peak Flow (CFS)		
	2 Year	10 Year	25 Year
POI 1	0.15	0.86	1.74
POI 2	0.03	0.18	0.34
POI 3	0.00	0.00	0.00

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

12.10.2 Post development Conditions

Analysis for the post development condition consists of determining post development peak flows and limiting the post development flows to predevelopment levels for the 2, 10, and 25-year storm events. The post development condition has been modeled as five subcatchments tributary to the three POIs as described below.

Subcatchment 1A consists of new roof, driveway/parking areas, and grassed areas associated with the proposed development. In addition, this subcatchment also includes previously developed areas upstream of the site on abutting properties. This subcatchment is tributary to the subsurface sand filter and ultimately POI 1.

Subcatchment 1B consists of a portion of the building roof that is tributary to Drip Strip #1 and ultimately drains to POI 1.

Subcatchment 1C consists of a portion of the building roof that is tributary to Drip Strip #2 and ultimately drains to POI 1.

Subcatchment 1D consists of new walkway area and grassed area associated with the proposed development. In addition, this subcatchment also includes previously developed areas upstream of the site on abutting properties. Runoff from these areas tributary to Drip Strip #3 and ultimately drains to POI 1.

Subcatchment 1E consists of developed and undeveloped vegetated area throughout the lot which is not treated. Runoff from these areas is tributary to POI 1.

Subcatchment 2S is located along the northeast side of the lot along Forest Avenue (Route 302) and includes existing grassed cover, a small portion of the existing parking lot, and a portion of the proposed walkway for access to the site. This subcatchment is ultimately tributary to POI 2 located along the northern corner of the property.

Subcatchment 3S is located along the southeast boundary of the lot along Belfort Street consists of a small portion of the driveway that ultimately drains to a catch basin located on Belfort Street (POI 3).

A watershed map for the post development conditions is attached to this section as drawing number WS2 in Attachment A. Attachment B includes the TR-20 pond calculations.

A comparison of pre and post development flow without detention is presented in the following table.

TABLE 8— PEAK FLOW COMPARISON WITHOUT DETENTION			
Point of Interest	Peak Flow (CFS)		
	2 Year	10 Year	25 Year
POI 1			
Pre	0.15	0.86	1.74
Post	1.23	2.52	3.73
POI 2			
Pre	0.03	0.18	0.34
Post	0.06	0.24	0.42
POI 3			
Pre	0.00	0.00	0.00
Post	0.02	0.04	0.05

As shown in the table above, the peak flow to POI 1 greatly increases, emphasizing the need for peak flow detention. The following table presents a comparison of peak flow with the proposed stormwater management system in the form of a subsurface sand filter, and the three drip strips.

TABLE 10 – PEAK FLOW COMPARISON WITH DETENTION			
Point of Interest	Peak Flow (CFS)		
	2 Year	10 Year	25 Year
POI 1			
Pre	0.15	0.86	1.74
Post	0.08	0.71	1.29
POI 2			
Pre	0.03	0.18	0.34
Post	0.06	0.24	0.42
POI 3			
Pre	0.00	0.00	0.00
Post	0.02	0.04	0.05

12.10.3 Conclusion – Water Quantity

As can be seen from Table 10 above, the peak flows at the abutter properties (POI 1) have been maintained to be at or below predevelopment peak levels. By inspection, the peak flows to POI 2 and POI 3 increase by a less than 0.2 cfs. These flows are tributary to the municipal stormwater system and it is our understanding that the municipal stormwater system has the capacity to accommodate these minor increases in flow. Therefore, the project is not anticipated to have any adverse impact on abutting downstream properties, or the municipal system due to stormwater runoff.

12.11 Construction BMPs

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

12.12 Maintenance of Facilities, Recertification and Housekeeping

See Maintenance of Facilities, Recertification and Housekeeping sections of the Erosion and Sedimentation Control Report included in this application package.

12.13 Conclusion

Gorrill Palmer has been retained by ACRE Properties to prepare plans and permit applications for a proposed residential development on the proposed parcel in Portland, Maine. Based upon the attached calculations, the proposed project meets or exceeds the water quality and water quantity regulations of the City of Portland and Chapter 500 of the MDEP to the greatest extent practicable and will not cause

degradation of the receiving waters from the site or likely have an adverse impact on abutting or downstream properties due to the stormwater runoff.

Therefore, the proposed development meets the requirements of the MaineDEP and the City of Portland.

12.14 Attachments

Attached to this section are the following items

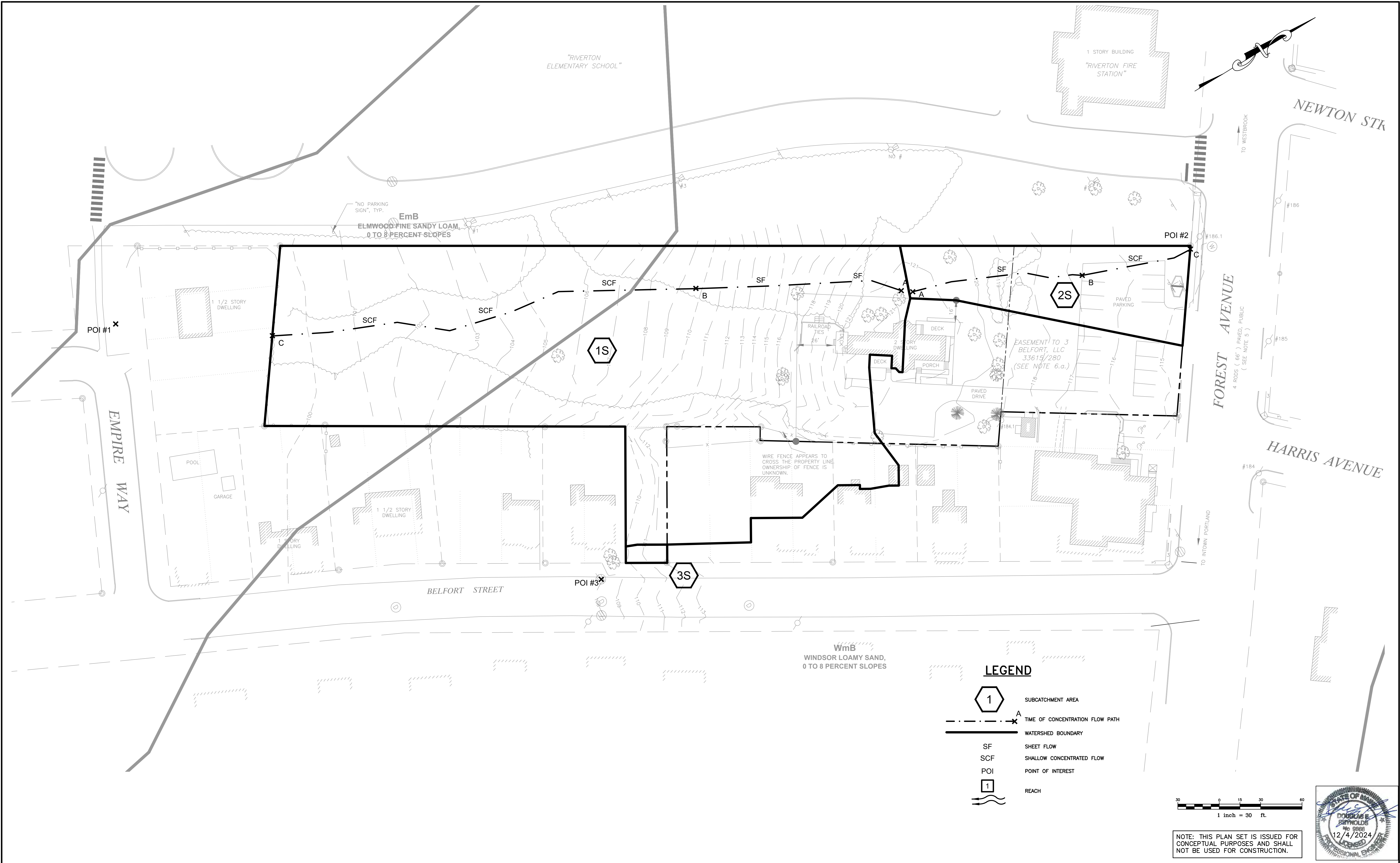
Attachment A – Watershed Maps (Pre, Post, Water Quality)

Attachment B – TR-20 Calculations

ATTACHMENT A

WATERSHED MAPS (PRE, POST, WATER QUALITY)

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Rev.	Date	Revision

LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-WS-PRE.dwg		
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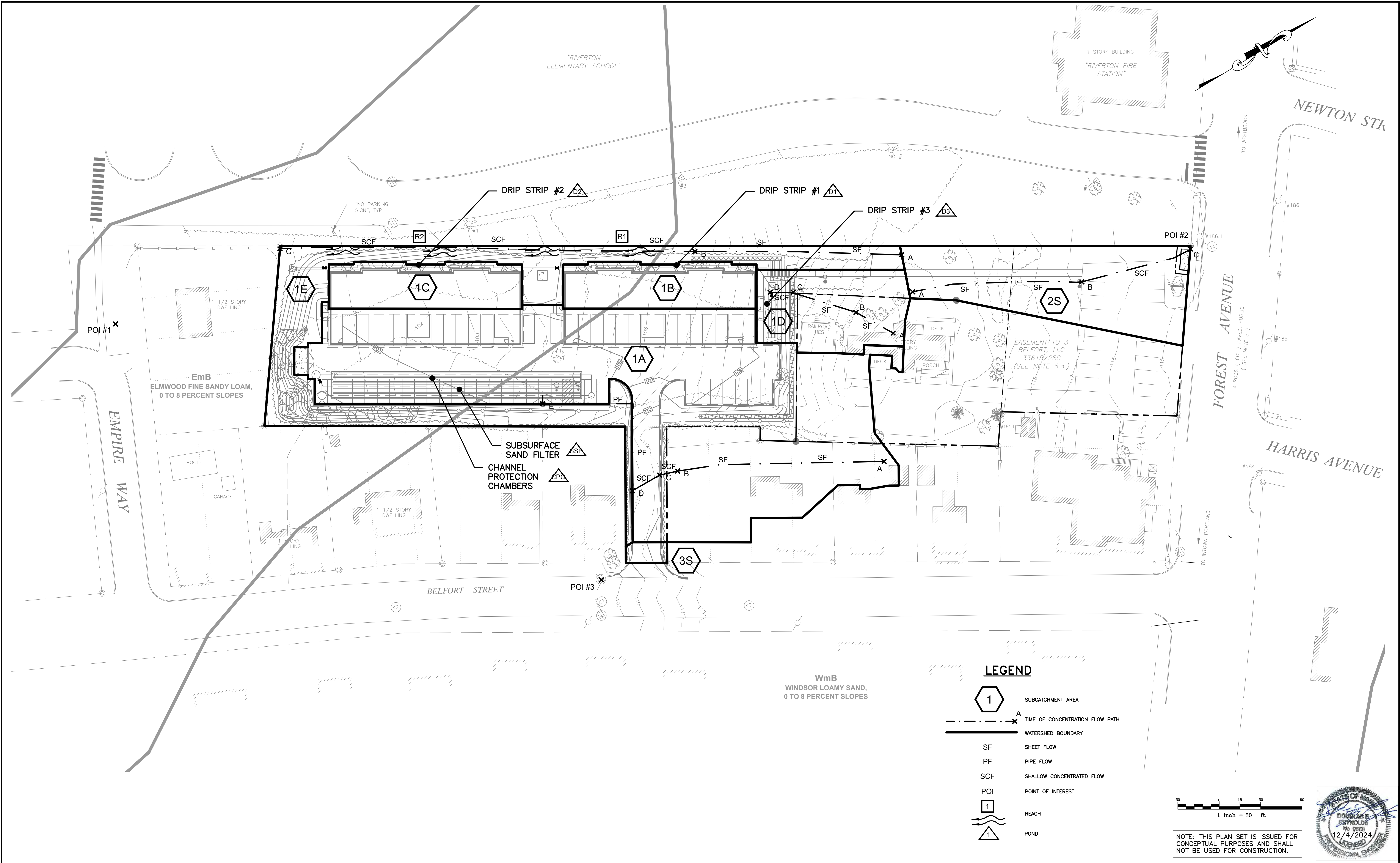


Gorri Palmer, an LJB Engineering Company
GorriPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Pre Development Watershed Map
Project:	1582 Forest Ave Residential Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
WS1

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Rev.	Date	Revision

LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-WS-POST.dwg		
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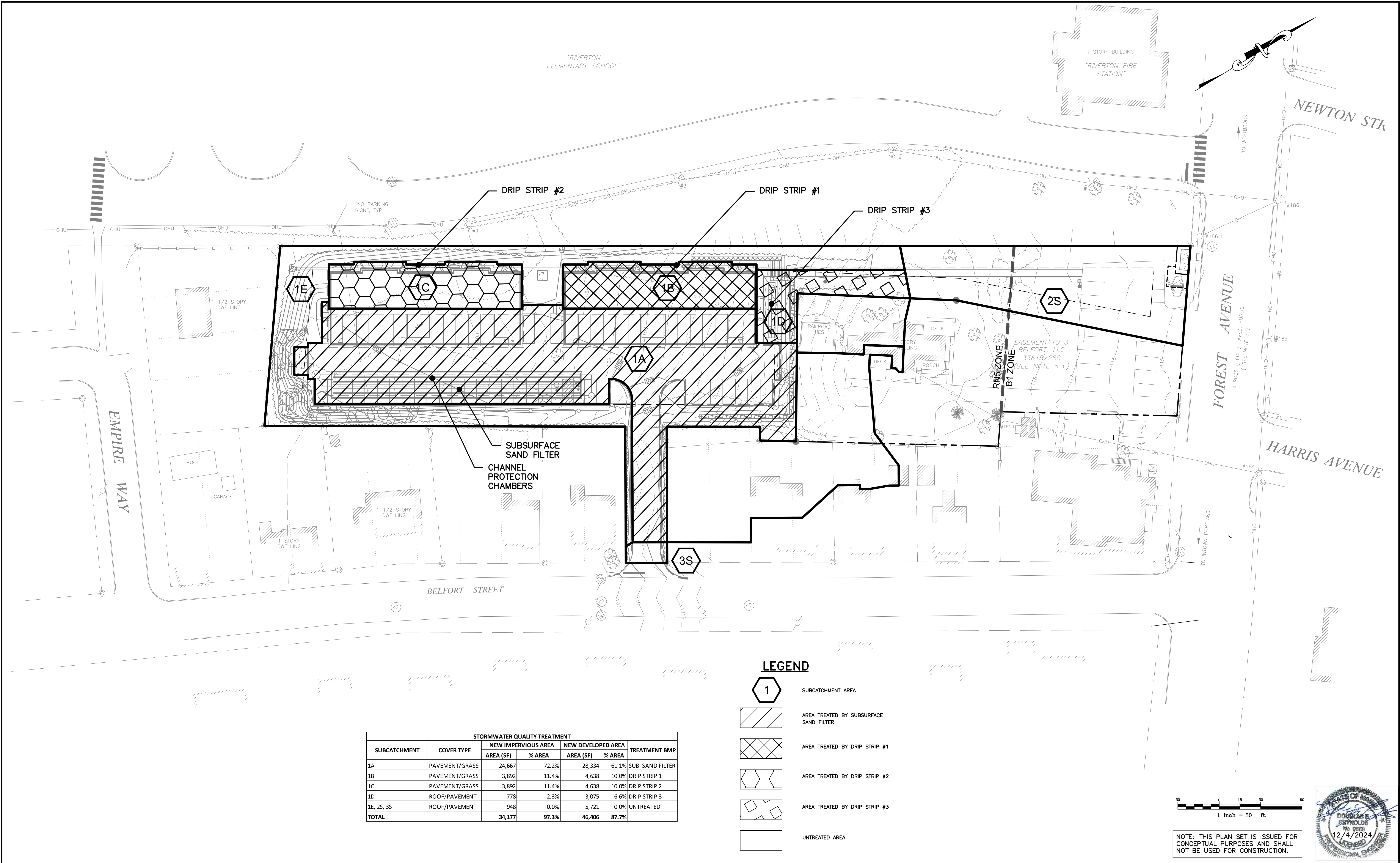


Gorriil Palmer, an LJB Engineering Company
GorriilPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Post Development Watershed Map
Project:	1582 Forest Ave Residential Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
WS2

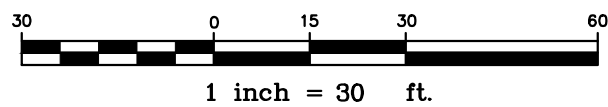
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STORMWATER QUALITY TREATMENT						
SUBCATCHMENT	COVER TYPE	NEW IMPERVIOUS AREA		NEW DEVELOPED AREA		TREATMENT BMP
		AREA (SF)	% AREA	AREA (SF)	% AREA	
1A	PAVEMENT/GRASS	24,667	72.2%	28,334	61.1%	SUB. SAND FILTER
1B	PAVEMENT/GRASS	3,892	11.4%	4,638	10.0%	DRIP STRIP 1
1C	PAVEMENT/GRASS	3,892	11.4%	4,638	10.0%	DRIP STRIP 2
1D	ROOF/PAVEMENT	778	2.3%	3,075	6.6%	DRIP STRIP 3
1E, 2S, 3S	ROOF/PAVEMENT	948	0.0%	5,721	0.0%	UNTREATED
TOTAL		34,177	97.3%	46,406	87.7%	

LEGEND

- 1 SUBCATCHMENT AREA
- AREA TREATED BY SUBSURFACE SAND FILTER
- AREA TREATED BY DRIP STRIP #1
- AREA TREATED BY DRIP STRIP #2
- AREA TREATED BY DRIP STRIP #3
- UNTREATED AREA



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



Rev.	Date	Revision

LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-WQ.dwg		
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South Portland, ME 04106

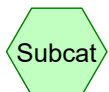
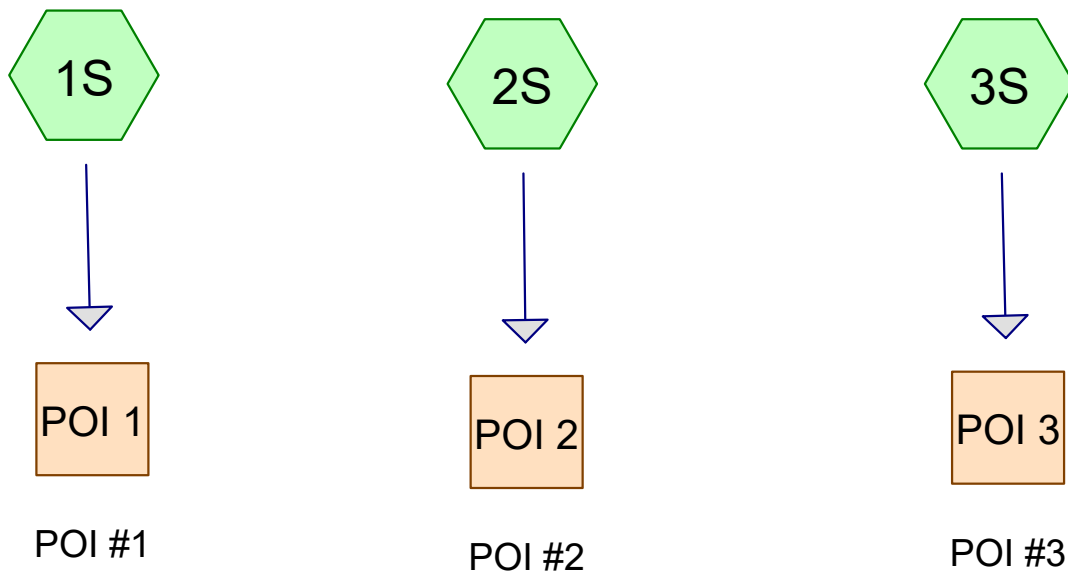
Drawing Name:	Water Quality Map
Project:	1582 Forest Ave Residential Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
WQ

ATTACHMENT B

TR-20 CALCULATIONS

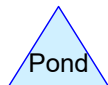
PREDEVELOPMENT



Subcat



Reach



Pond



Link

Routing Diagram for Pre - NEW STORMS

Prepared by LJB, Inc, Printed 2/11/2025

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Pre - NEW STORMS*Type III 24-hr 2-Year Storm Rainfall=3.10"*

Prepared by LJB, Inc

Printed 2/11/2025

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Page 2

Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:

Runoff Area=72,004 sf 3.08% Impervious Runoff Depth=0.25"
Flow Length=465' Tc=19.0 min CN=56 Runoff=0.15 cfs 1,494 cf

Subcatchment2S:

Runoff Area=10,805 sf 33.40% Impervious Runoff Depth=0.31"
Flow Length=205' Tc=13.5 min CN=58 Runoff=0.03 cfs 276 cf

Subcatchment3S:

Runoff Area=390 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0 cf

Reach POI 1: POI #1

Inflow=0.15 cfs 1,494 cf
Outflow=0.15 cfs 1,494 cf

Reach POI 2: POI #2

Inflow=0.03 cfs 276 cf
Outflow=0.03 cfs 276 cf

Reach POI 3: POI #3

Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Total Runoff Area = 83,199 sf Runoff Volume = 1,770 cf Average Runoff Depth = 0.26"
93.00% Pervious = 77,373 sf 7.00% Impervious = 5,826 sf

Pre - NEW STORMS*Type III 24-hr 10-Year Storm Rainfall=4.60"*

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Page 3

Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S:

Runoff Area=72,004 sf 3.08% Impervious Runoff Depth=0.84"
Flow Length=465' Tc=19.0 min CN=56 Runoff=0.86 cfs 5,056 cf

Subcatchment2S:

Runoff Area=10,805 sf 33.40% Impervious Runoff Depth=0.96"
Flow Length=205' Tc=13.5 min CN=58 Runoff=0.18 cfs 861 cf

Subcatchment3S:

Runoff Area=390 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0 cf

Reach POI 1: POI #1

Inflow=0.86 cfs 5,056 cf
Outflow=0.86 cfs 5,056 cf

Reach POI 2: POI #2

Inflow=0.18 cfs 861 cf
Outflow=0.18 cfs 861 cf

Reach POI 3: POI #3

Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Total Runoff Area = 83,199 sf Runoff Volume = 5,916 cf Average Runoff Depth = 0.85"
93.00% Pervious = 77,373 sf 7.00% Impervious = 5,826 sf

Pre - NEW STORMS*Type III 24-hr 25-Year Storm Rainfall=5.80"*

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Page 1

Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 points

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

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

Subcatchment1S:Runoff Area=72,004 sf 3.08% Impervious Runoff Depth=1.48"
Flow Length=465' Tc=19.0 min CN=56 Runoff=1.74 cfs 8,877 cf**Subcatchment2S:**Runoff Area=10,805 sf 33.40% Impervious Runoff Depth=1.63"
Flow Length=205' Tc=13.5 min CN=58 Runoff=0.34 cfs 1,471 cf**Subcatchment3S:**Runoff Area=390 sf 0.00% Impervious Runoff Depth=0.05"
Tc=6.0 min CN=30 Runoff=0.00 cfs 2 cf**Reach POI 1: POI #1**Inflow=1.74 cfs 8,877 cf
Outflow=1.74 cfs 8,877 cf**Reach POI 2: POI #2**Inflow=0.34 cfs 1,471 cf
Outflow=0.34 cfs 1,471 cf**Reach POI 3: POI #3**Inflow=0.00 cfs 2 cf
Outflow=0.00 cfs 2 cf**Total Runoff Area = 83,199 sf Runoff Volume = 10,350 cf Average Runoff Depth = 1.49"**
93.00% Pervious = 77,373 sf 7.00% Impervious = 5,826 sf

Pre - NEW STORMS

Prepared by LJB, Inc

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Type III 24-hr 25-Year Storm Rainfall=5.80"

Printed 2/11/2025

Page 2

Summary for Subcatchment 1S:

Runoff = 1.74 cfs @ 12.30 hrs, Volume= 8,877 cf, Depth= 1.48"
 Routed to Reach POI 1 : POI #1

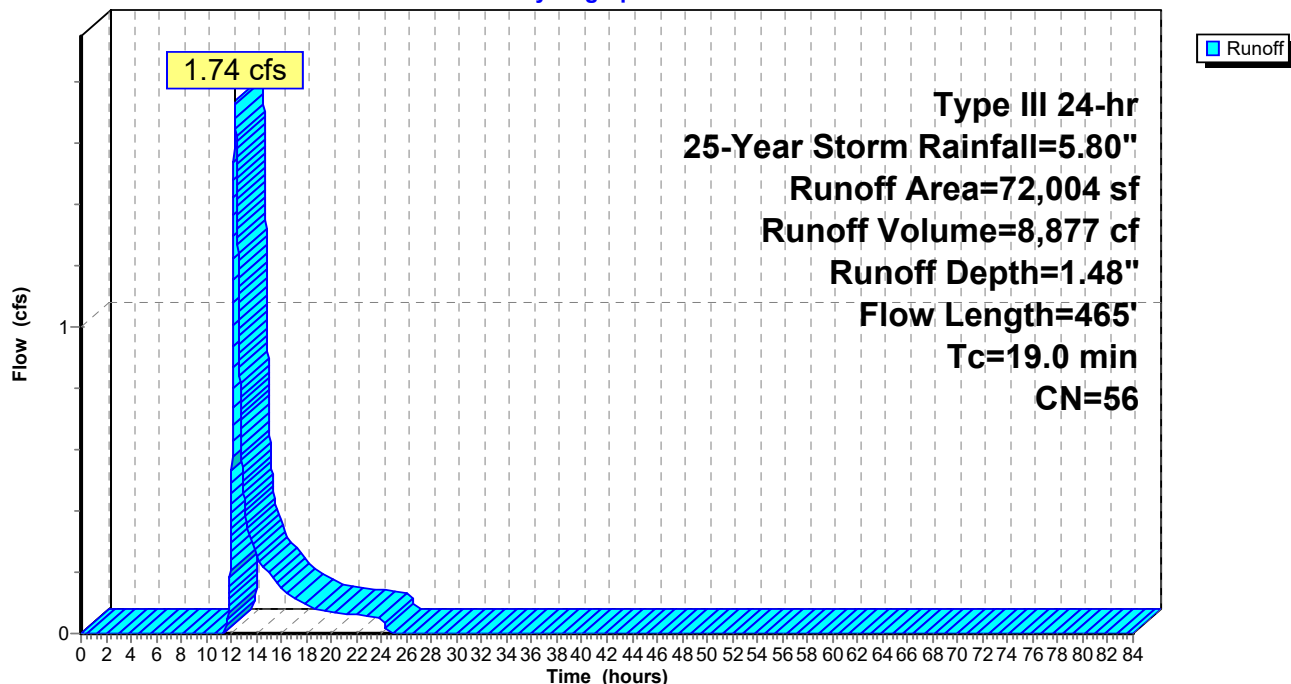
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
2,217	98	Roofs, HSG A
14,269	72	Dirt roads, HSG A
11,678	82	Dirt roads, HSG B
13,382	30	Woods, Good, HSG A
16,036	55	Woods, Good, HSG B
14,422	39	>75% Grass cover, Good, HSG A
72,004	56	Weighted Average
69,787		96.92% Pervious Area
2,217		3.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	150	0.0800	0.14		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"
1.7	315	0.0350	3.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
19.0	465	Total			

Subcatchment 1S:

Hydrograph



Pre - NEW STORMS

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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 2S:

Runoff = 0.34 cfs @ 12.20 hrs, Volume= 1,471 cf, Depth= 1.63"
 Routed to Reach POI 2 : POI #2

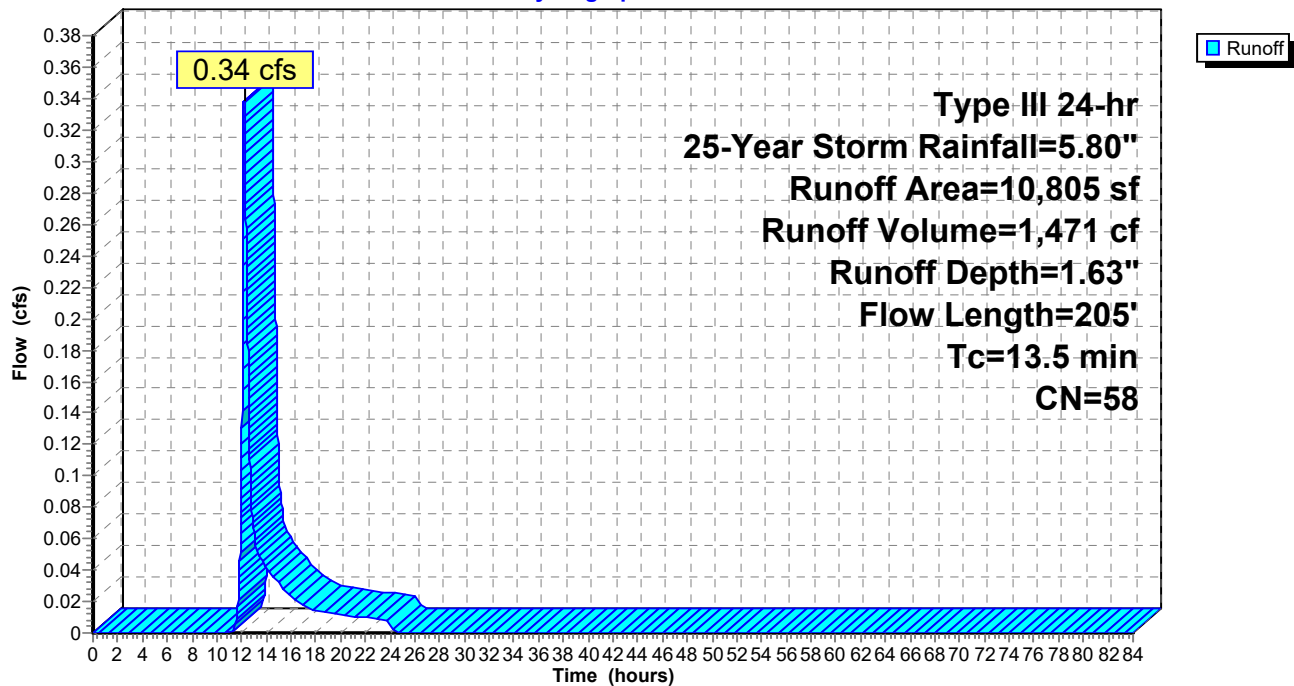
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
6,413	39	>75% Grass cover, Good, HSG A
783	30	Woods, Good, HSG A
3,609	98	Paved parking, HSG A
10,805	58	Weighted Average
7,196		66.60% Pervious Area
3,609		33.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.1	125	0.0400	0.16		Sheet Flow, A-B
					Grass: Dense n= 0.240 P2= 3.10"
0.4	80	0.0250	3.21		Shallow Concentrated Flow, B-C
					Paved Kv= 20.3 fps
13.5	205	Total			

Subcatchment 2S:

Hydrograph



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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 3S:

Runoff = 0.00 cfs @ 16.78 hrs, Volume= 2 cf, Depth= 0.05"
Routed to Reach POI 3 : POI #3

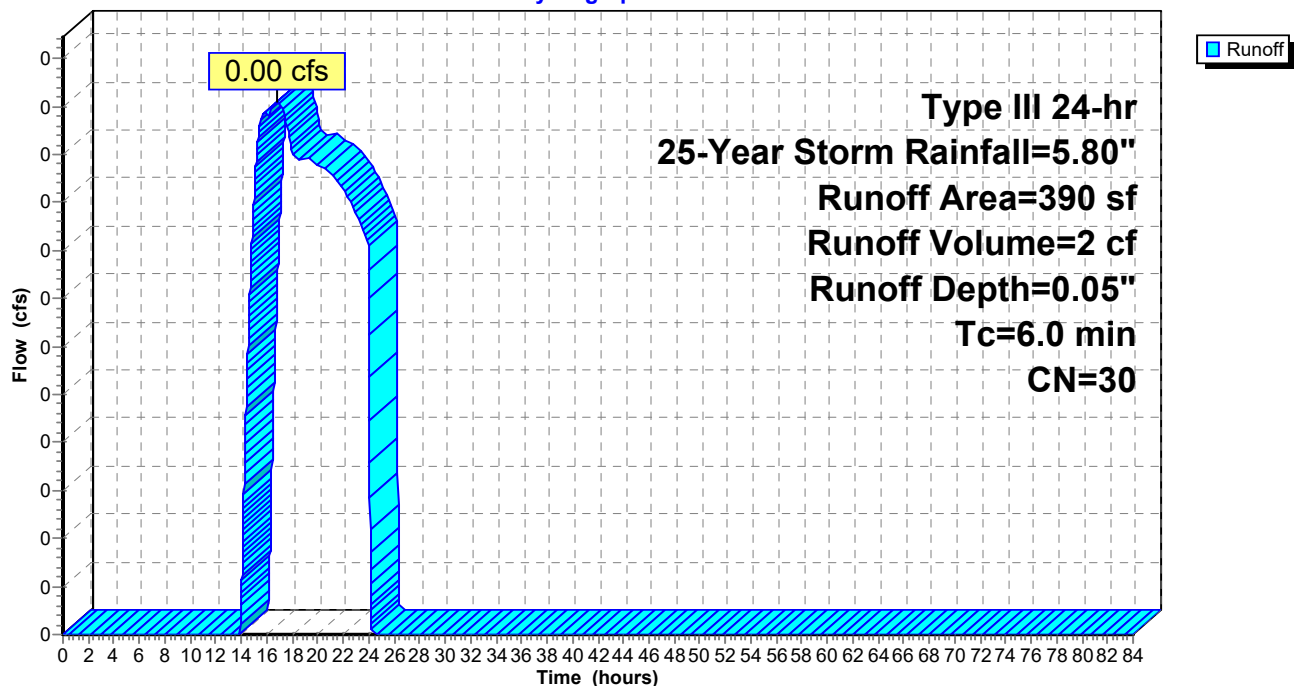
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
390	30	Woods, Good, HSG A
390		100.00% Pervious Area

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

Subcatchment 3S:

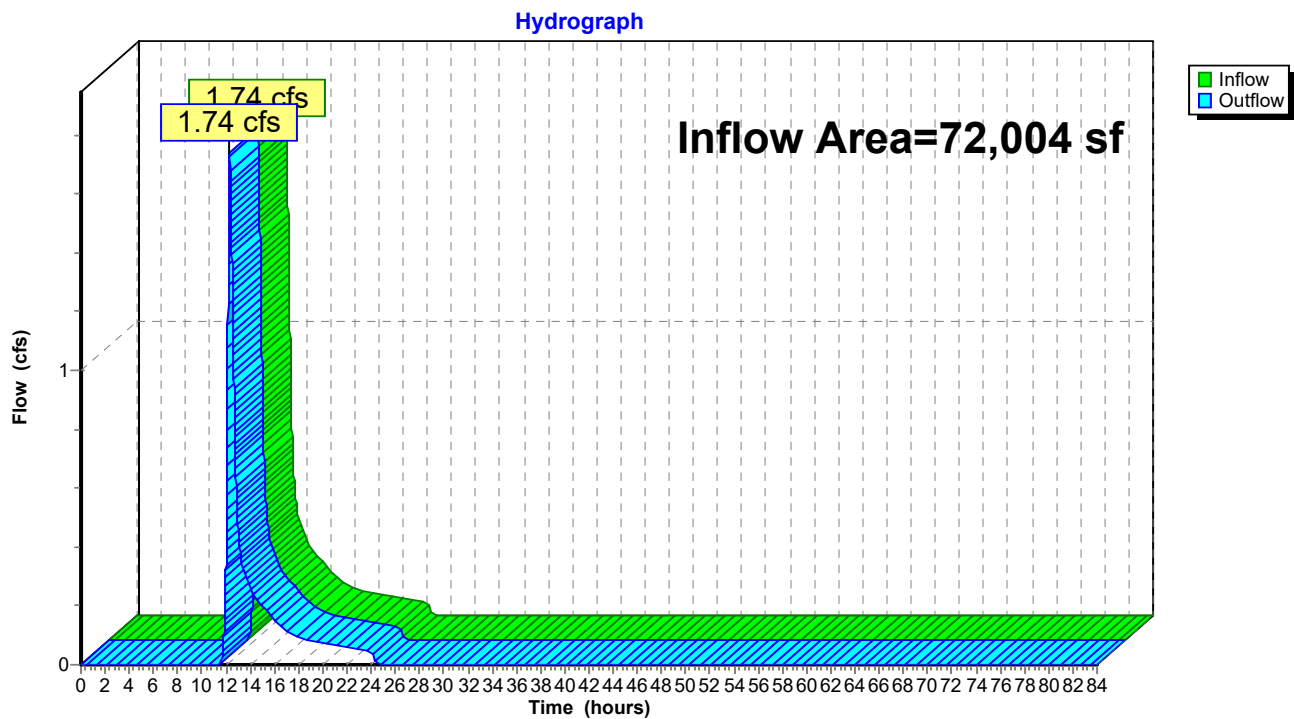
Hydrograph



Summary for Reach POI 1: POI #1

Inflow Area = 72,004 sf, 3.08% Impervious, Inflow Depth = 1.48" for 25-Year Storm event
Inflow = 1.74 cfs @ 12.30 hrs, Volume= 8,877 cf
Outflow = 1.74 cfs @ 12.30 hrs, Volume= 8,877 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 1: POI #1

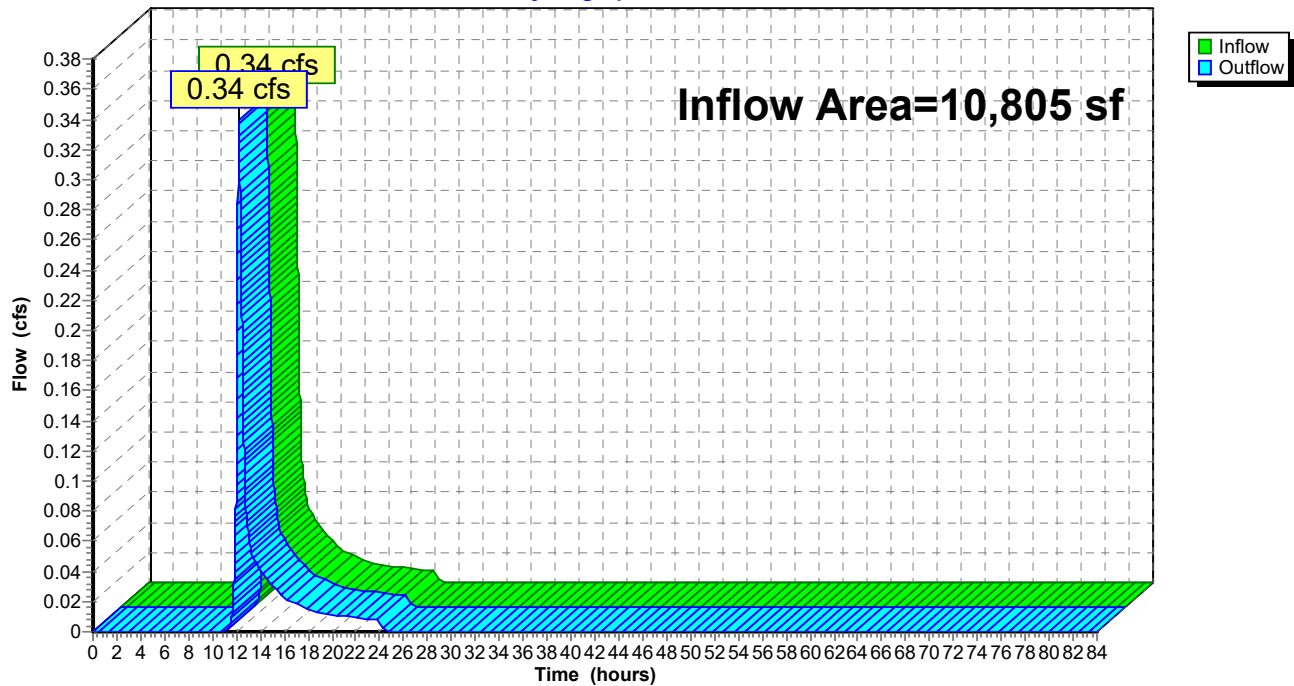
Summary for Reach POI 2: POI #2

Inflow Area = 10,805 sf, 33.40% Impervious, Inflow Depth = 1.63" for 25-Year Storm event
Inflow = 0.34 cfs @ 12.20 hrs, Volume= 1,471 cf
Outflow = 0.34 cfs @ 12.20 hrs, Volume= 1,471 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 2: POI #2

Hydrograph



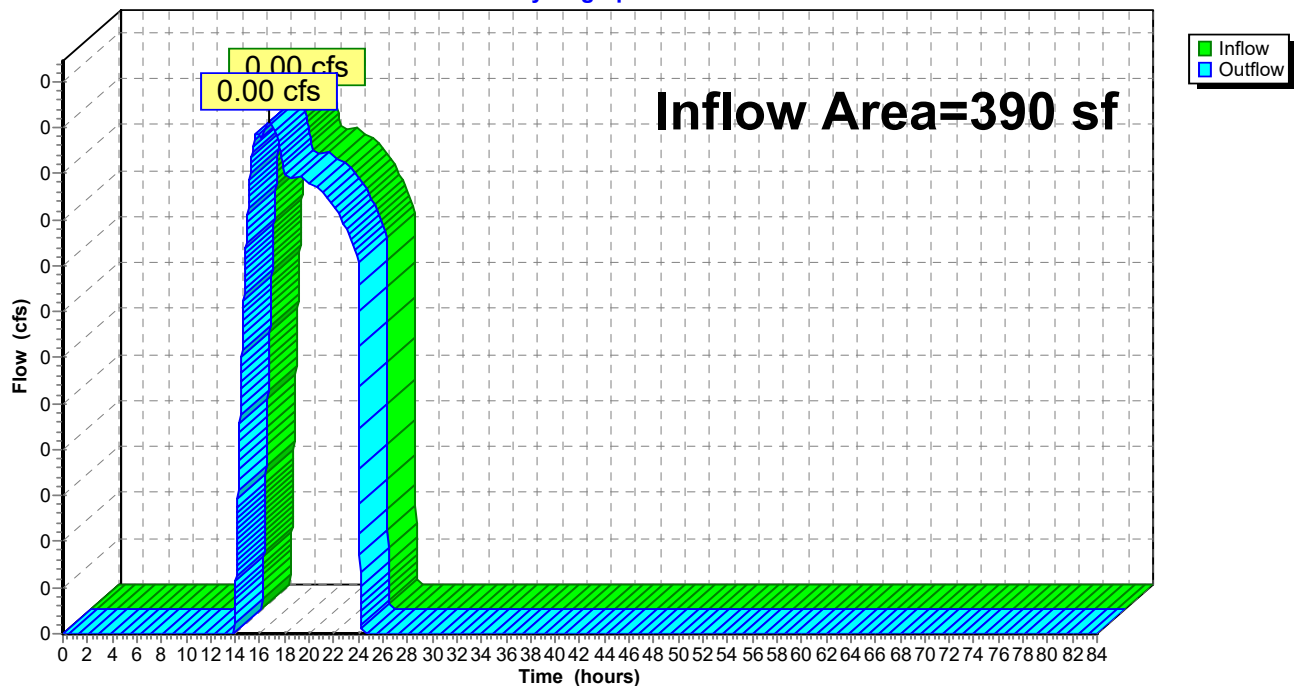
Summary for Reach POI 3: POI #3

Inflow Area = 390 sf, 0.00% Impervious, Inflow Depth = 0.05" for 25-Year Storm event
Inflow = 0.00 cfs @ 16.78 hrs, Volume= 2 cf
Outflow = 0.00 cfs @ 16.78 hrs, Volume= 2 cf, Atten= 0%, Lag= 0.0 min

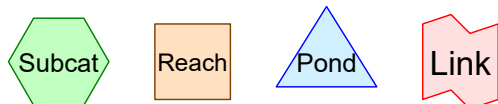
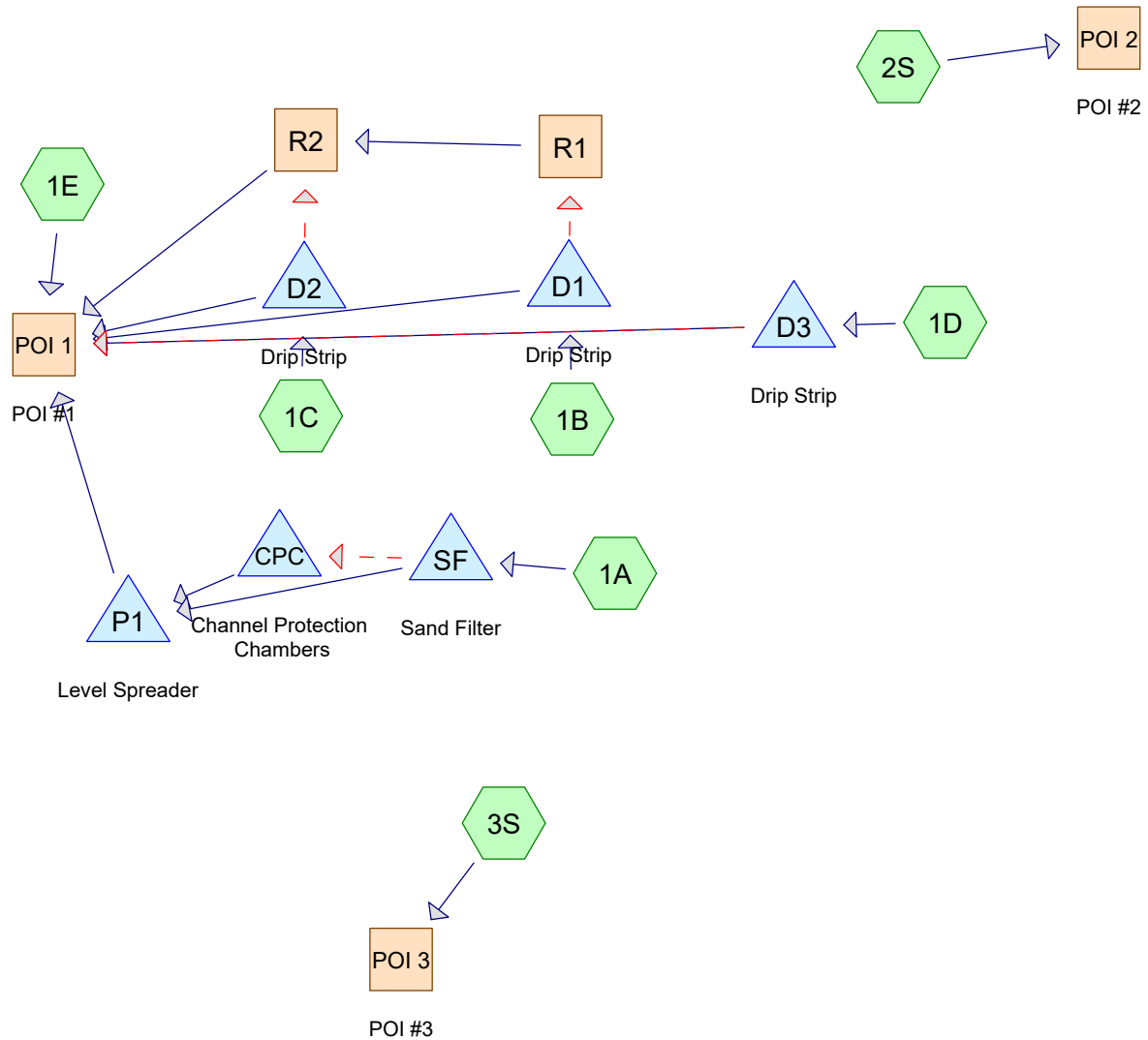
Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 3: POI #3

Hydrograph



POST DEVELOPMENT



Routing Diagram for Post - NEW STORMS
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Post - NEW STORMS*Type III 24-hr 2-Year Storm Rainfall=3.10"*

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Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 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 1A:	Runoff Area=41,296 sf 63.51% Impervious Runoff Depth=1.14" Flow Length=323' Tc=16.0 min CN=77 Runoff=0.90 cfs 3,926 cf
Subcatchment 1B:	Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=2.55" Tc=6.0 min CN=95 Runoff=0.30 cfs 984 cf
Subcatchment 1C:	Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=2.65" Tc=6.0 min CN=96 Runoff=0.31 cfs 1,024 cf
Subcatchment 1D:	Runoff Area=6,197 sf 23.12% Impervious Runoff Depth=0.17" Flow Length=97' Tc=11.0 min CN=53 Runoff=0.01 cfs 89 cf
Subcatchment 1E:	Runoff Area=15,184 sf 0.00% Impervious Runoff Depth=0.17" Flow Length=450' Tc=19.2 min CN=53 Runoff=0.01 cfs 218 cf
Subcatchment 2S:	Runoff Area=10,805 sf 39.27% Impervious Runoff Depth=0.44" Flow Length=205' Tc=13.5 min CN=62 Runoff=0.06 cfs 395 cf
Subcatchment 3S:	Runoff Area=441 sf 71.20% Impervious Runoff Depth=1.83" Tc=6.0 min CN=87 Runoff=0.02 cfs 67 cf
Reach POI 1: POI #1	Inflow=0.08 cfs 5,803 cf Outflow=0.08 cfs 5,803 cf
Reach POI 2: POI #2	Inflow=0.06 cfs 395 cf Outflow=0.06 cfs 395 cf
Reach POI 3: POI #3	Inflow=0.02 cfs 67 cf Outflow=0.02 cfs 67 cf
Reach R1:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0 cf n=0.035 L=80.0' S=0.0250 '/' Capacity=102.63 cfs Outflow=0.00 cfs 0 cf
Reach R2:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0 cf n=0.035 L=90.0' S=0.0389 '/' Capacity=128.00 cfs Outflow=0.00 cfs 0 cf
Pond CPC: Channel Protection Chambers	Peak Elev=101.80' Storage=300 cf Inflow=0.06 cfs 421 cf Outflow=0.02 cfs 182 cf
Pond D1: Drip Strip	Peak Elev=107.73' Storage=549 cf Inflow=0.30 cfs 984 cf Primary=0.01 cfs 985 cf Secondary=0.00 cfs 0 cf Outflow=0.01 cfs 985 cf
Pond D2: Drip Strip	Peak Elev=103.41' Storage=573 cf Inflow=0.31 cfs 1,024 cf Primary=0.01 cfs 1,025 cf Secondary=0.00 cfs 0 cf Outflow=0.01 cfs 1,025 cf
Pond D3: Drip Strip	Peak Elev=104.95' Storage=0 cf Inflow=0.01 cfs 89 cf Outflow=0.01 cfs 89 cf

Post - NEW STORMS*Type III 24-hr 2-Year Storm Rainfall=3.10"*

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Pond P1: Level SpreaderPeak Elev=101.51' Storage=117 cf Inflow=0.05 cfs 3,601 cf
Outflow=0.05 cfs 3,486 cf**Pond SF: Sand Filter**Peak Elev=104.09' Storage=2,255 cf Inflow=0.90 cfs 3,926 cf
Primary=0.03 cfs 3,419 cf Secondary=0.06 cfs 421 cf Outflow=0.09 cfs 3,840 cf**Total Runoff Area = 83,199 sf Runoff Volume = 6,705 cf Average Runoff Depth = 0.97"**
51.92% Pervious = 43,196 sf 48.08% Impervious = 40,003 sf

Post - NEW STORMS

Type III 24-hr 10-Year Storm Rainfall=4.60"

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Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 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 1A:	Runoff Area=41,296 sf 63.51% Impervious Runoff Depth=2.29" Flow Length=323' Tc=16.0 min CN=77 Runoff=1.87 cfs 7,888 cf
Subcatchment 1B:	Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=4.02" Tc=6.0 min CN=95 Runoff=0.46 cfs 1,555 cf
Subcatchment 1C:	Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=4.14" Tc=6.0 min CN=96 Runoff=0.47 cfs 1,598 cf
Subcatchment 1D:	Runoff Area=6,197 sf 23.12% Impervious Runoff Depth=0.68" Flow Length=97' Tc=11.0 min CN=53 Runoff=0.06 cfs 353 cf
Subcatchment 1E:	Runoff Area=15,184 sf 0.00% Impervious Runoff Depth=0.68" Flow Length=450' Tc=19.2 min CN=53 Runoff=0.13 cfs 864 cf
Subcatchment 2S:	Runoff Area=10,805 sf 39.27% Impervious Runoff Depth=1.20" Flow Length=205' Tc=13.5 min CN=62 Runoff=0.24 cfs 1,079 cf
Subcatchment 3S:	Runoff Area=441 sf 71.20% Impervious Runoff Depth=3.19" Tc=6.0 min CN=87 Runoff=0.04 cfs 117 cf
Reach POI 1: POI #1	Inflow=0.71 cfs 11,819 cf Outflow=0.71 cfs 11,819 cf
Reach POI 2: POI #2	Inflow=0.24 cfs 1,079 cf Outflow=0.24 cfs 1,079 cf
Reach POI 3: POI #3	Inflow=0.04 cfs 117 cf Outflow=0.04 cfs 117 cf
Reach R1:	Avg. Flow Depth=0.05' Max Vel=0.82 fps Inflow=0.10 cfs 254 cf n=0.035 L=80.0' S=0.0250 ' Capacity=102.63 cfs Outflow=0.09 cfs 254 cf
Reach R2:	Avg. Flow Depth=0.06' Max Vel=1.20 fps Inflow=0.19 cfs 535 cf n=0.035 L=90.0' S=0.0389 ' Capacity=128.00 cfs Outflow=0.18 cfs 535 cf
Pond CPC: Channel Protection Chambers	Peak Elev=103.02' Storage=1,144 cf Inflow=1.44 cfs 4,120 cf Outflow=0.44 cfs 3,881 cf
Pond D1: Drip Strip	Peak Elev=108.40' Storage=753 cf Inflow=0.46 cfs 1,555 cf Primary=0.01 cfs 1,301 cf Secondary=0.10 cfs 254 cf Outflow=0.11 cfs 1,555 cf
Pond D2: Drip Strip	Peak Elev=104.01' Storage=754 cf Inflow=0.47 cfs 1,598 cf Primary=0.01 cfs 1,318 cf Secondary=0.13 cfs 281 cf Outflow=0.14 cfs 1,598 cf
Pond D3: Drip Strip	Peak Elev=107.24' Storage=105 cf Inflow=0.06 cfs 353 cf Outflow=0.01 cfs 353 cf

Post - NEW STORMS*Type III 24-hr 10-Year Storm Rainfall=4.60"*

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Pond P1: Level Spreader

Peak Elev=101.55' Storage=122 cf Inflow=0.47 cfs 7,563 cf

Outflow=0.47 cfs 7,448 cf

Pond SF: Sand Filter

Peak Elev=104.26' Storage=2,399 cf Inflow=1.87 cfs 7,888 cf

Primary=0.03 cfs 3,682 cf Secondary=1.44 cfs 4,120 cf Outflow=1.47 cfs 7,801 cf

Total Runoff Area = 83,199 sf Runoff Volume = 13,454 cf Average Runoff Depth = 1.94"
51.92% Pervious = 43,196 sf 48.08% Impervious = 40,003 sf

Post - NEW STORMS

Type III 24-hr 25-Year Storm Rainfall=5.80"

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Page 1

Time span=0.00-84.00 hrs, dt=0.01 hrs, 8401 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 1A: Runoff Area=41,296 sf 63.51% Impervious Runoff Depth=3.31"
Flow Length=323' Tc=16.0 min CN=77 Runoff=2.71 cfs 11,374 cf

Subcatchment 1B: Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=5.21"
Tc=6.0 min CN=95 Runoff=0.59 cfs 2,015 cf

Subcatchment 1C: Runoff Area=4,638 sf 83.92% Impervious Runoff Depth=5.33"
Tc=6.0 min CN=96 Runoff=0.60 cfs 2,059 cf

Subcatchment 1D: Runoff Area=6,197 sf 23.12% Impervious Runoff Depth=1.26"
Flow Length=97' Tc=11.0 min CN=53 Runoff=0.15 cfs 649 cf

Subcatchment 1E: Runoff Area=15,184 sf 0.00% Impervious Runoff Depth=1.26"
Flow Length=450' Tc=19.2 min CN=53 Runoff=0.29 cfs 1,591 cf

Subcatchment 2S: Runoff Area=10,805 sf 39.27% Impervious Runoff Depth=1.95"
Flow Length=205' Tc=13.5 min CN=62 Runoff=0.42 cfs 1,760 cf

Subcatchment 3S: Runoff Area=441 sf 71.20% Impervious Runoff Depth=4.33"
Tc=6.0 min CN=87 Runoff=0.05 cfs 159 cf

Reach POI 1: POI #1 Inflow=1.29 cfs 17,249 cf
Outflow=1.29 cfs 17,249 cf

Reach POI 2: POI #2 Inflow=0.42 cfs 1,760 cf
Outflow=0.42 cfs 1,760 cf

Reach POI 3: POI #3 Inflow=0.05 cfs 159 cf
Outflow=0.05 cfs 159 cf

Reach R1: Avg. Flow Depth=0.11' Max Vel=1.28 fps Inflow=0.41 cfs 641 cf
n=0.035 L=80.0' S=0.0250 ' Capacity=102.63 cfs Outflow=0.36 cfs 641 cf

Reach R2: Avg. Flow Depth=0.14' Max Vel=1.84 fps Inflow=0.74 cfs 1,309 cf
n=0.035 L=90.0' S=0.0389 ' Capacity=128.00 cfs Outflow=0.72 cfs 1,309 cf

Pond CPC: Channel Protection Chambers Peak Elev=104.36' Storage=2,335 cf Inflow=2.66 cfs 7,503 cf
Outflow=0.71 cfs 7,265 cf

Pond D1: Drip Strip Peak Elev=108.41' Storage=763 cf Inflow=0.59 cfs 2,015 cf
Primary=0.01 cfs 1,374 cf Secondary=0.41 cfs 641 cf Outflow=0.42 cfs 2,015 cf

Pond D2: Drip Strip Peak Elev=104.01' Storage=764 cf Inflow=0.60 cfs 2,059 cf
Primary=0.01 cfs 1,391 cf Secondary=0.45 cfs 669 cf Outflow=0.46 cfs 2,059 cf

Pond D3: Drip Strip Peak Elev=108.46' Storage=215 cf Inflow=0.15 cfs 649 cf
Outflow=0.03 cfs 649 cf

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Pond P1: Level Spreader

Peak Elev=101.57' Storage=125 cf Inflow=0.74 cfs 11,049 cf

Outflow=0.74 cfs 10,934 cf

Pond SF: Sand Filter

Peak Elev=104.39' Storage=2,518 cf Inflow=2.71 cfs 11,374 cf

Primary=0.03 cfs 3,784 cf Secondary=2.66 cfs 7,503 cf Outflow=2.69 cfs 11,287 cf

Total Runoff Area = 83,199 sf Runoff Volume = 19,607 cf Average Runoff Depth = 2.83"
51.92% Pervious = 43,196 sf 48.08% Impervious = 40,003 sf

Post - NEW STORMS

Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 1A:

Runoff = 2.71 cfs @ 12.22 hrs, Volume= 11,374 cf, Depth= 3.31"
 Routed to Pond SF : Sand Filter

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	24,667	98	Impervious, HSG A
	3,273	39	>75% Grass cover, Good, HSG A
	394	61	>75% Grass cover, Good, HSG B
*	1,562	98	(OFFSITE) Impervious, HSG A
*	11,400	39	(OFFSITE) >75% Grass cover, Good, HSG A
	41,296	77	Weighted Average
	15,067		36.49% Pervious Area
	26,229		63.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	150	0.0400	0.16		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.10"
0.1	15	0.0400	3.00		Shallow Concentrated Flow, B-C Grassed Waterway Kv= 15.0 fps
0.1	23	0.0350	3.80		Shallow Concentrated Flow, C-D Paved Kv= 20.3 fps
0.6	135	0.0050	3.47	2.73	Pipe Channel, D-E 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Corrugated PP, smooth interior
16.0	323	Total			

Post - NEW STORMS

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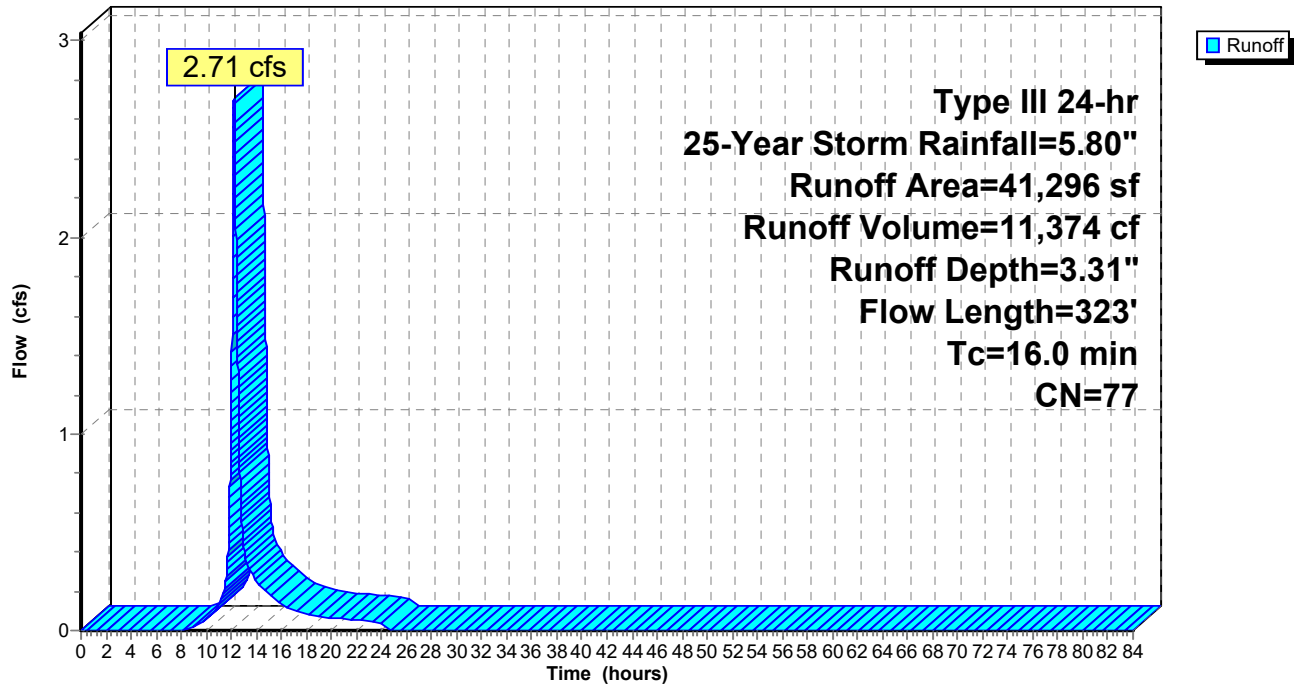
Type III 24-hr 25-Year Storm Rainfall=5.80"

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Subcatchment 1A:

Hydrograph



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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 1B:

Runoff = 0.59 cfs @ 12.08 hrs, Volume= 2,015 cf, Depth= 5.21"
Routed to Pond D1 : Drip Strip

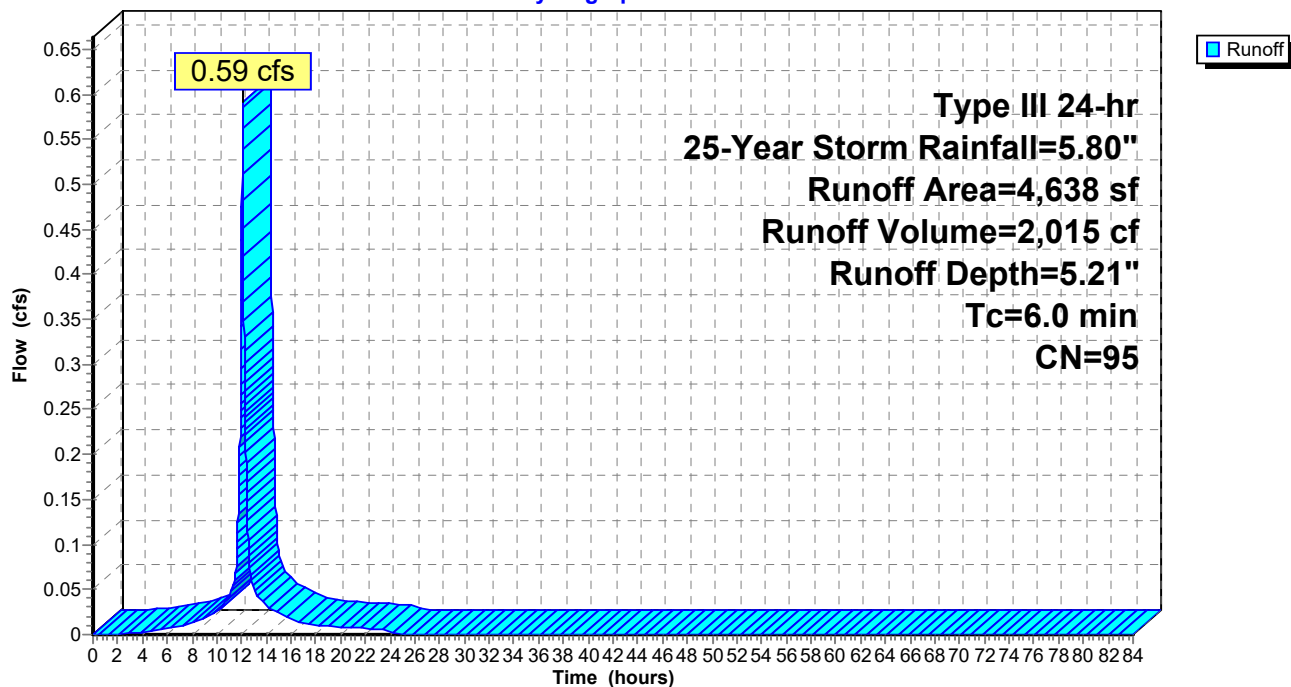
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
3,892	98	Paved parking, HSG A
380	77	Newly graded area, HSG A
366	86	Newly graded area, HSG B
4,638	95	Weighted Average
746		16.08% Pervious Area
3,892		83.92% Impervious Area

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

Subcatchment 1B:

Hydrograph



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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 1C:

Runoff = 0.60 cfs @ 12.08 hrs, Volume= 2,059 cf, Depth= 5.33"
Routed to Pond D2 : Drip Strip

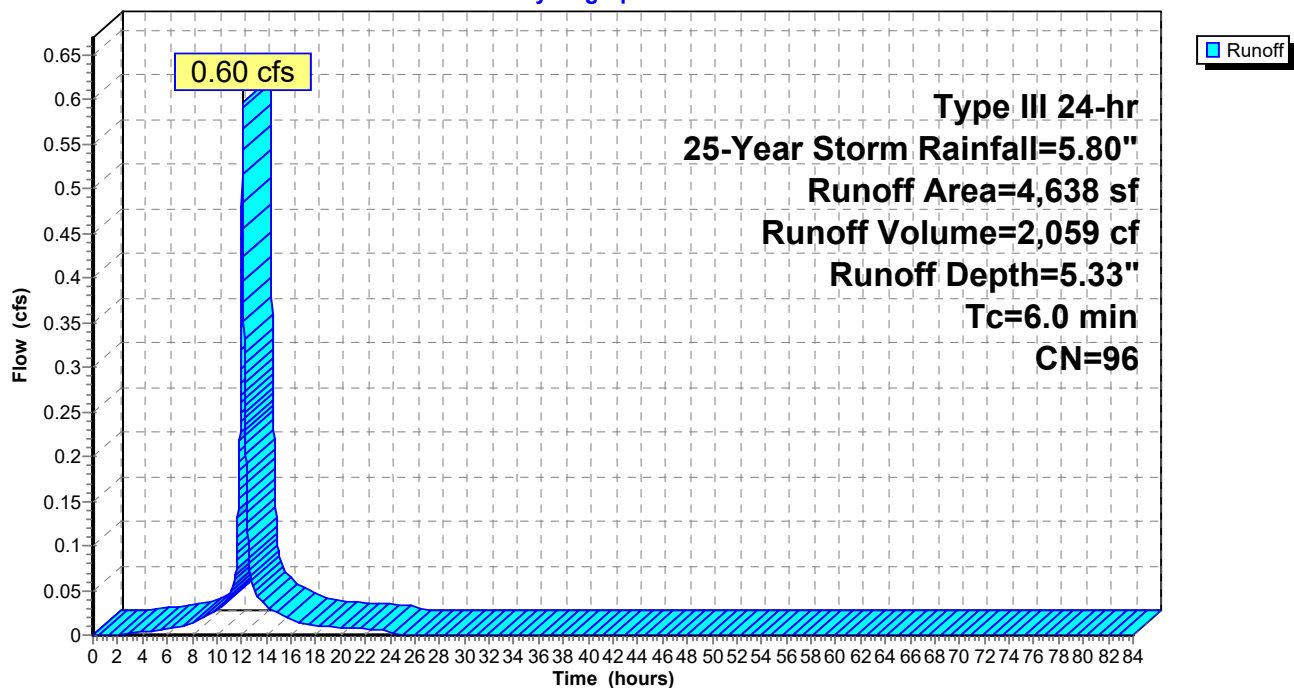
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
3,892	98	Paved parking, HSG A
746	86	Newly graded area, HSG B
4,638	96	Weighted Average
746		16.08% Pervious Area
3,892		83.92% Impervious Area

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

Subcatchment 1C:

Hydrograph



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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 1D:

Runoff = 0.15 cfs @ 12.18 hrs, Volume= 649 cf, Depth= 1.26"
 Routed to Pond D3 : Drip Strip

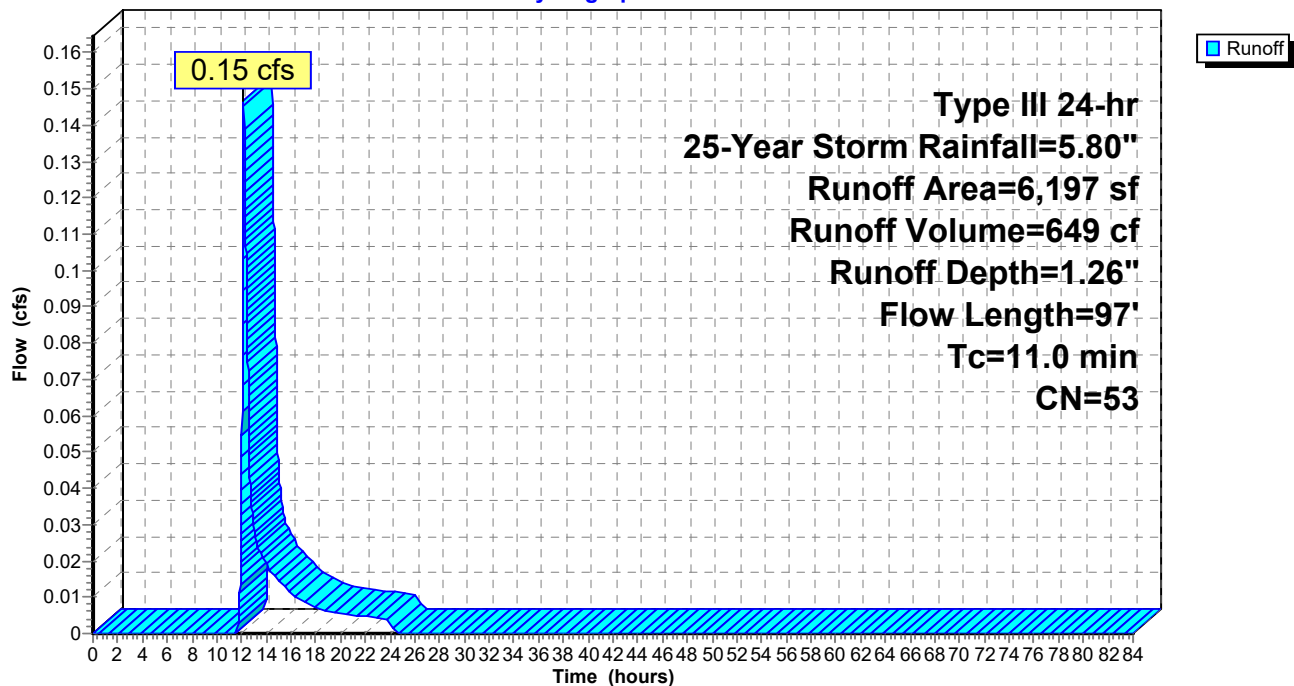
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
778	98	Paved parking, HSG A
* 655	98	(OFFSITE) Impervious, HSG A
2,297	39	>75% Grass cover, Good, HSG A
* 2,467	39	(OFFSITE) >75% Grass cover, Good, HSG A
6,197	53	Weighted Average
4,764		76.88% Pervious Area
1,433		23.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	31	0.0450	0.13		Sheet Flow, A-B Grass: Dense n= 0.240 P2= 3.10"
6.9	50	0.0900	0.12		Sheet Flow, B-C Woods: Light underbrush n= 0.400 P2= 3.10"
0.0	16	0.5000	10.61		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
11.0	97	Total			

Subcatchment 1D:

Hydrograph



Post - NEW STORMS

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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 1E:

Runoff = 0.29 cfs @ 12.31 hrs, Volume= 1,591 cf, Depth= 1.26"
 Routed to Reach POI 1 : POI #1

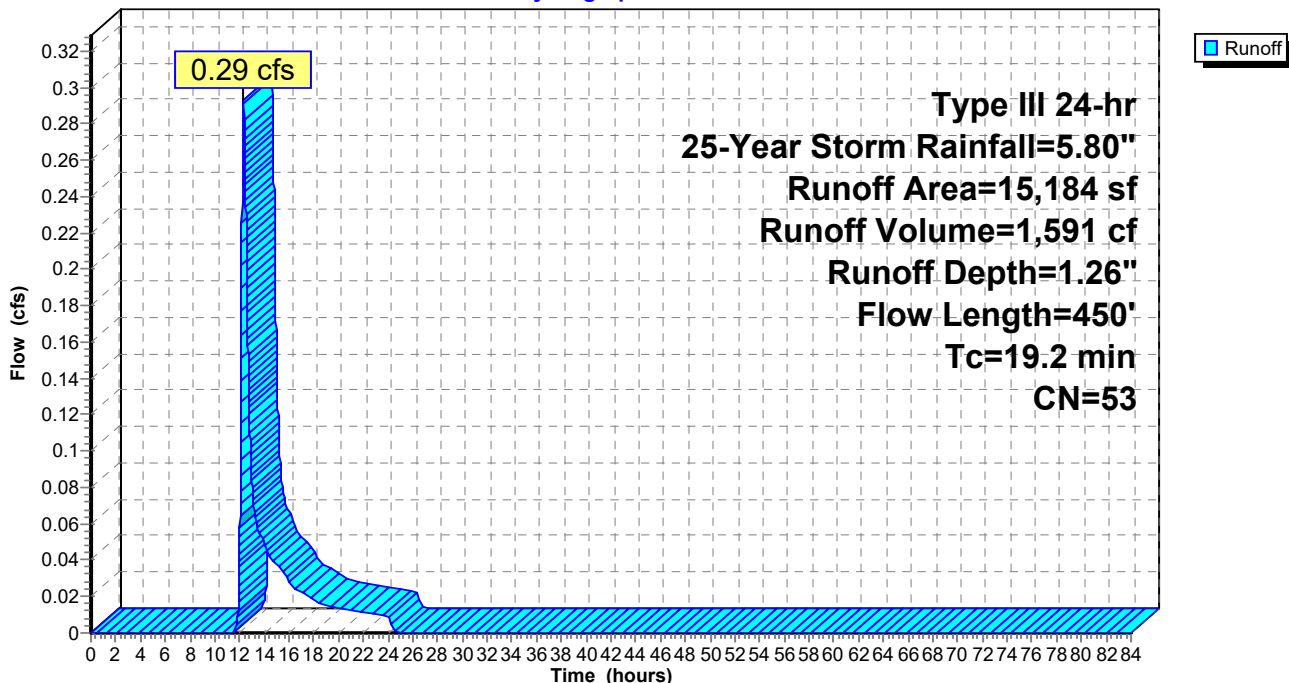
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
2,744	39	>75% Grass cover, Good, HSG A
2,358	61	>75% Grass cover, Good, HSG B
2,626	39	Pasture/grassland/range, Good, HSG A
7,456	61	Pasture/grassland/range, Good, HSG B
15,184	53	Weighted Average
15,184		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.3	150	0.0800	0.14		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.10"
1.9	300	0.0300	2.60		Shallow Concentrated Flow, B-C
					Grassed Waterway Kv= 15.0 fps
19.2	450	Total			

Subcatchment 1E:

Hydrograph



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Type III 24-hr 25-Year Storm Rainfall=5.80"

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Summary for Subcatchment 2S:

Runoff = 0.42 cfs @ 12.20 hrs, Volume= 1,760 cf, Depth= 1.95"
 Routed to Reach POI 2 : POI #2

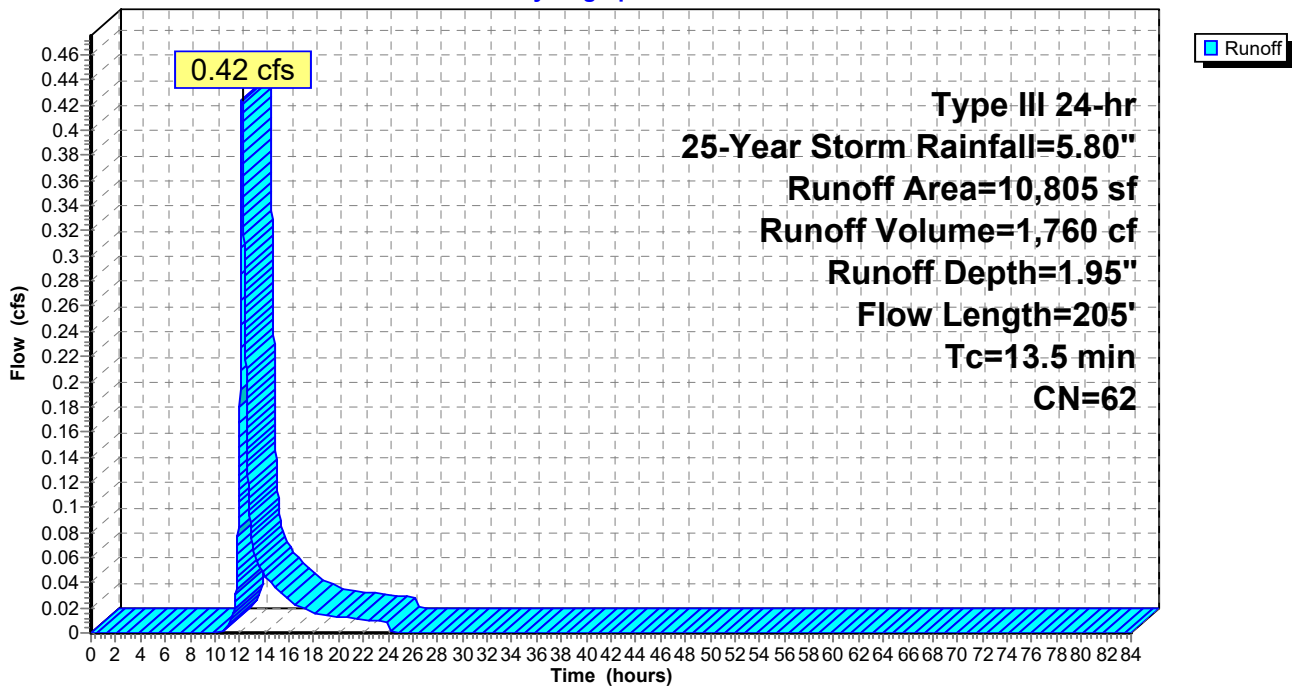
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
4,243	98	Paved parking, HSG A
5,957	39	>75% Grass cover, Good, HSG A
605	30	Woods, Good, HSG A
10,805	62	Weighted Average
6,562		60.73% Pervious Area
4,243		39.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.1	125	0.0400	0.16		Sheet Flow, A-B
					Grass: Dense n= 0.240 P2= 3.10"
0.4	80	0.0250	3.21		Shallow Concentrated Flow, B-C
					Paved Kv= 20.3 fps
13.5	205	Total			

Subcatchment 2S:

Hydrograph



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Summary for Subcatchment 3S:

Runoff = 0.05 cfs @ 12.09 hrs, Volume= 159 cf, Depth= 4.33"
Routed to Reach POI 3 : POI #3

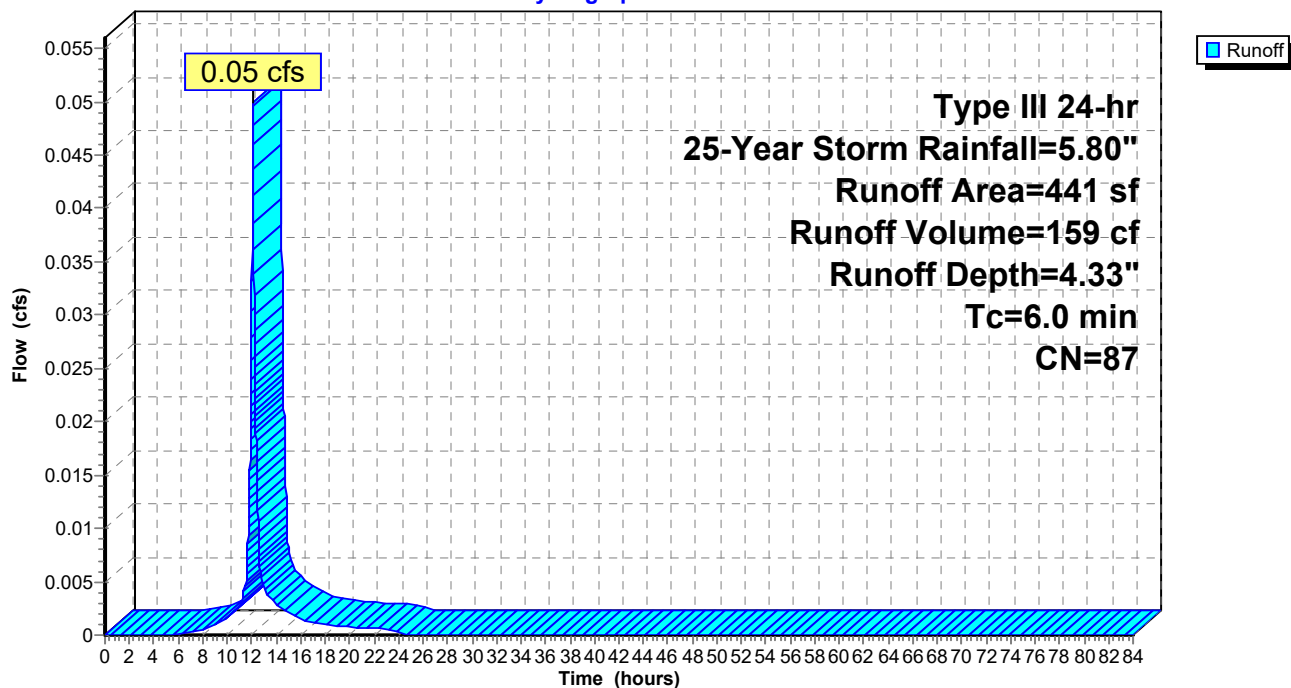
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
314	98	Paved parking, HSG A
127	61	>75% Grass cover, Good, HSG B
441	87	Weighted Average
127		28.80% Pervious Area
314		71.20% Impervious Area

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

Subcatchment 3S:

Hydrograph

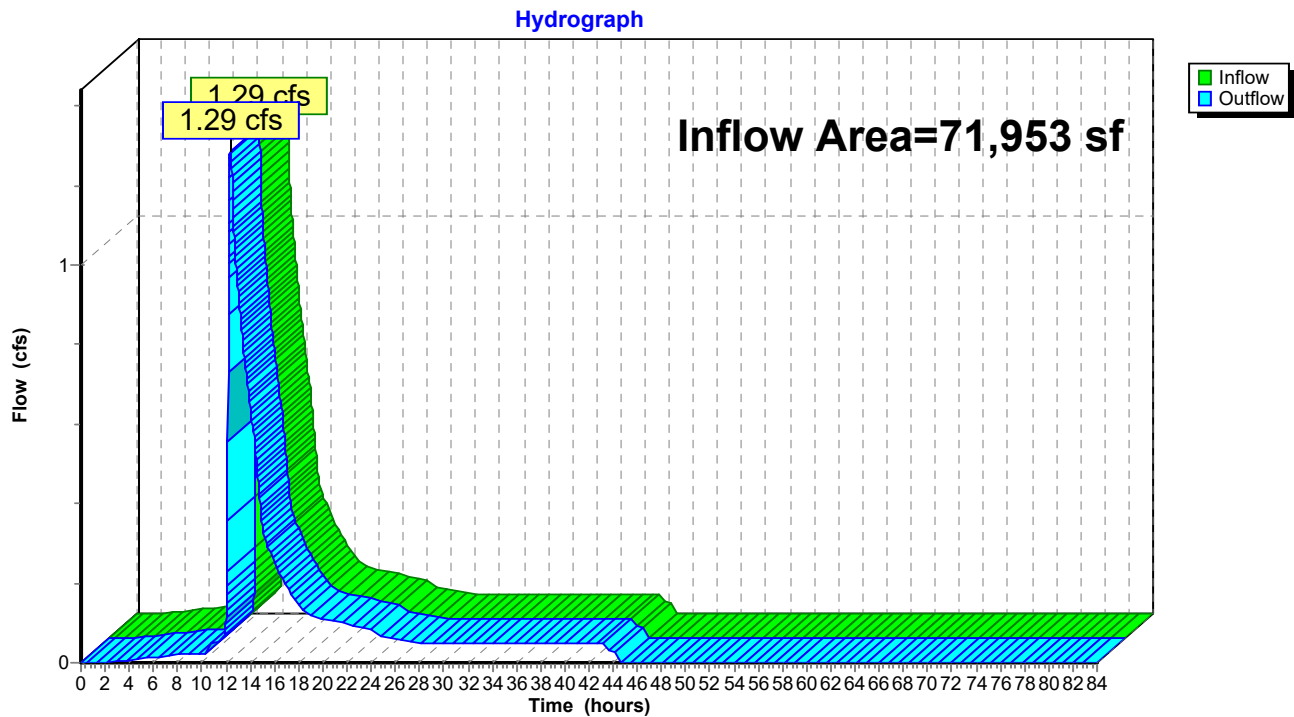


Summary for Reach POI 1: POI #1

Inflow Area = 71,953 sf, 49.26% Impervious, Inflow Depth = 2.88" for 25-Year Storm event
 Inflow = 1.29 cfs @ 12.34 hrs, Volume= 17,249 cf
 Outflow = 1.29 cfs @ 12.34 hrs, Volume= 17,249 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 1: POI #1

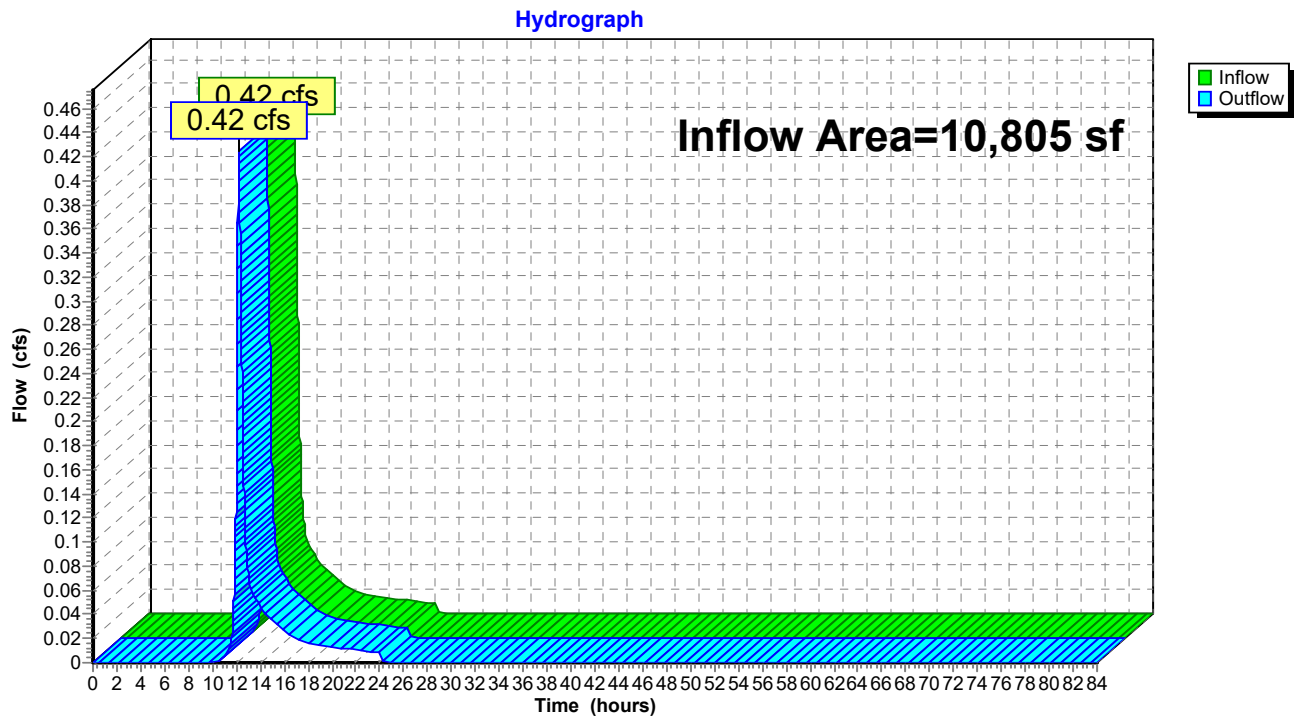


Summary for Reach POI 2: POI #2

Inflow Area = 10,805 sf, 39.27% Impervious, Inflow Depth = 1.95" for 25-Year Storm event
 Inflow = 0.42 cfs @ 12.20 hrs, Volume= 1,760 cf
 Outflow = 0.42 cfs @ 12.20 hrs, Volume= 1,760 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 2: POI #2

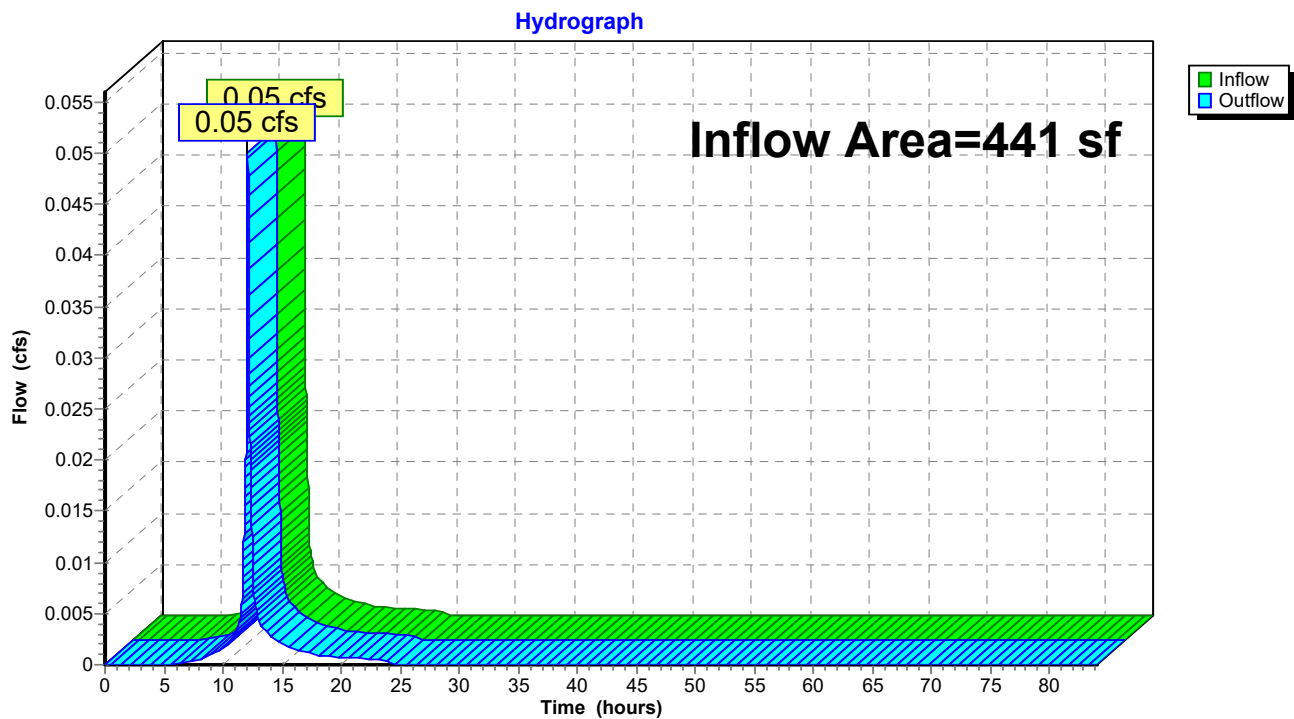


Summary for Reach POI 3: POI #3

Inflow Area = 441 sf, 71.20% Impervious, Inflow Depth = 4.33" for 25-Year Storm event
 Inflow = 0.05 cfs @ 12.09 hrs, Volume= 159 cf
 Outflow = 0.05 cfs @ 12.09 hrs, Volume= 159 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs

Reach POI 3: POI #3



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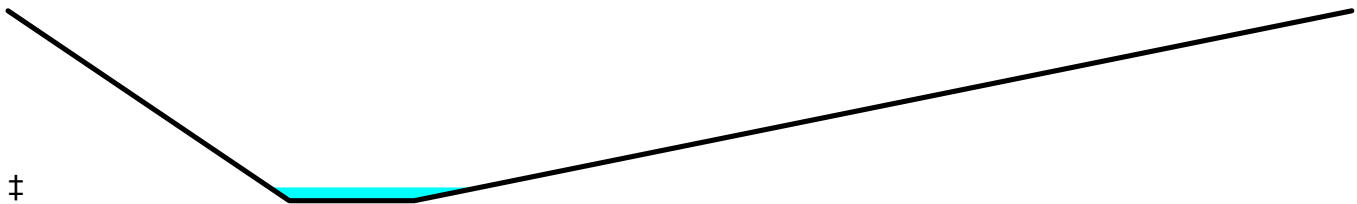
Summary for Reach R1:

Inflow = 0.41 cfs @ 12.16 hrs, Volume= 641 cf
Outflow = 0.36 cfs @ 12.19 hrs, Volume= 641 cf, Atten= 12%, Lag= 1.4 min
Routed to Reach R2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.28 fps, Min. Travel Time= 1.0 min
Avg. Velocity= 0.50 fps, Avg. Travel Time= 2.7 min

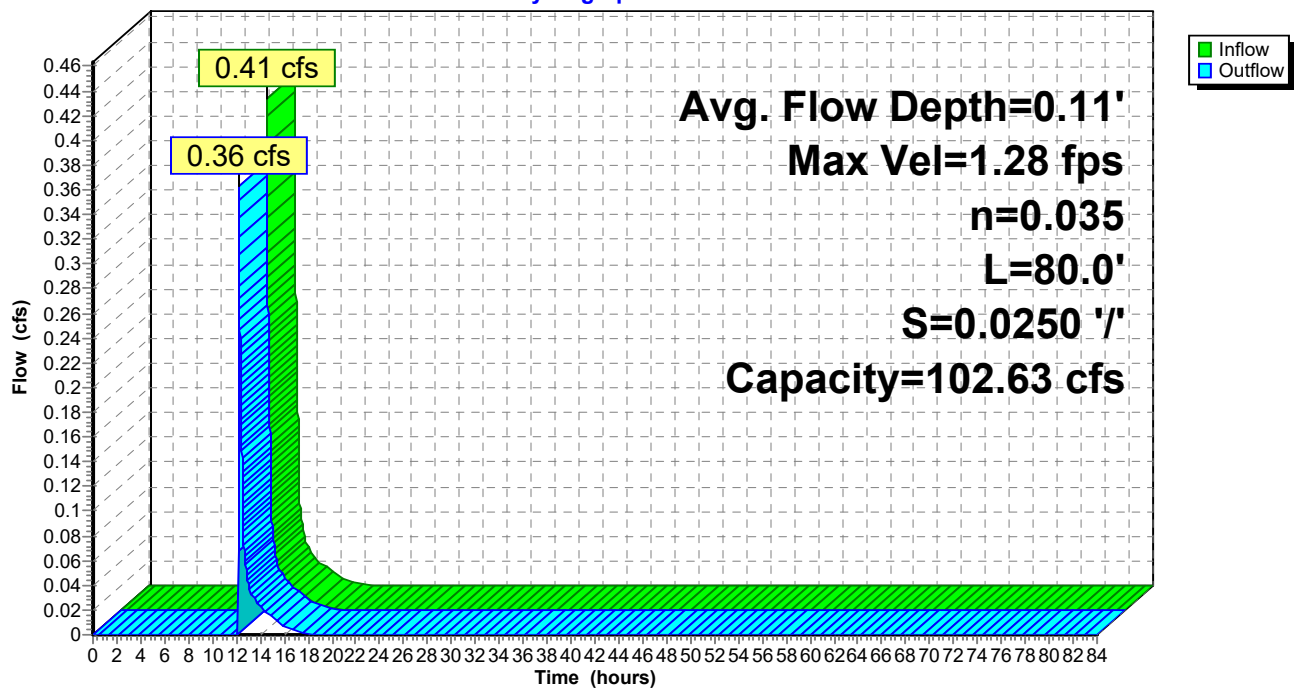
Peak Storage= 23 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.11' , Surface Width= 3.37'
Bank-Full Depth= 1.50' Flow Area= 17.6 sf, Capacity= 102.63 cfs

2.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 10.0 '/' Top Width= 21.50'
Length= 80.0' Slope= 0.0250 '/'
Inlet Invert= 105.50', Outlet Invert= 103.50'



Reach R1:

Hydrograph



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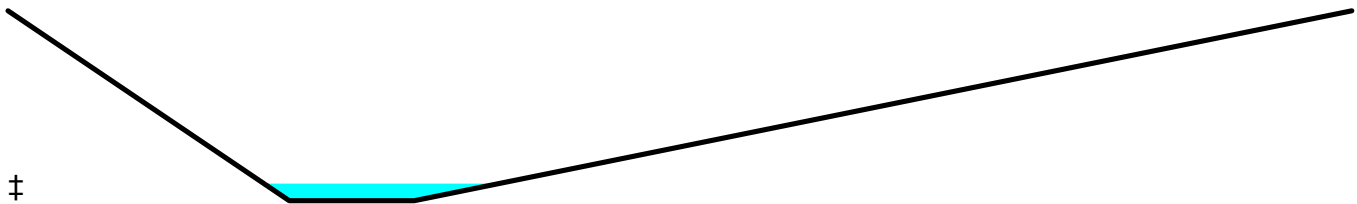
Summary for Reach R2:

Inflow = 0.74 cfs @ 12.18 hrs, Volume= 1,309 cf
Outflow = 0.72 cfs @ 12.19 hrs, Volume= 1,309 cf, Atten= 3%, Lag= 0.8 min
Routed to Reach POI 1 : POI #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.84 fps, Min. Travel Time= 0.8 min
Avg. Velocity= 0.70 fps, Avg. Travel Time= 2.1 min

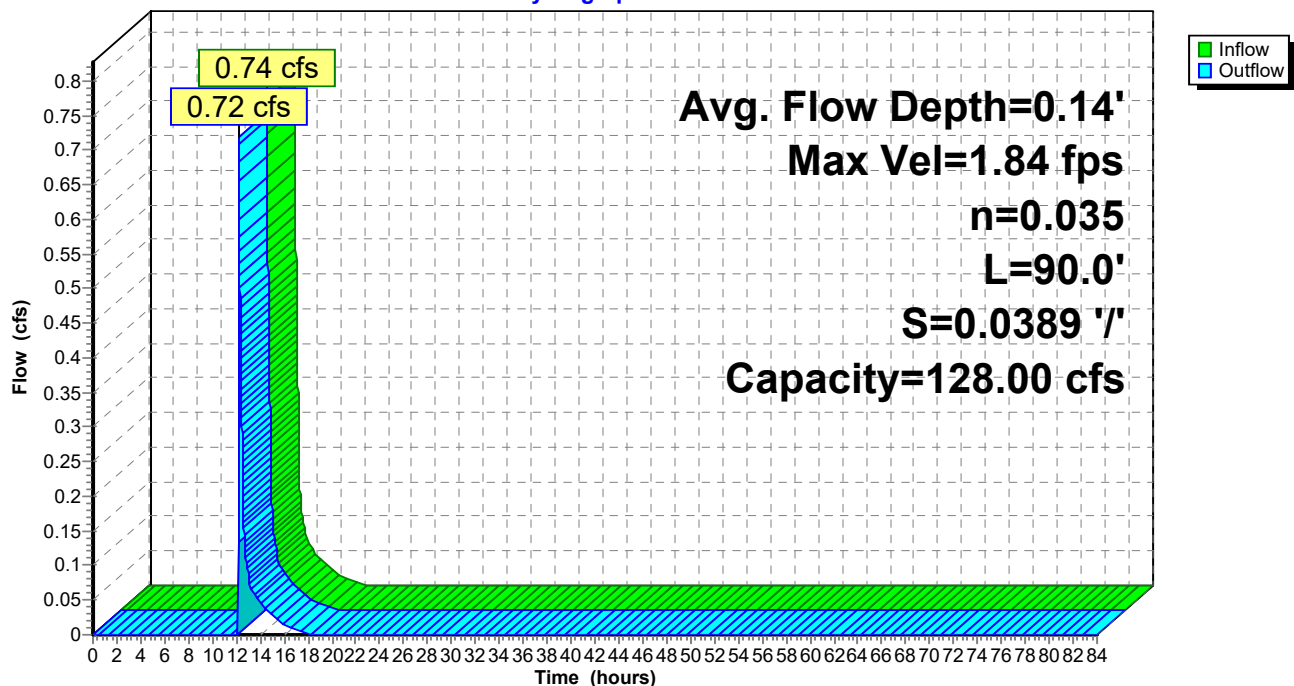
Peak Storage= 35 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.14' , Surface Width= 3.76'
Bank-Full Depth= 1.50' Flow Area= 17.6 sf, Capacity= 128.00 cfs

2.00' x 1.50' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 10.0 '/' Top Width= 21.50'
Length= 90.0' Slope= 0.0389 '/'
Inlet Invert= 103.50', Outlet Invert= 100.00'



Reach R2:

Hydrograph



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Summary for Pond CPC: Channel Protection Chambers

Inflow = 2.66 cfs @ 12.24 hrs, Volume= 7,503 cf
 Outflow = 0.71 cfs @ 12.72 hrs, Volume= 7,265 cf, Atten= 73%, Lag= 28.6 min
 Primary = 0.71 cfs @ 12.72 hrs, Volume= 7,265 cf
 Routed to Pond P1 : Level Spreader

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 104.36' @ 12.72 hrs Surf.Area= 1,508 sf Storage= 2,335 cf
 Flood Elev= 192.02' Surf.Area= 1,508 sf Storage= 2,946 cf

Plug-Flow detention time= 62.1 min calculated for 7,264 cf (97% of inflow)
 Center-of-Mass det. time= 45.9 min (884.8 - 838.9)

Volume	Invert	Avail.Storage	Storage Description
#1	101.70'	16 cf	4.0" Round Pipe Storage Inside #2 L= 181.0' 19 cf Overall - 0.2" Wall Thickness = 16 cf
#2A	101.37'	1,967 cf	8.17'W x 181.20'L x 3.83'H Field A 5,673 cf Overall - 756 cf Embedded = 4,916 cf x 40.0% Voids
#3A	102.87'	737 cf	ADS_StormTech SC-310 +Cap x 50 Inside #2 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 50 Chambers in 2 Rows
#4	100.20'	226 cf	6.00'D x 8.00'H Vertical Cone/Cylinder
		2,946 cf	Total Available Storage

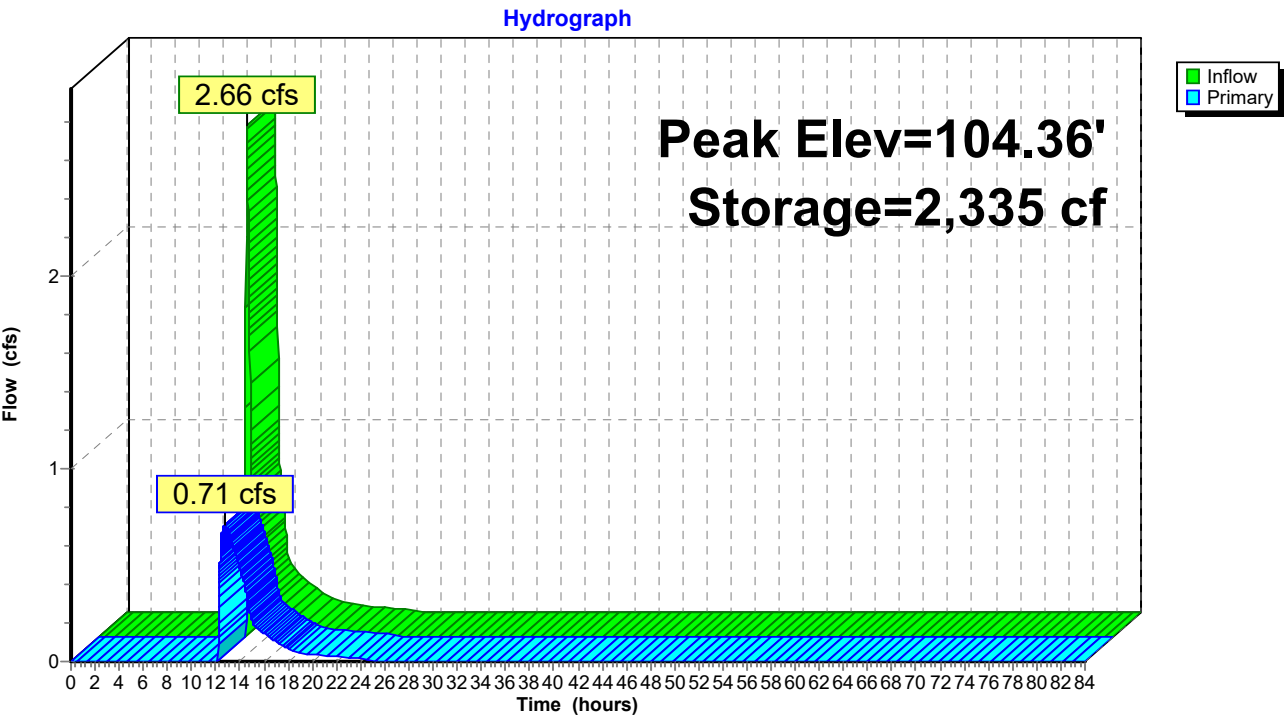
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.15'	12.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 100.15' / 100.00' S= 0.0075 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	101.70'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	102.30'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	104.35'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.71 cfs @ 12.72 hrs HW=104.36' TW=101.57' (Dynamic Tailwater)

- 1=Culvert (Passes 0.71 cfs of 4.98 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.38 cfs @ 7.66 fps)
- 3=Orifice/Grate (Orifice Controls 0.33 cfs @ 6.69 fps)
- 4=Broad-Crested Rectangular Weir (Weir Controls 0.01 cfs @ 0.21 fps)

Pond CPC: Channel Protection Chambers



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Summary for Pond D1: Drip Strip

Inflow Area = 4,638 sf, 83.92% Impervious, Inflow Depth = 5.21" for 25-Year Storm event
 Inflow = 0.59 cfs @ 12.08 hrs, Volume= 2,015 cf
 Outflow = 0.42 cfs @ 12.16 hrs, Volume= 2,015 cf, Atten= 28%, Lag= 4.8 min
 Primary = 0.01 cfs @ 8.73 hrs, Volume= 1,374 cf
 Routed to Reach POI 1 : POI #1
 Secondary = 0.41 cfs @ 12.16 hrs, Volume= 641 cf
 Routed to Reach R1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 108.41' @ 12.16 hrs Surf.Area= 2,880 sf Storage= 763 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 474.3 min (1,238.8 - 764.5)

Volume	Invert	Avail.Storage	Storage Description
#1	104.90'	290 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 740 cf Overall - 15 cf Embedded = 725 cf x 40.0% Voids
#2	106.90'	444 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,110 cf Overall x 40.0% Voids
#3	108.40'	1,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
#4	105.23'	12 cf	4.0" Round Pipe Storage Inside #1 L= 140.0' 15 cf Overall - 0.2" Wall Thickness = 12 cf
2,146 cf			Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.90	740	0	0
105.90	740	740	740

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.90	740	0	0
108.40	740	1,110	1,110

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.40	1,400	0	0
109.40	1,400	1,400	1,400

Device	Routing	Invert	Outlet Devices
#1	Primary	104.73'	4.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.73' / 104.63' S= 0.0050 ' / ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.09 sf
#2	Device 1	104.90'	0.01 cfs Exfiltration at all elevations
#3	Secondary	108.40'	140.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50

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Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.01 cfs @ 8.73 hrs HW=104.95' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.01 cfs of 0.06 cfs potential flow)

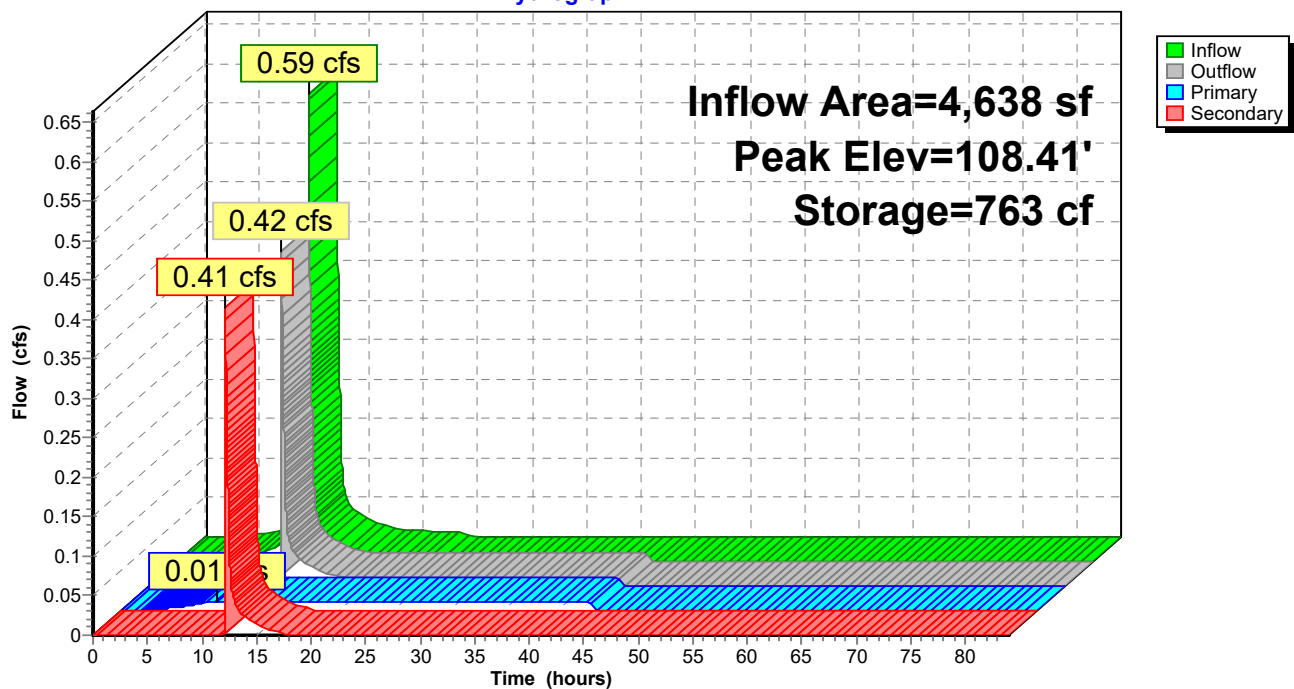
2=Exfiltration (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.40 cfs @ 12.16 hrs HW=108.41' TW=105.59' (Dynamic Tailwater)

3=Broad-Crested Rectangular Weir (Weir Controls 0.40 cfs @ 0.25 fps)

Pond D1: Drip Strip

Hydrograph



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Summary for Pond D2: Drip Strip

Inflow Area = 4,638 sf, 83.92% Impervious, Inflow Depth = 5.33" for 25-Year Storm event
 Inflow = 0.60 cfs @ 12.08 hrs, Volume= 2,059 cf
 Outflow = 0.46 cfs @ 12.15 hrs, Volume= 2,059 cf, Atten= 23%, Lag= 4.1 min
 Primary = 0.01 cfs @ 8.52 hrs, Volume= 1,391 cf
 Routed to Reach POI 1 : POI #1
 Secondary = 0.45 cfs @ 12.15 hrs, Volume= 669 cf
 Routed to Reach R2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 104.01' @ 12.15 hrs Surf.Area= 2,880 sf Storage= 764 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 465.7 min (1,224.7 - 759.0)

Volume	Invert	Avail.Storage	Storage Description
#1	100.50'	290 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 740 cf Overall - 15 cf Embedded = 725 cf x 40.0% Voids
#2	102.50'	444 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,110 cf Overall x 40.0% Voids
#3	104.00'	1,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
#4	100.83'	12 cf	4.0" Round Pipe Storage Inside #1 L= 140.0' 15 cf Overall - 0.2" Wall Thickness = 12 cf
2,146 cf			Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.50	740	0	0
101.50	740	740	740

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.50	740	0	0
104.00	740	1,110	1,110

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.00	1,400	0	0
105.00	1,400	1,400	1,400

Device	Routing	Invert	Outlet Devices
#1	Primary	100.33'	4.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 100.33' / 100.23' S= 0.0050 ' / ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.09 sf
#2	Device 1	100.50'	0.01 cfs Exfiltration at all elevations
#3	Secondary	104.00'	140.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50

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Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.01 cfs @ 8.52 hrs HW=100.55' TW=0.00' (Dynamic Tailwater)

↑ **1=Culvert** (Passes 0.01 cfs of 0.06 cfs potential flow)

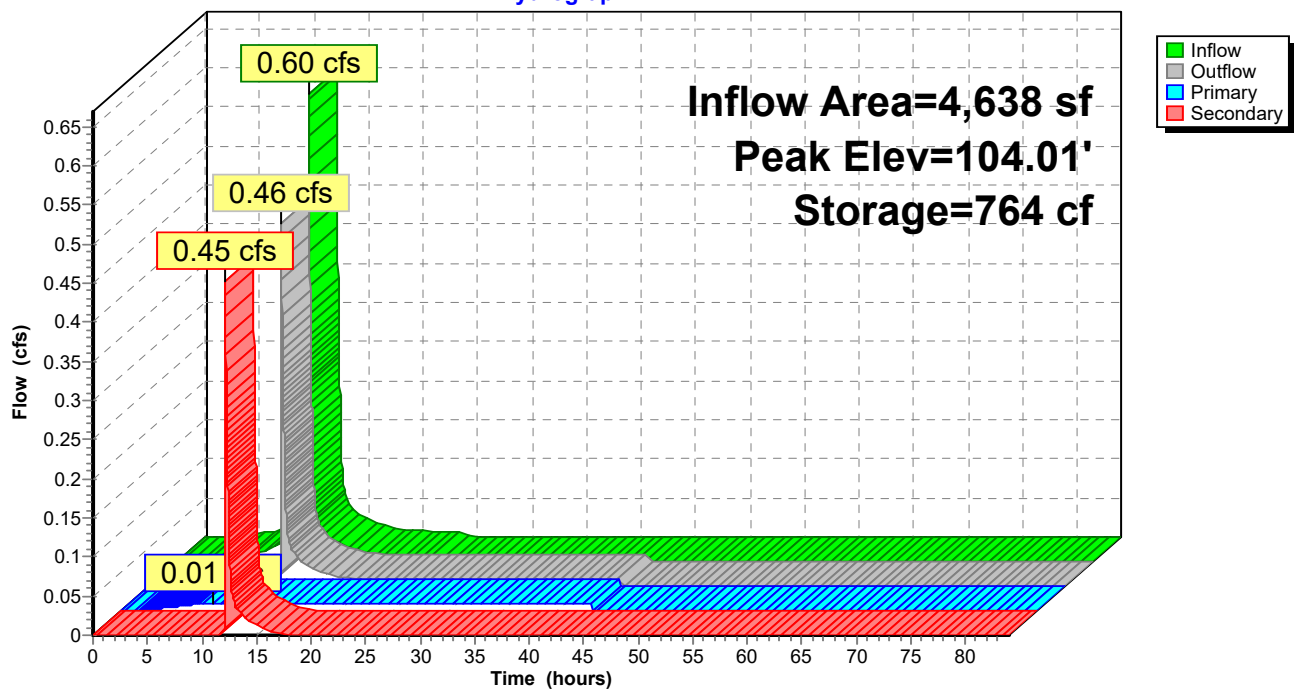
↑ **2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.45 cfs @ 12.15 hrs HW=104.01' TW=103.59' (Dynamic Tailwater)

↑ **3=Broad-Crested Rectangular Weir** (Weir Controls 0.45 cfs @ 0.26 fps)

Pond D2: Drip Strip

Hydrograph



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Summary for Pond D3: Drip Strip

Inflow Area = 6,197 sf, 23.12% Impervious, Inflow Depth = 1.26" for 25-Year Storm event
 Inflow = 0.15 cfs @ 12.18 hrs, Volume= 649 cf
 Outflow = 0.03 cfs @ 12.86 hrs, Volume= 649 cf, Atten= 78%, Lag= 41.2 min
 Primary = 0.03 cfs @ 12.86 hrs, Volume= 649 cf
 Routed to Reach POI 1 : POI #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 108.46' @ 12.86 hrs Surf.Area= 1,800 sf Storage= 215 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 200.9 min (1,091.9 - 891.1)

Volume	Invert	Avail.Storage	Storage Description
#1	104.95'	78 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 200 cf Overall - 4 cf Embedded = 196 cf x 40.0% Voids
#2	106.95'	120 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 300 cf Overall x 40.0% Voids
#3	108.45'	1,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
#4	105.28'	3 cf	4.0" Round Pipe Storage Inside #1 L= 40.0' 4 cf Overall - 0.2" Wall Thickness = 3 cf
		1,602 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.95	200	0	0
105.95	200	200	200

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.95	200	0	0
108.45	200	300	300

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.45	1,400	0	0
109.45	1,400	1,400	1,400

Device	Routing	Invert	Outlet Devices
#1	Primary	104.78'	4.0" Round Culvert L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.78' / 104.68' S= 0.0050 ' / ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.09 sf
#2	Device 1	104.95'	0.01 cfs Exfiltration at all elevations
#3	Primary	108.45'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate (100% open area) Limited to weir flow at low heads

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Primary OutFlow Max=0.03 cfs @ 12.86 hrs HW=108.46' TW=0.00' (Dynamic Tailwater)

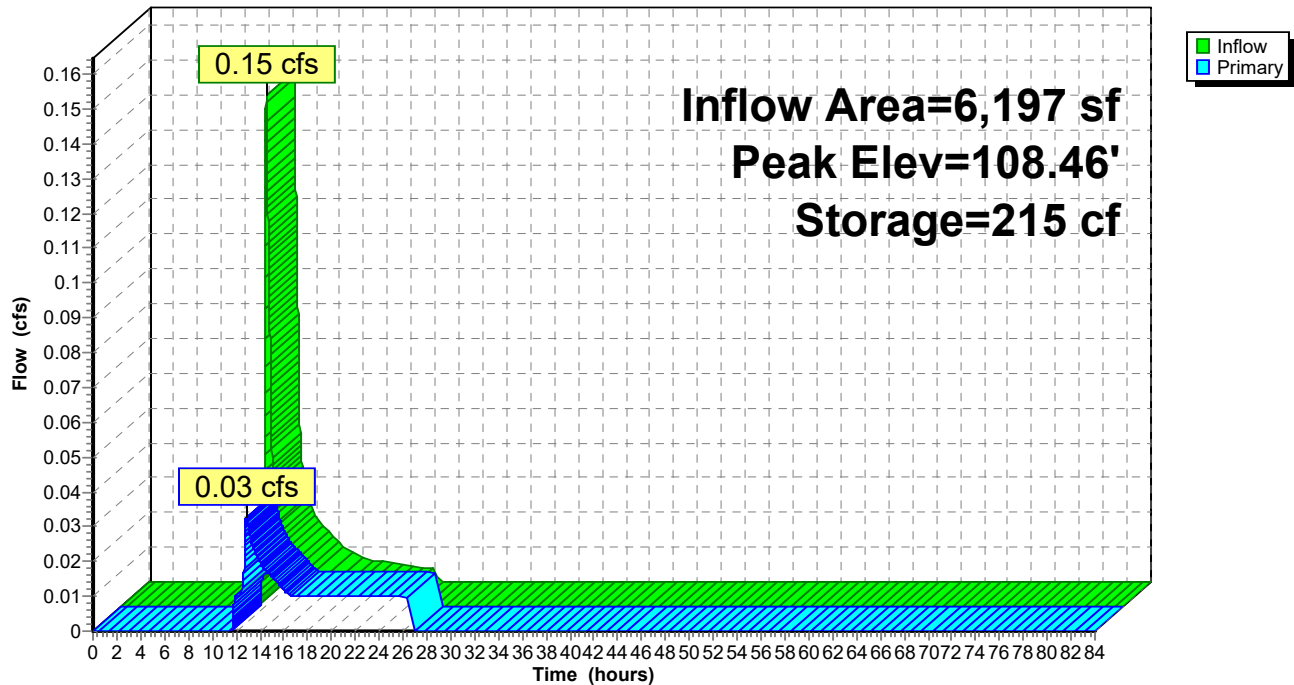
1=Culvert (Passes 0.01 cfs of 0.62 cfs potential flow)

2=Exfiltration (Exfiltration Controls 0.01 cfs)

3=Orifice/Grate (Weir Controls 0.02 cfs @ 0.31 fps)

Pond D3: Drip Strip

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Summary for Pond P1: Level Spreader

Inflow Area = 41,296 sf, 63.51% Impervious, Inflow Depth = 3.21" for 25-Year Storm event
 Inflow = 0.74 cfs @ 12.72 hrs, Volume= 11,049 cf
 Outflow = 0.74 cfs @ 12.72 hrs, Volume= 10,934 cf, Atten= 0%, Lag= 0.2 min
 Primary = 0.74 cfs @ 12.72 hrs, Volume= 10,934 cf
 Routed to Reach POI 1 : POI #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 101.57' @ 12.72 hrs Surf.Area= 140 sf Storage= 125 cf

Plug-Flow detention time= 22.0 min calculated for 10,934 cf (99% of inflow)
 Center-of-Mass det. time= 6.2 min (1,136.4 - 1,130.3)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	198 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	30	0	0
101.00	90	60	60
101.50	130	55	115
102.00	200	83	198

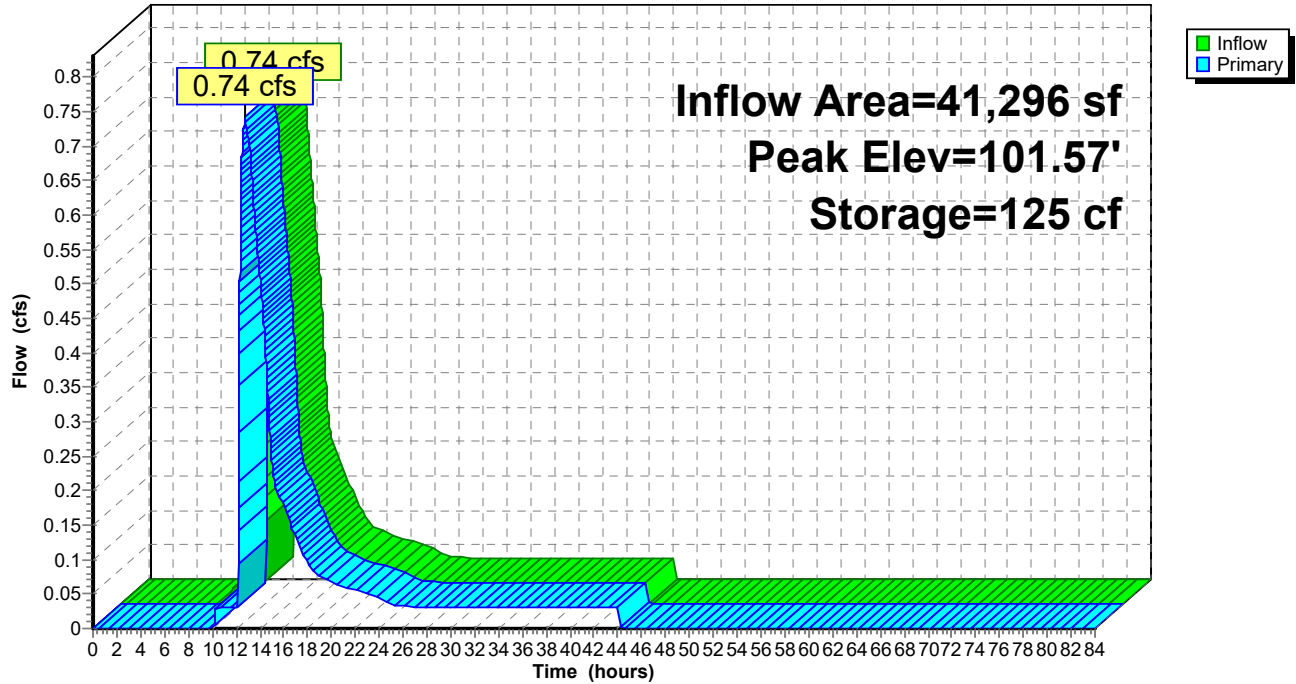
Device	Routing	Invert	Outlet Devices
#1	Primary	101.50'	15.0' long + 2.0 ' SideZ x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.74 cfs @ 12.72 hrs HW=101.57' TW=0.00' (Dynamic Tailwater)

↑1=**Broad-Crested Rectangular Weir** (Weir Controls 0.74 cfs @ 0.68 fps)

Pond P1: Level Spreader

Hydrograph



Post - NEW STORMS

Type III 24-hr 25-Year Storm Rainfall=5.80"

Prepared by LJB, Inc

Printed 2/11/2025

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Summary for Pond SF: Sand Filter

Inflow Area = 41,296 sf, 63.51% Impervious, Inflow Depth = 3.31" for 25-Year Storm event
 Inflow = 2.71 cfs @ 12.22 hrs, Volume= 11,374 cf
 Outflow = 2.69 cfs @ 12.24 hrs, Volume= 11,287 cf, Atten= 1%, Lag= 1.4 min
 Primary = 0.03 cfs @ 9.63 hrs, Volume= 3,784 cf
 Routed to Pond P1 : Level Spreader
 Secondary = 2.66 cfs @ 12.24 hrs, Volume= 7,503 cf
 Routed to Pond CPC : Channel Protection Chambers

Routing by Dyn-Stor-Ind method, Time Span= 0.00-84.00 hrs, dt= 0.01 hrs
 Peak Elev= 104.39' @ 12.71 hrs Surf.Area= 4,360 sf Storage= 2,518 cf
 Flood Elev= 192.02' Surf.Area= 4,360 sf Storage= 3,292 cf

Plug-Flow detention time= 267.0 min calculated for 11,287 cf (99% of inflow)
 Center-of-Mass det. time= 262.2 min (1,094.6 - 832.3)

Volume	Invert	Avail.Storage	Storage Description
#1	99.87'	9 cf	11.50'W x 195.44'L x 1.00'H Prismatic 2,248 cf Overall - 38 cf Embedded = 2,209 cf x 0.4% Voids
#2	100.20'	32 cf	4.0" Round Pipe Storage x 2 Inside #1 L= 181.0' 38 cf Overall - 0.2" Wall Thickness = 32 cf
#3A	102.37'	1,919 cf	11.50'W x 181.20'L x 2.83'H Field A 5,904 cf Overall - 1,106 cf Embedded = 4,798 cf x 40.0% Voids
#4A	102.87'	1,106 cf	ADS_StormTech SC-310 +Cap x 75 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 75 Chambers in 3 Rows
#5	99.87'	226 cf	6.00'D x 8.00'H Vertical Cone/Cylinder
		3,292 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	100.20'	4.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 100.20' / 100.15' S= 0.0050 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.09 sf
#2	Device 1	99.87'	0.03 cfs Exfiltration at all elevations
#3	Secondary	103.17'	12.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 103.17' / 102.87' S= 0.0167 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#4	Device 3	104.07'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#5	Secondary	104.07'	12.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.07' / 103.17' S= 0.0500 '/ Cc= 0.900

Post - NEW STORMS

Prepared by LJB, Inc

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Type III 24-hr 25-Year Storm Rainfall=5.80"

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n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 9.63 hrs HW=100.87' TW=100.87' (Dynamic Tailwater)

1=Culvert (Controls 0.00 cfs)

2=Exfiltration (Passes 0.00 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=2.66 cfs @ 12.24 hrs HW=104.35' TW=102.42' (Dynamic Tailwater)

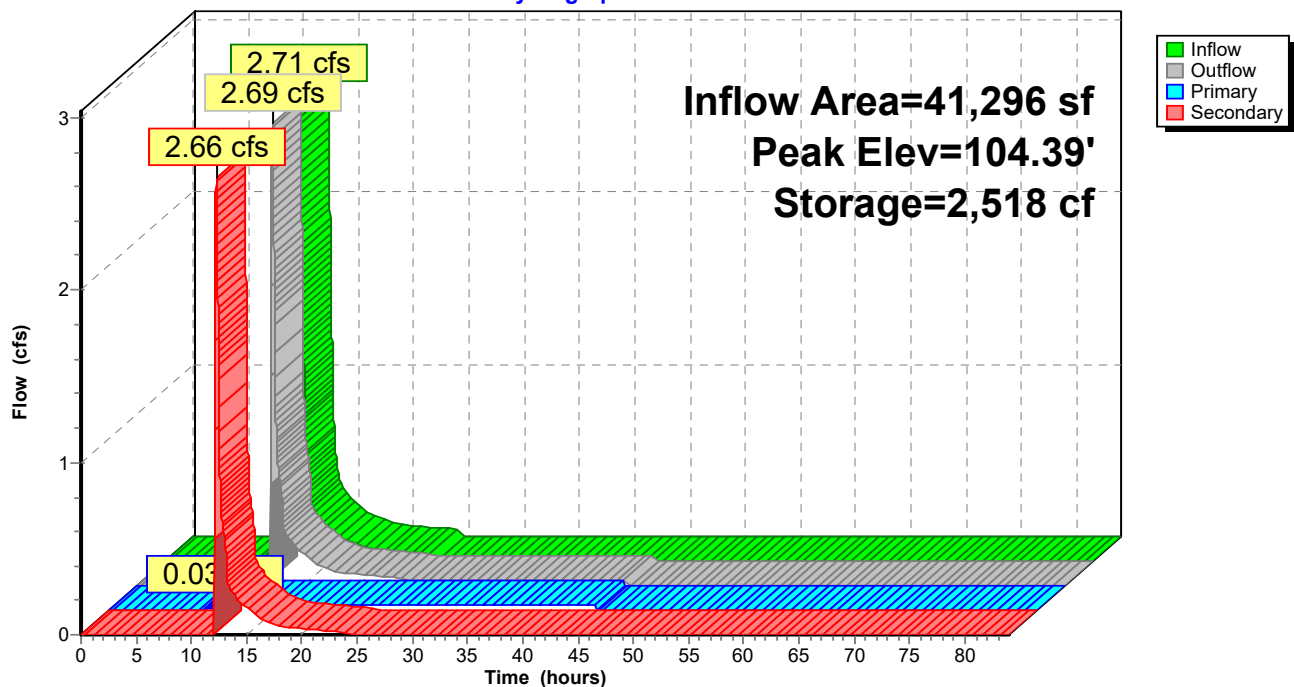
3=Culvert (Passes 2.41 cfs of 2.45 cfs potential flow)

4=Broad-Crested Rectangular Weir (Weir Controls 2.41 cfs @ 1.46 fps)

5=Culvert (Inlet Controls 0.25 cfs @ 1.41 fps)

Pond SF: Sand Filter

Hydrograph





ZONING ANALYSIS Relevant Zone(s) RN-5 + B-1

All Projects:

	Required	Proposed
Lot Size	40,000 sf	66,560 sf
Area Per Dwelling Unit	1,200 sf	1,331 sf
Minimum Street Frontage	50 ft	72 ft
Front Yard Minimum	25 ft	312 ft
Front Yard Maximum	-	312 ft
Rear Yard	25 ft	36 ft
Yard Right	16 ft	58 ft
Yard Left	16 ft	16.5 ft
Side Street Setback		
Step Back		
Maximum Lot Coverage	60%	23%
Minimum Lot Coverage		
Maximum Height	55 ft	47 ft
Open Space	30%	33%
Maximum Impervious Area		56%
Pavement Setback		
Floor Area Ratio		
Off Street Parking Spaces	0	50
Loading Bays		
Other 1	Bicycle Spaces	
Other 2	25	26
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	40,000 sf	66,560 sf
Minimum Lot Area per Dwelling	1,200 sf	1,331 sf
Maximum # Units per Building		25
Maximum Building Length	180 ft	140 ft
Maximum Accessory Building Length		
Minimum Setbacks	see table above	
Minimum Building Separation		
Minimum Open Space	see table above	

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space		N/A	
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

MEMORANDUM
TRAFFIC EVALUATION
1582 FOREST AVE
PORTLAND, ME
March 3, 2025

INTRODUCTION

It is our understanding that Acre Properties would like to propose the construction of two, three-story, multi-family dwellings as new residential development in Portland, Maine. Each dwelling will consist of 25 units for a total of 50 units combined. The residential development is proposed to be accessed via Belfort Street from Forest Avenue. The physical address for the site is 1582 Forest Avenue and is currently an undeveloped 1.5-acre site.

Gorrill Palmer received a comment response on their major site plan submission from Portland City Planner Eric Freeman stating that “1. *The applicant shall conduct a traffic study with the following scope: An evaluation of conditions at the Forest Avenue / Belfort Street intersection. This shall include an evaluation of traffic operations, safety conditions, pedestrian conditions, sight distance and access management conditions.*”

This memorandum includes an evaluation of the following:

- Capacity Analysis
- Safety Conditions
- Pedestrian Conditions
- Sight distance and access management

TRIP GENERATION

Trip generation for the site has been calculated using the Institute of Transportation Engineers’ (ITE) publication, *Trip Generation*, 11th Edition, the most recent edition accepted by MaineDOT. The proposed residential development will include 50 units. After review of the Land Use Codes (LUCs) provided in the 11th Edition of *Trip Generation*, the following was selected to calculate the trip generation for the proposed uses:

Proposed Trip Generation Variables

- LUC 220 – Multifamily Housing (Low-Rise)

The ITE provides two methodologies for determining trip generation; fitted curve and average rate. Because the number of units for the ITE studies are over 200, and 50 units are being proposed, using the fitted curve equation does not appear to yield realistic results. Therefore, the average rate was used for this evaluation. Trip generation calculations are provided in Attachment A.

The following Table I summarizes the trip generation for Multifamily Housing (Low-Rise)

Table I – Trip Generation (LUC 220 – 50 units)

Time Period	Trip Generation (Trip Ends)	
	Trip Gen Rates	Trip Generation
Weekday	6.74	337
AM Peak Hour of Adjacent Street	0.40	20
PM Peak Hour of Adjacent Street	0.51	26
AM Peak Hour Generator	0.47	24
PM Peak Hour Generator	0.57	28
Saturday Peak Hour Generator*	0.41	21

* Trip gen rates based on one study

TRAFFIC COUNT

Gorrill Palmer (GP) completed a turning movement count at the intersection of Forest Avenue / Belfort Street on Tuesday, February 25, 2025, from 2:00 PM – 6:00 PM and on Wednesday, February 26, 2025, from 7:00 AM – 9:00 AM. These time periods were approved by the City prior to counting. Raw traffic volumes on Forest Avenue were adjusted to peak summer conditions using the 2024 weekly group mean factors ($1.04 / 0.87 = 1.20$). This site is expected to be constructed in 2025, therefore it does not require an annual growth adjustment. Traffic figures are located in Attachment B.

CAPACITY ANALYSIS

A capacity analysis was completed for the intersection of Forest Avenue / Belfort Street for two scenarios; AM & PM peak hours for the predevelopment and postdevelopment conditions, Figures 2 & 4 respectively.

Capacity analysis was completed using Synchro/SimTraffic computer analysis software (Version 12). Hard copies of the capacity analysis are provided in Attachment D. Level of service rankings are similar to the academic rankings system where an 'A' is good with little control delay and an 'F' represents poor traffic conditions. If the level of service falls below a 'D' an evaluation should be made to determine if mitigation is warranted.

The following Table 2 summarizes the level of service for an unsignalized intersection based on the Highway Capacity Manual.

Table 2 – Unsignalized Intersection

Level of Service	Control Delay per Vehicle (s)
A	Less than 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 results of AM pre & postdevelopment conditions.

Table 3 – AM Capacity Analysis

Intersection Movement*	Predevelopment (delay sec./LOS)		Postdevelopment (delay sec./LOS)	
Belfort Street NB LR	9	A	10	A
Forest Avenue SEB TR	2	A	2	A
Forest Avenue NWB LT	2	A	2	A

*L=left, T=Through, R=Right, EB=Eastbound, NB=Northbound, SB=Southbound

The following Table 4 summarizes the results of PM pre & postdevelopment conditions.

Table 4 – PM Capacity Analysis

Intersection Movement*	Predevelopment (delay sec./LOS)		Postdevelopment (delay sec./LOS)	
Belfort Street NB LR	8	A	8	A
Forest Avenue SEB TR	2	A	2	A
Forest Avenue NWB LT	3	A	4	A

*L=left, T=Through, R=Right, EB=Eastbound, NB=Northbound, SB=Southbound

Based on the results from Tables 3 & 4, the intersection movements are forecast to operate at acceptable LOSs for all movements. The addition of the residential development is not forecast to have a significant impact on the operations of the intersection. Capacity analysis results are provided in Attachment C

SAFETY CONDITIONS

Gorrill Palmer requested and reviewed the latest three-year MaineDOT crash history (2021-2023) for the anticipated study area. Crash history is provided in Attachment D.

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

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

Based on a review of the crash history, there were two crashes at the Belfort St. / Forest Ave. intersection in the three-year time period 2021-2023. There are no high crash locations in the immediate study area.

In addition, GP reviewed the safety information on the MaineDOT Crash Query website for the period of 2021-2023 to check for pedestrian and bicycle crashes. There are no reported pedestrian or bicycle crashes in the immediate study area.

PEDESTRIAN CONDITIONS

Overall pedestrian counts were completed for the intersection of Forest Avenue / Belfort Street. The pedestrian count was completed for the full time period of 7:00 AM – 9:00 AM and 2:00 PM – 6:00 PM with no peak hour designation. There was a total of approximately 10 pedestrians that crossed Belfort Street and a total of approximately 10 pedestrians that crossed Forest Avenue at the crosswalk from 7:00 AM – 9:00 AM. There was a total of approximately 33 pedestrians that crossed Belfort Street and a total of approximately 16 pedestrians that crossed Forest Avenue at the crosswalk from 2:00 PM – 6:00 PM.

There are sidewalks provided on both sides of Forest Avenue and Belfort Street. A crosswalk is striped directly to the right exiting Belfort Street with no crosswalk striped across Belfort Street. There are not pedestrian landings provided at the Forest Avenue crosswalk ends or on either corner of Belfort Street. This is an existing condition and not the responsibility of the proposed project.

There is a bicycle lane provided on both sides of Forest Avenue.

SIGHT DISTANCE & ACCESS MANAGEMENT

The site is proposed to be accessed via one full movement unsignalized driveway off Belfort Street. Per the request of the City, sight distance was measured at the intersection of Forest Avenue / Belfort Street.

Sight Distance:

The City of Portland and MaineDOT use the same standards for sight distance. The following Table 5 presents the sight distance standards for MaineDOT.

Table 5 – Standards for Sight Distance

Speed Limit (mph)	Passenger Vehicle – MaineDOT (ft)
25	200
30	250
35	305
40	360
45	425

MaineDOT sight distance evaluation methodology is as follows:

Driveway Observation Point:	10 feet from traveled way
Height of Eye at Driveway:	3.5 feet above the ground
Height of Approaching vehicle:	4.25 feet above the ground

Based on the MaineDOT Map Viewer, Forest Avenue in the site vicinity is 30 mph. This speed was used for the sight distance evaluation.

The following Table 6 summarizes the measured sight distances exiting Belfort Street onto Forest Avenue looking left and right.

Table 6 – Sight Distance Summary

Driveway	Passenger Vehicle Required (feet)	Observed Looking Left (feet)	Observed Looking Right (feet)
Belfort Street	250	Approximately 270 to intersection	400+

As seen from the results in Table 6, the available sight distances exceed MaineDOT minimum requirements, provided parked vehicles in the area do not block sight distances.

It was observed during the traffic count that vehicles parking adjacent to and in front of a local store on the southwesterly corner of the intersection causes sight-distance issues looking to the left leaving Belfort Street.

This is a long-standing existing condition and is not the responsibility of the proposed development to address.

Access Management:

The adjacent store has two significantly wide curb cuts (greater than 50 feet each) on Forest Avenue and a third curb cut located on Belfort Street approximately 25 feet from the intersection with Forest Avenue. In addition to the store, the business on the opposite side of Belfort Street, also has a significantly wide curb cut (approximately 100 feet) close to Forest Avenue.

In our opinion, the access management in the immediate area is very poor, but it is a long-standing existing condition that is not the responsibility of the proposed development to address.

Attachments:

Attachment A – Trip Generation
Attachment B – Trip Figures
Attachment C – Capacity Analysis
Attachment D – Safety Review

Attachment A

Trip Generation

Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

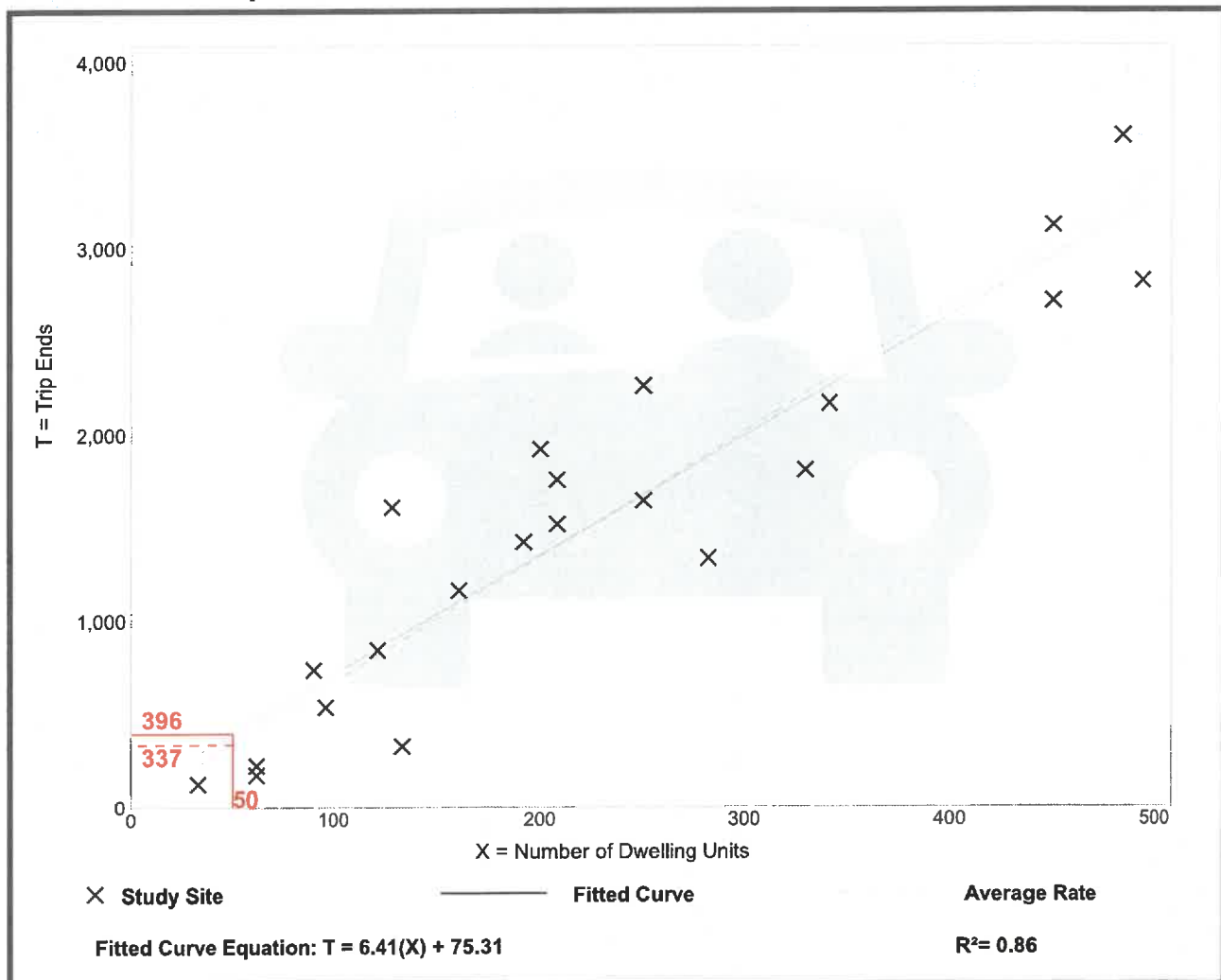
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

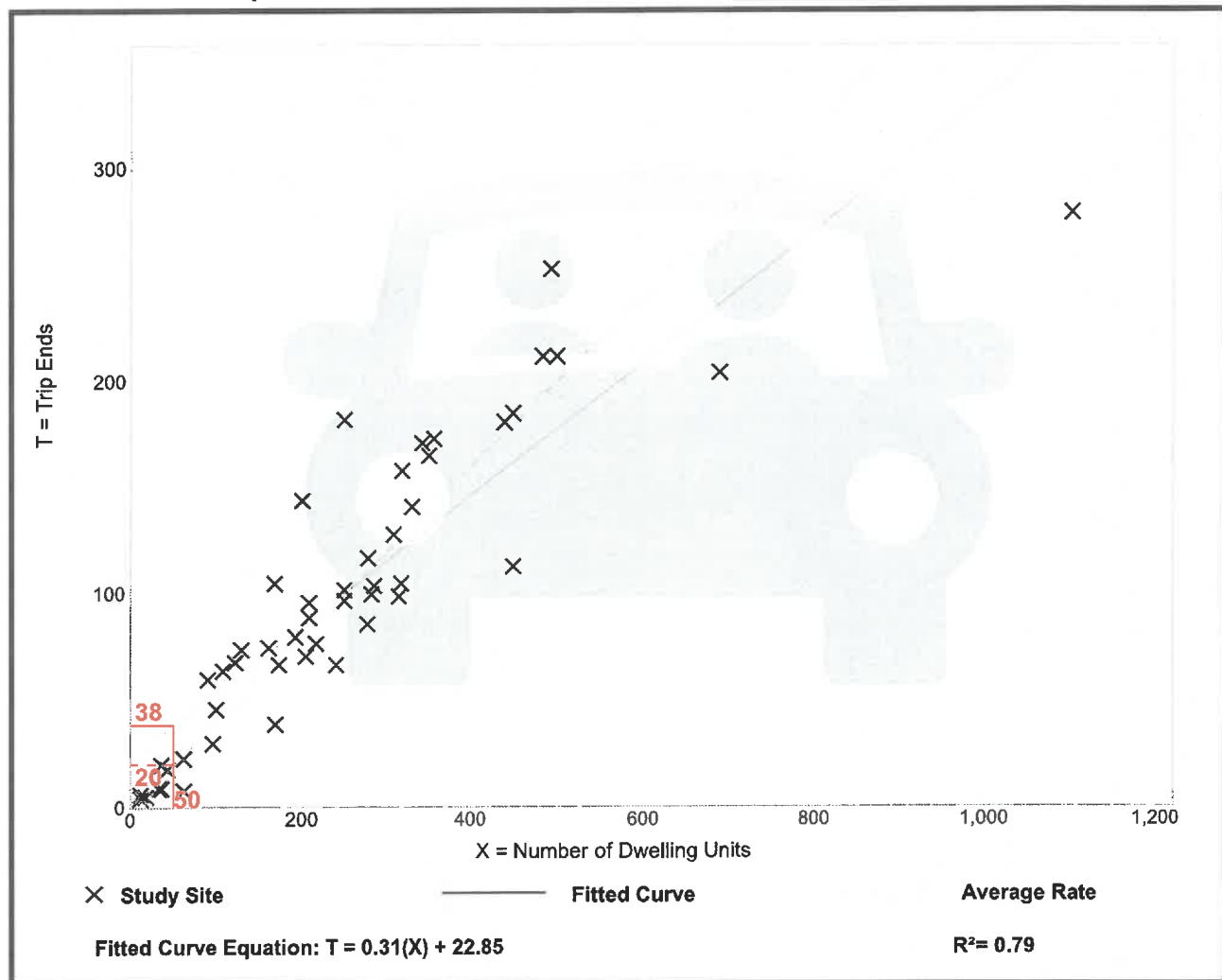
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

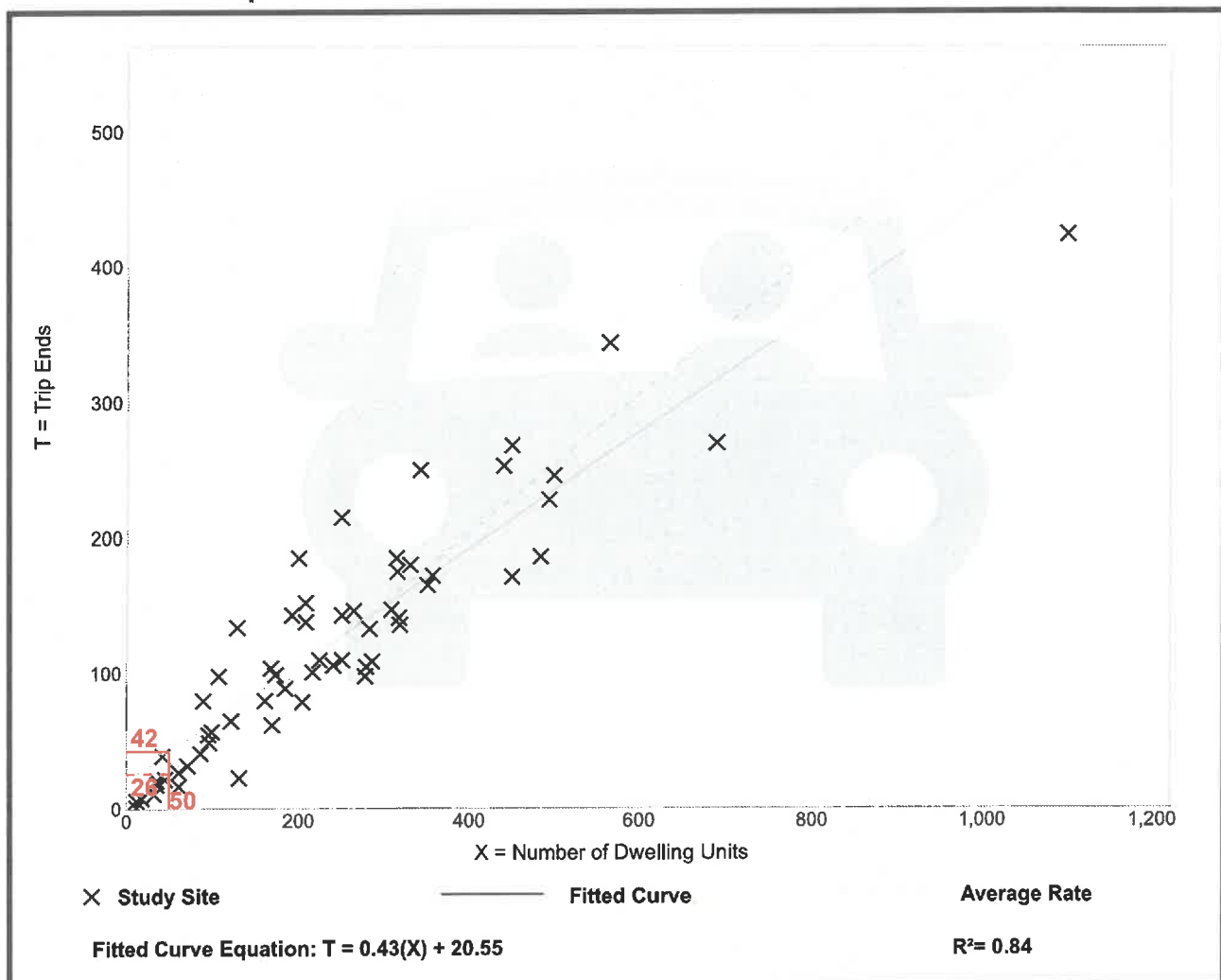
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

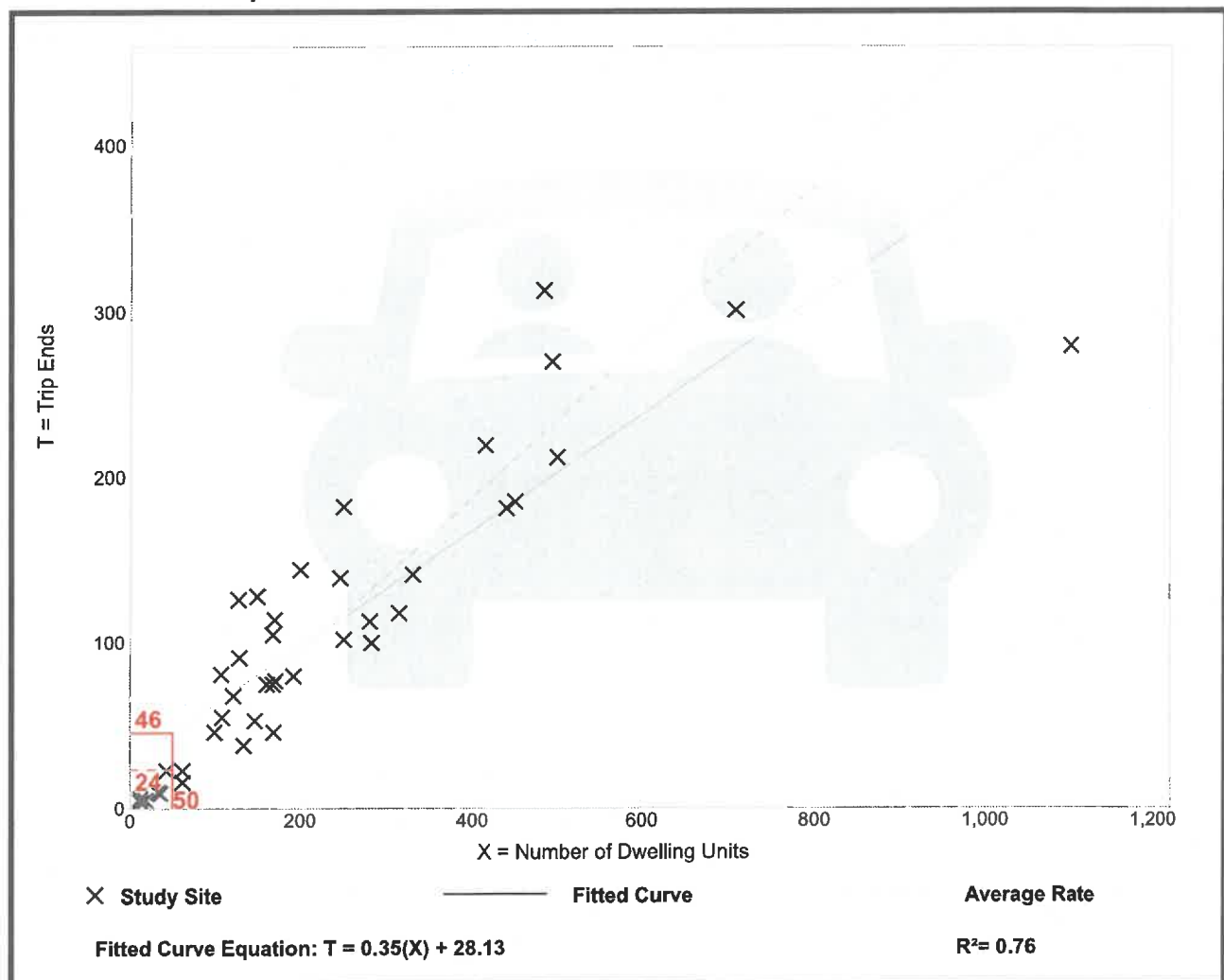
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 40
Avg. Num. of Dwelling Units: 234
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.47	0.25 - 0.98	0.16

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

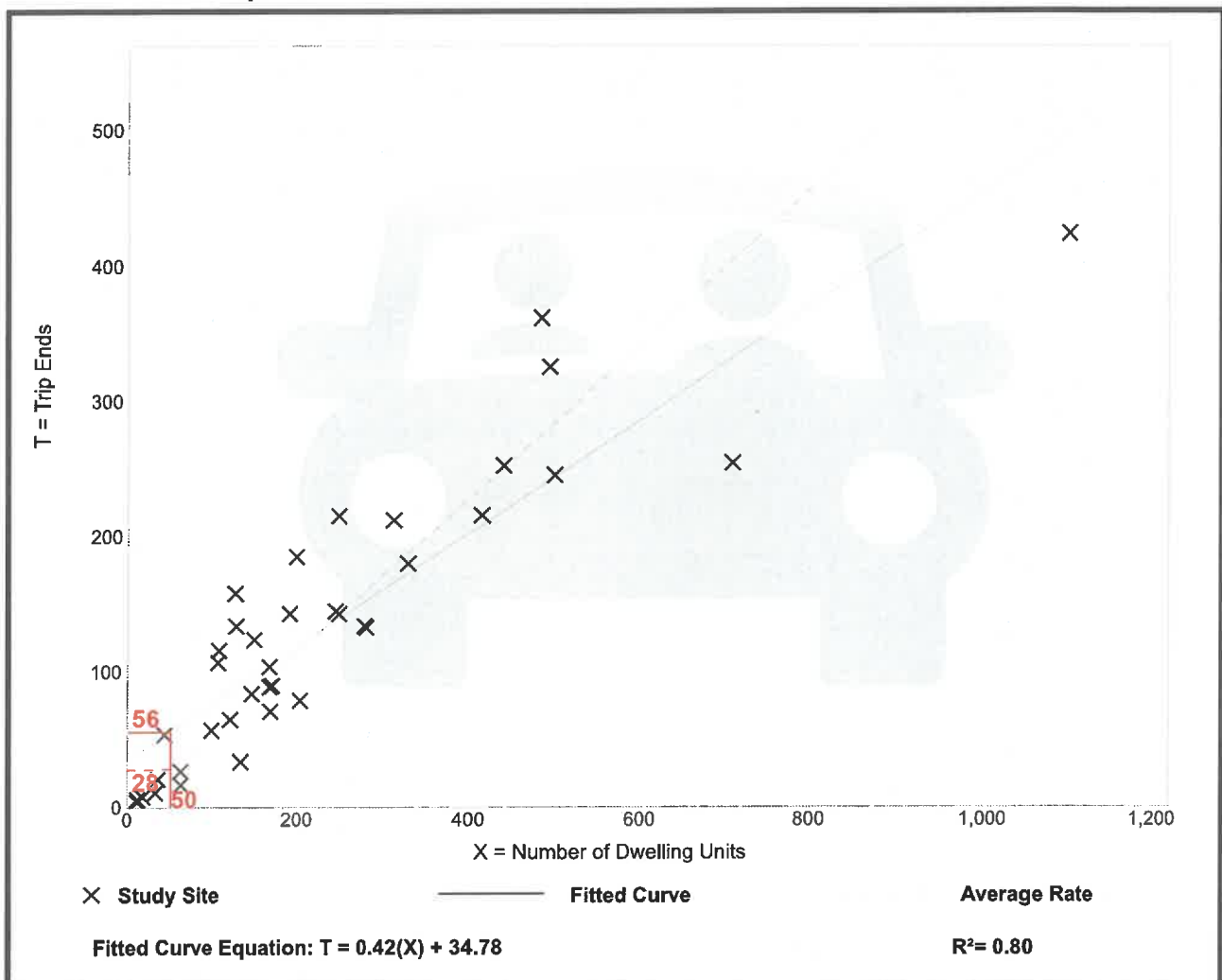
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 38
Avg. Num. of Dwelling Units: 231
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.25 - 1.26	0.20

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

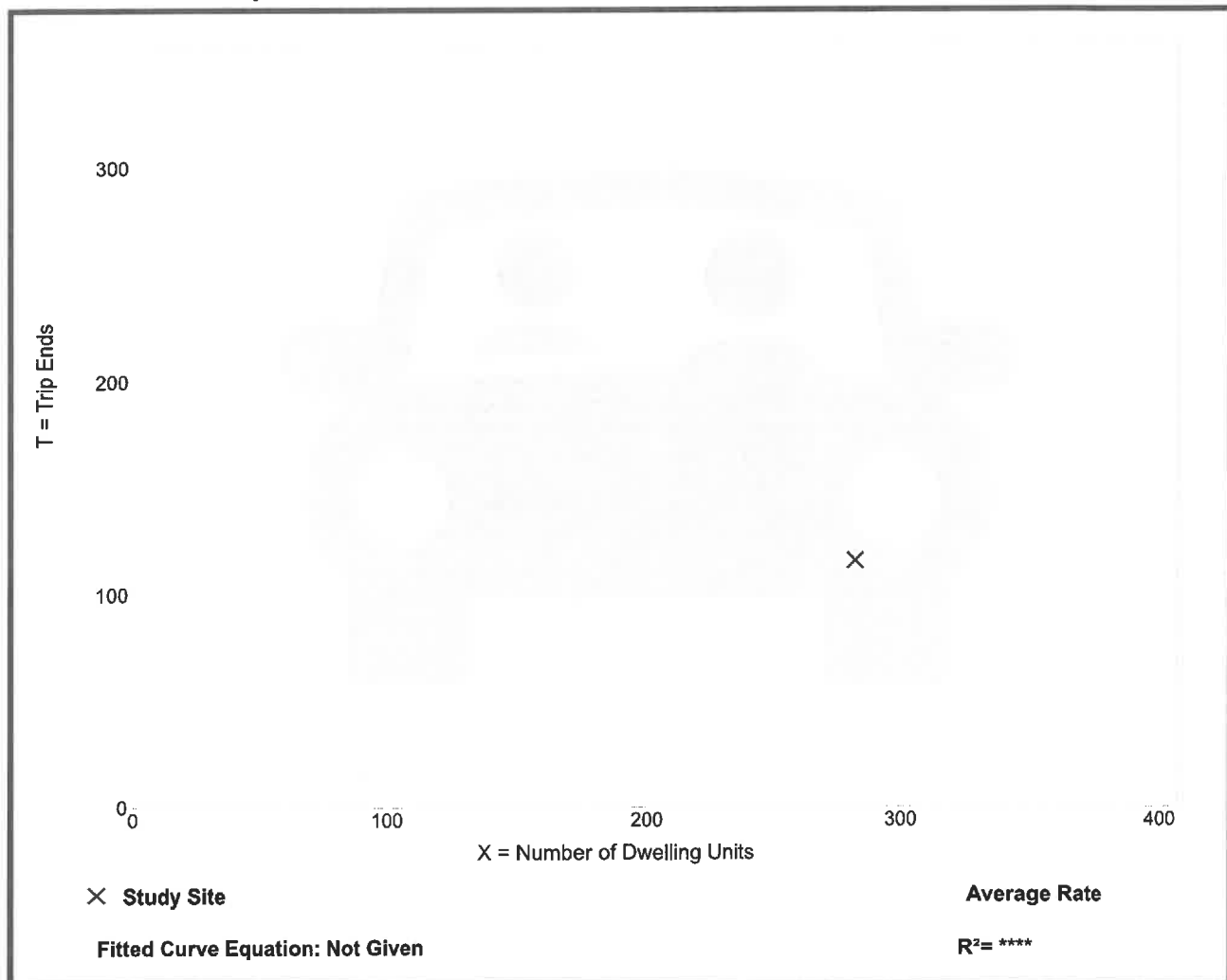
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.41 - 0.41	*

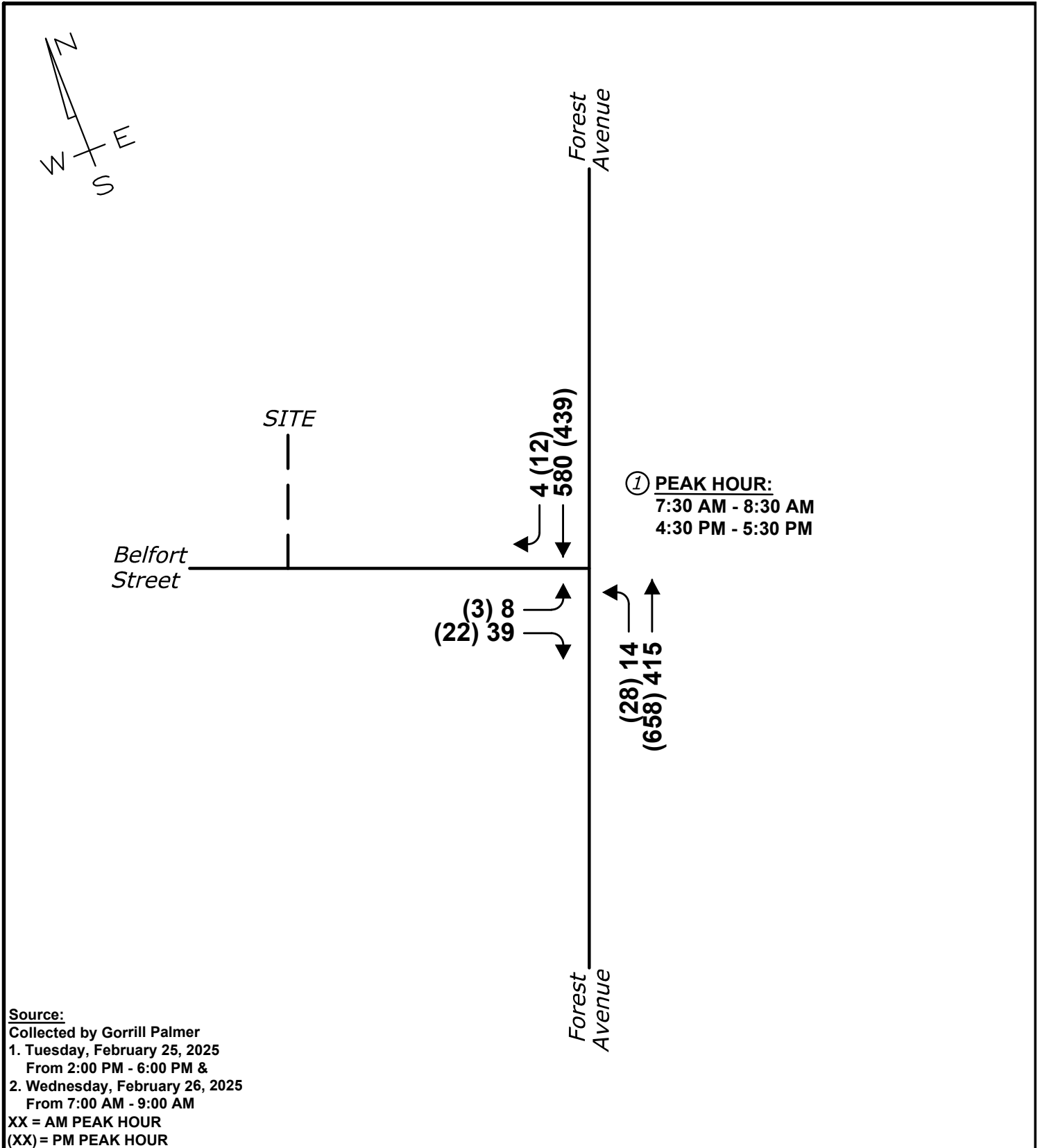
Data Plot and Equation

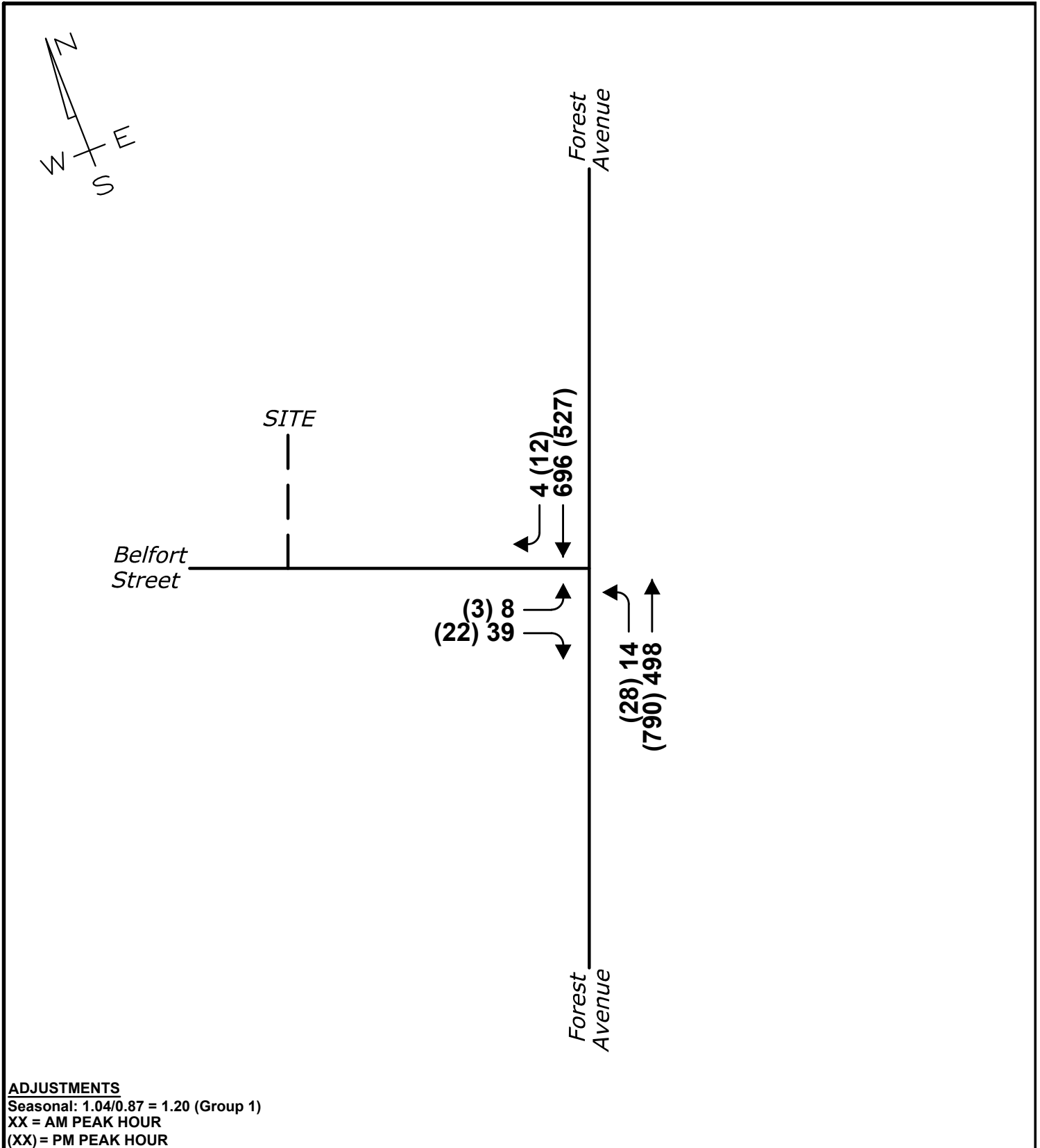
Caution – Small Sample Size



Attachment B

Trip Figures

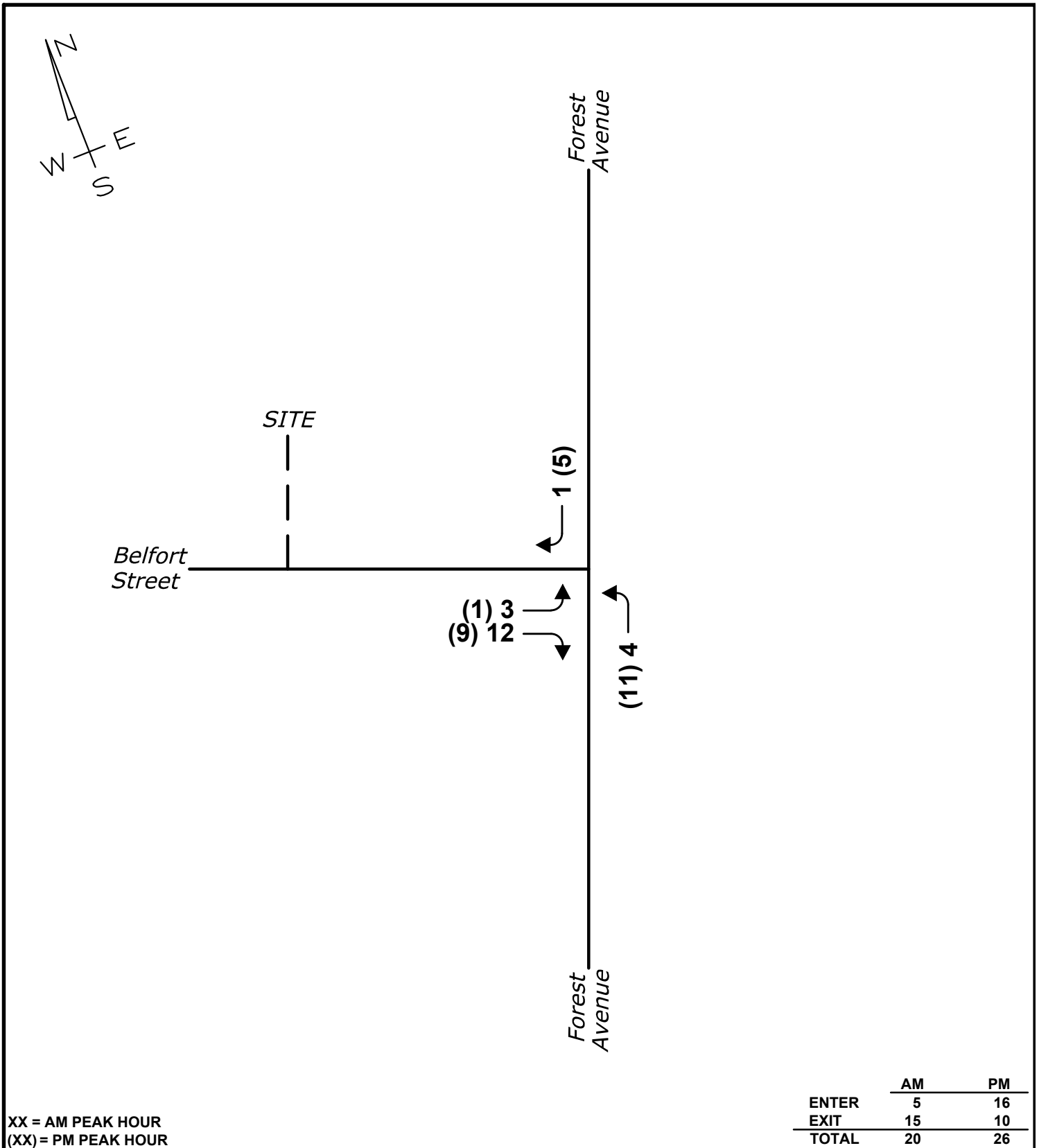




TRIP DISTRIBUTION

Figure No.

3

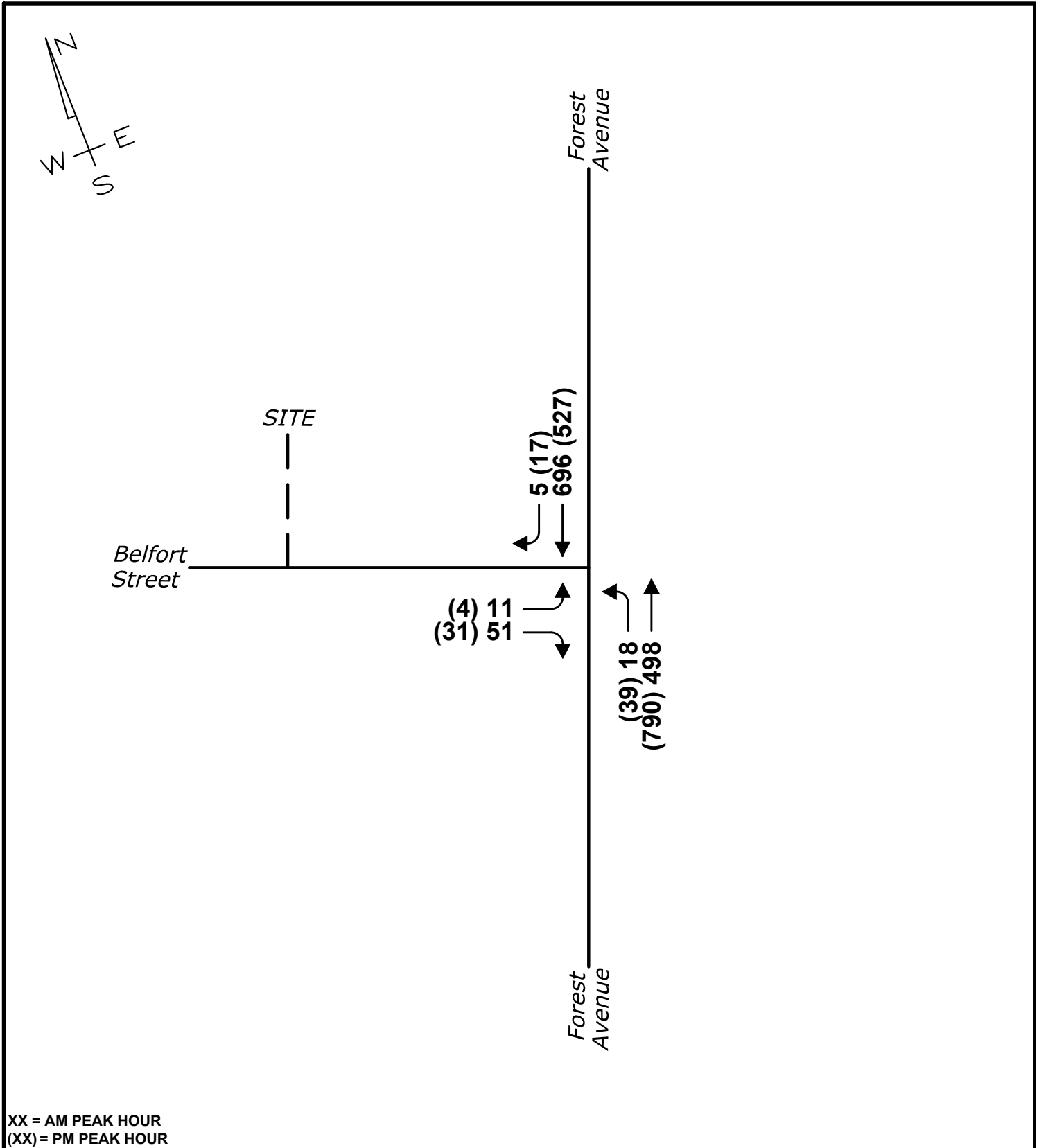


158 FOREST AVE PORTLAND, MAINE

Design: KJB Scale: NONE
Draft: KJB Date: 2/28/2025
Checked: RED File Name: Figure Set-TD.dwg



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158 FOREST AVE PORTLAND, MAINE

Attachment C

Capacity Analysis

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:30	7:30	7:30	7:30	7:30	7:30
End Time	8:35	8:35	8:35	8:35	8:35	8:35
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	1319	1313	1258	1243	1206	1268
Vehs Exited	1316	1321	1264	1241	1205	1270
Starting Vehs	22	25	30	16	23	21
Ending Vehs	25	17	24	18	24	20
Travel Distance (mi)	682	681	655	645	627	658
Travel Time (hr)	24.9	24.8	23.9	23.2	22.8	23.9
Total Delay (hr)	1.7	1.7	1.7	1.5	1.6	1.6
Total Stops	62	71	58	64	58	63
Fuel Used (gal)	20.2	20.1	19.4	18.9	18.4	19.4

Interval #0 Information Seeding

Start Time	7:30
End Time	7:35
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:35
End Time	8:35
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1319	1313	1258	1243	1206	1268
Vehs Exited	1316	1321	1264	1241	1205	1270
Starting Vehs	22	25	30	16	23	21
Ending Vehs	25	17	24	18	24	20
Travel Distance (mi)	682	681	655	645	627	658
Travel Time (hr)	24.9	24.8	23.9	23.2	22.8	23.9
Total Delay (hr)	1.7	1.7	1.7	1.5	1.6	1.6
Total Stops	62	71	58	64	58	63
Fuel Used (gal)	20.2	20.1	19.4	18.9	18.4	19.4

3: Belfort Street & Forest Avenue Performance by lane

Lane	NB	SE	NW	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	9.0	1.5	1.7	1.9

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	4.1

Intersection: 3: Belfort Street & Forest Avenue

Movement	NB	NW
Directions Served	LR	LT
Maximum Queue (ft)	65	112
Average Queue (ft)	28	12
95th Queue (ft)	54	56
Link Distance (ft)	977	1464
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	7:30	7:30	7:30	7:30	7:30	7:30
End Time	8:35	8:35	8:35	8:35	8:35	8:35
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	1334	1340	1271	1253	1216	1283
Vehs Exited	1333	1347	1274	1253	1216	1285
Starting Vehs	23	25	30	17	23	22
Ending Vehs	24	18	27	17	23	21
Travel Distance (mi)	690	694	660	649	631	665
Travel Time (hr)	25.2	25.3	24.1	23.5	23.0	24.2
Total Delay (hr)	1.7	1.8	1.7	1.5	1.6	1.7
Total Stops	72	87	73	90	76	80
Fuel Used (gal)	20.4	20.5	19.6	19.1	18.6	19.6

Interval #0 Information Seeding

Start Time	7:30
End Time	7:35
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:35
End Time	8:35
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1334	1340	1271	1253	1216	1283
Vehs Exited	1333	1347	1274	1253	1216	1285
Starting Vehs	23	25	30	17	23	22
Ending Vehs	24	18	27	17	23	21
Travel Distance (mi)	690	694	660	649	631	665
Travel Time (hr)	25.2	25.3	24.1	23.5	23.0	24.2
Total Delay (hr)	1.7	1.8	1.7	1.5	1.6	1.7
Total Stops	72	87	73	90	76	80
Fuel Used (gal)	20.4	20.5	19.6	19.1	18.6	19.6

3: Belfort Street & Forest Avenue Performance by lane

Lane	NB	SE	NW	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	9.2	1.5	1.8	2.0

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	4.1

Intersection: 3: Belfort Street & Forest Avenue

Movement	NB	NW
Directions Served	LR	LT
Maximum Queue (ft)	69	96
Average Queue (ft)	32	15
95th Queue (ft)	56	59
Link Distance (ft)	977	1464
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	4:30	4:30	4:30	4:30	4:30	4:30
End Time	5:35	5:35	5:35	5:35	5:35	5:35
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	1423	1461	1398	1336	1372	1399
Vehs Exited	1425	1470	1410	1325	1373	1401
Starting Vehs	30	31	31	14	17	24
Ending Vehs	28	22	19	25	16	23
Travel Distance (mi)	739	761	728	690	712	726
Travel Time (hr)	27.0	28.0	26.7	25.2	26.2	26.6
Total Delay (hr)	2.0	2.3	2.0	1.9	2.1	2.0
Total Stops	59	49	52	50	47	51
Fuel Used (gal)	22.0	22.4	21.6	20.3	21.0	21.5

Interval #0 Information Seeding

Start Time	4:30
End Time	4:35
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:35
End Time	5:35
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1423	1461	1398	1336	1372	1399
Vehs Exited	1425	1470	1410	1325	1373	1401
Starting Vehs	30	31	31	14	17	24
Ending Vehs	28	22	19	25	16	23
Travel Distance (mi)	739	761	728	690	712	726
Travel Time (hr)	27.0	28.0	26.7	25.2	26.2	26.6
Total Delay (hr)	2.0	2.3	2.0	1.9	2.1	2.0
Total Stops	59	49	52	50	47	51
Fuel Used (gal)	22.0	22.4	21.6	20.3	21.0	21.5

3: Belfort Street & Forest Avenue Performance by lane

Lane	NB	SE	NW	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.6
Total Del/Veh (s)	7.4	1.3	2.8	2.3

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	4.6

Intersection: 3: Belfort Street & Forest Avenue

Movement	NB	NW
Directions Served	LR	LT
Maximum Queue (ft)	47	133
Average Queue (ft)	16	23
95th Queue (ft)	42	84
Link Distance (ft)	977	1464
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	4:30	4:30	4:30	4:30	4:30	4:30
End Time	5:35	5:35	5:35	5:35	5:35	5:35
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	1434	1487	1408	1347	1402	1416
Vehs Exited	1441	1496	1420	1339	1408	1421
Starting Vehs	32	31	30	18	22	25
Ending Vehs	25	22	18	26	16	22
Travel Distance (mi)	745	772	732	696	728	735
Travel Time (hr)	27.4	28.6	26.9	25.6	26.9	27.1
Total Delay (hr)	2.1	2.4	2.1	2.0	2.2	2.2
Total Stops	71	79	75	69	75	74
Fuel Used (gal)	22.2	22.9	21.9	20.7	21.6	21.8

Interval #0 Information Seeding

Start Time	4:30
End Time	4:35
Total Time (min)	5
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:35
End Time	5:35
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1434	1487	1408	1347	1402	1416
Vehs Exited	1441	1496	1420	1339	1408	1421
Starting Vehs	32	31	30	18	22	25
Ending Vehs	25	22	18	26	16	22
Travel Distance (mi)	745	772	732	696	728	735
Travel Time (hr)	27.4	28.6	26.9	25.6	26.9	27.1
Total Delay (hr)	2.1	2.4	2.1	2.0	2.2	2.2
Total Stops	71	79	75	69	75	74
Fuel Used (gal)	22.2	22.9	21.9	20.7	21.6	21.8

3: Belfort Street & Forest Avenue Performance by lane

Lane	NB	SE	NW	All
Movements Served	LR	TR	LT	
Denied Del/Veh (s)				0.6
Total Del/Veh (s)	7.5	1.3	3.1	2.5

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	4.8

Intersection: 3: Belfort Street & Forest Avenue

Movement	NB	NW
Directions Served	LR	LT
Maximum Queue (ft)	47	145
Average Queue (ft)	21	31
95th Queue (ft)	46	97
Link Distance (ft)	977	1464
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Attachment D

Safety Review

Report Selections and Input Parameters

REPORT SELECTIONS

☒ Crash Summary I

☐ Section Detail

☒ Crash Summary II

☐ 1320 Public

☐ 1320 Private

☐ 1320 Summary

REPORT DESCRIPTION

Portland

Forest Ave (Rte 302) from Westlawn Dr-Commonwealth Dr (16881) to Newton St (16884) & Belfort St from Por,Belfast,Elbert St (13297) to Forest Ave (16882)

REPORT PARAMETERS

Year 2021, Start Month 1 through Year 2023 End Month: 12

Route: 0302X	Start Node: 16881	Start Offset: 0	☐ Exclude First Node
	End Node: 16884	End Offset: 0	☐ Exclude Last Node
Route: 0560050	Start Node: 16882	Start Offset: 0	☐ Exclude First Node
	End Node: 13297	End Offset: 0	☐ Exclude Last Node
Route: 3209864	Start Node: 69084	Start Offset: 0	☐ Exclude First Node
	End Node: 69085	End Offset: 0	☐ Exclude Last Node

Crash Summary I

Nodes														
Node	Route - MP	Node Description	U/R	Total Crashes	K	Injury Crashes			PD	Injury	Percent Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
16883	0302X - 3.15	Int of FOREST AV HARRIS AV	2	2	0	0	0	0	2	0.0	6.325	0.11	0.32	0.00
P16884	0302X - 3.20	Int of FOREST AV NEWTON ST	9	3	0	0	0	0	3	0.0	6.566	Statewide Crash Rate: 0.13		
												0.15	1.17	0.00
16882	0302X - 3.13	Int of BELFORT ST FOREST AV	2	2	0	0	0	0	2	0.0	6.219	0.11	0.32	0.00
16881	0302X - 3.07	Int of COMMONWEALTH DR FOREST AV WESTLAWN RD	2	0	0	0	0	0	0	0.0	6.172	Statewide Crash Rate: 0.13		
												0.00	0.32	0.00
A69084	0302X - 3.19	Int of ENT TO RIVERTON SCHOOL FOREST AV	9	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
16882	0560050 - 0	Int of BELFORT ST FOREST AV	2	2	0	0	0	0	2	0.0	6.219	0.11	0.32	0.00
13297	0560050 - 0.24	0503711 POR,BELFAST,ELBERT ST.	2	0	0	0	0	0	0	0.0	0.219	Statewide Crash Rate: 0.13		
												0.00	0.51	0.00
A69084	3209864 - 0	Int of ENT TO RIVERTON SCHOOL FOREST AV	9	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
69085	3209864 - 0.01	End of ENT TO RIVERTON SCHOOL	2	0	0	0	0	0	0	0.0	0.002	Statewide Crash Rate: 0.71		
												0.00	-78.64	0.00
Study Years: 3.00			NODE TOTALS:											
				9	0	0	0	0	9	0.0	31.722	0.09	0.38	0.25

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	A	B	C	PD	Injury Percent	Annual HMVM	Crash Rate	Critical Rate	CRF
16881	16882	3130491	0 - 0.06	0302X - 3.07 US 302	0.06	2	1	0	0	0	1	0.0	0.00359	92.72	498.87	0.00
Int of COMMONWEALTH DR FOREST AV WESTLAWN RD																
16882	16883	3131657	0 - 0.02	0302X - 3.13 US 302	0.02	2	2	0	0	0	2	0.0	0.00123	542.27	656.88	0.00
Int of BELFORT ST FOREST AV																
16883	69084	3506324	0 - 0.04	0302X - 3.15 US 302	0.04	2	2	0	0	0	2	0.0	0.00252	264.45	546.72	0.00
Int of FOREST AV HARRIS AV																
69084	16884	3506325	0 - 0.01	0302X - 3.19 US 302	0.01	2	0	0	0	0	0	0.0	0.00065	0.00	758.42	0.00
Int of ENT TO RIVERTON SCHOOL FOREST AV																
13297	16882	187995	0 - 0.24	0560050 - 0 RD INV 05 60050	0.24	2	2	0	0	0	2	0.0	0.00072	928.09	1205.03	0.00
0503711 POR,BELFAST,ELBERT ST.																
69084	69085	3506326	0 - 0.01	3209864 - 0 RD INV 3209864	0.01	2	0	0	0	0	0	0.0	0.00000	0.00	-	0.00
Int of ENT TO RIVERTON SCHOOL FOREST AV																
Statewide Crash Rate: 197.04																
Statewide Crash Rate: 197.04																
Statewide Crash Rate: 197.04																
Statewide Crash Rate: 197.04																
Statewide Crash Rate: 369.86																
Statewide Crash Rate: 408.97																
96																

Study Years:	3.00	Section Totals:	0.38	7	0	0	0	0	0	0	7	0.0	0.00872	267.63	423.70	0.63
Grand Totals:			0.38	16	0	0	0	0	0	0	16	0.0	0.00872	611.73	563.63	1.09

Crash Summary

Section Details														
Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
16881	16882	3130491	0 - 0.06	0302X - 3.07	1	0	0	0	0	1	2023-30715	10/23/2023	3.08	PD
16882	16883	3131657	0 - 0.02	0302X - 3.13	2	0	0	0	0	2	2022-38909	12/25/2022	3.14	PD
16883	69084	3506324	0 - 0.04	0302X - 3.15	2	0	0	0	0	2	2021-11664	05/16/2021	3.14	PD
69084	16884	3506325	0 - 0.01	0302X - 3.19	0	0	0	0	0	0	2021-18414	07/17/2021	3.17	PD
13297	16882	187995	0 - 0.24	0560050 - 0	2	0	0	0	0	2	2022-17687	06/25/2022	3.17	PD
69084	69085	3506326	0 - 0.01	3209864 - 0	0	0	0	0	0	0	2021-27983	10/17/2021	0.08	PD
											2021-4659	02/22/2021	0.21	PD
Totals:					7	0	0	0	0	7				

PM

[illegible]

Total

Total

Crashes by Driver Action at Time of Crash						
Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Total
No Contributing Action	3	8	1	0	0	12
Ran Off Roadway	0	0	0	0	0	0
Failed to Yield Right-of-Way	1	0	0	0	0	1
Ran Red Light	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0
Drove Too Fast For Conditions	1	0	0	0	0	1
Improper Turn	0	0	0	0	0	0
Improper Backing	2	0	0	0	0	2
Improper Passing	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0
Followed Too Closely	6	4	0	0	0	10
Failed to Keep in Proper Lane	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0
Other Contributing Action	2	1	0	0	0	3
Unknown	1	0	0	0	0	1
Total	16	13	1	0	0	30

Crashes by Apparent Physical Condition And Driver						
Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Total
Apparently Normal	14	13	1	0	0	28
Physically Impaired	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	1	0	0	0	0	1
Other	0	0	0	0	0	0
Total	15	13	1	0	0	29

Driver Age by Unit Type					
Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV
09-Under	0	0	0	0	0
10-14	0	0	0	0	0
15-19	3	0	0	0	0
20-24	3	0	0	0	0
25-29	1	0	0	0	0
30-39	12	0	0	0	0
40-49	3	0	0	0	0
50-59	6	0	0	0	0
60-69	1	0	0	0	0
70-79	1	0	0	0	0
80-Over	0	0	0	0	0
Unknown	2	0	0	0	0
Total	32	0	0	0	0

Crash Summary II - Characteristics

Most Harmful Event			
Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	Total	32
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	30		
14-Parked Motor Vehicle	2		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
Traffic Control Devices			
		Traffic Control Device	Total
16-Work Zone / Maintenance Equipment	0	1-Traffic Signals (Stop & Go)	5
17-Other Non-Fixed Object	0	2-Traffic Signals (Flashing)	1
18-Impact Attenuator / Crash Cushion	0	3-Advisory/Warning Sign	0
19-Bridge Overhead Structure	0	4-Stop Signs - All Approaches	0
20-Bridge Pier or Support	0	5-Stop Signs - Other	2
21-Bridge Rail	0	6-Yield Sign	0
22-Cable Barrier	0	7-Curve Warning Sign	0
23-Culvert	0	8-Officer, Flagman, School Patrol	0
24-Curb	0	9-School Bus Stop Arm	0
25-Ditch	0	10-School Zone Sign	0
26-Embankment	0	11-R.R. Crossing Device	0
27-Guardrail Face	0	12-No Passing Zone	0
28-Guardrail End	0	13-None	8
29-Concrete Traffic Barrier	0	14-Other	0
30-Other Traffic Barrier	0	Total	16
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	0		

Injury Data			
Severity Code	Injury Crashes	Number Of Injuries	
K	0	0	
A	0	0	
B	0	0	
C	0	0	
PD	16	0	
Total	16	0	

Road Character	
Road Grade	Total
1-Level	14
2-On Grade	2
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	16

Light	
Light Condition	Total
1-Daylight	12
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	3
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	16

Crashes by Year and Month

Month	2021	2022	2023	Total
JANUARY	0	0	0	0
FEBRUARY	3	1	0	4
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	2	0	0	2
JUNE	0	3	0	3
JULY	1	0	2	3
AUGUST	0	0	1	1
SEPTEMBER	0	0	0	0
OCTOBER	1	0	1	2
NOVEMBER	0	0	0	0
DECEMBER	0	1	0	1
Total	7	5	4	16

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	3	0	9	0	0	1	0	0	0	0	0	0	0	0	13
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	9	0	0	4	0	0	0	0	0	0	0	0	16

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	6	0	0	0	0	0	0	0	0	0	1	7
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	3	0	0	0	0	0	0	0	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	1	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	1	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	1	0	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	10	1	0	0	0	0	2	0	0	0	3	16

ATTACHMENT 13
GEOTECHNICAL STUDY



PLAN REFERENCE

AERIAL IMAGE (MAY 4, 2018) WAS
OBTAINED FROM GOOGLE EARTH.

LEGEND

 B-1 SUMMIT TEST BORING
(JULY 17, 2023)

OFFICE: 210 MAINE AVENUE FAIRMINGDALE, MAINE TEL.: (207) 446-3360		MAIL: P.O. BOX 515 GARDINER, ME 04345		 GEOENGINEERING SERVICES
PROJECT: NEW APARTMENT BUILDING 1584 FOREST AVENUE - PORTLAND, MAINE		CLIENT: DAN ANDERSON REAL ESTATE, INC.		
TITLE: EXPLORATION LOCATION PLAN		SCALE: 1" = 40'	DRAWN BY: KRF	APPR. BY: JNB
DATE: JULY 19, 2023				
FIGURE: 1		PROJECT: 23172		

EXPLORATION COVER SHEET

The exploration logs are prepared by the geotechnical engineer from both field and laboratory data. Soil descriptions are based upon the Unified Soil Classification System (USCS) per ASTM D2487 and/or ASTM D2488 as applicable. Supplemental descriptive terms for estimated particle percentage, color, density, moisture condition, and bedrock may also be included to further describe conditions.

Drilling and Sampling Symbols:

S = Split Spoon Sample	Hyd = Hydraulic Advancement of Drilling Rods
UT = Thin Wall Shelby Tube	Push = Direct Push of Drilling Rods
SSA = Solid Stem Auger	WOH = Weight of Hammer
HSA = Hollow Stem Auger	WOR = Weight of Rod
RW = Rotary Wash	PI = Plasticity Index
SV = Lab Shear Vane (Torvane)	LL = Liquid Limit
PP = Pocket Penetrometer	MC = Natural Moisture Content
C = Rock Core Sample	USCS = Unified Soil Classification System
FV = Field Vane Shear Test	Su = Undrained Shear Strength
SP = Concrete Punch Sample	Su(r) = Remolded Shear Strength

Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. Groundwater monitoring wells may be required to record accurate depths and fluctuation.

Gradation Description and Terminology:

Boulders:	Over 12 inches	Trace:	Less than 5%
Cobbles:	12 inches to 3 inches	Little:	5% to 15%
Gravel:	3 inches to No.4 sieve	Some:	15% to 30%
Sand:	No.4 to No. 200 sieve	Silty, Sandy, etc.:	Greater than 30%
Silt:	No. 200 sieve to 0.005 mm		
Clay:	less than 0.005 mm		

Density of Granular Soils and Consistency of Cohesive Soils:

CONSISTENCY OF COHESIVE SOILS		DENSITY OF GRANULAR SOILS	
SPT N-value blows/ft	Consistency	SPT N-value blows/ft	Relative Density
0 to 2	Very Soft	0 to 4	Very Loose
2 to 4	Soft	5 to 10	Loose
5 to 8	Firm	11 to 30	Compact
9 to 15	Stiff	31 to 50	Dense
16 to 30	Very Stiff	>50	Very Dense
>30	Hard		

					SOIL BORING LOG			Boring #: B-1	
Drilling Co: Summit Geoengineering Services					Project: Apartment Buildings			Project #: 23172	
Driller: S. Floyd					Location: 1584 Forest Avenue			Sheet: 1 of 1	
Summit Staff: J. Barnes, E.I.					City, State: Portland, Maine			Chkd by: WMP	
Boring Elevation:					Reference:				
Date started: 7/17/2023					Date Completed: 7/17/2023				
DRILLING METHOD		SAMPLER			ESTIMATED GROUND WATER DEPTH				
Vehicle: ATV		Length: 24" SS			Date	Depth	Elevation	Reference	
Model: 9500 AMS		Diameter: 2"OD/1.5"ID			7/17/2023	NE		Measuered in 20 ft of Augers	
Method: 2-1/4" HSA		Hammer: 140 lb			7/17/2023	10 ft		Estimated moisture content in samples	
Hammer Style: Auto		Method: ASTM D1586							
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION		Geological/ Test Data	Geological Stratum
1	S-1	24/14	0 - 2	1		Dark brown Sandy SILT, rootlets, soft, damp, ML			TOPSOIL
2				1		Brown fine SAND, little to some Silt, loose, damp, SM			0.5' GLACIAL MARINE
3				3		Olive brown Sandy SILT, soft, damp, ML			
4				4					
5									
6									
7									
8									
9									
10									
11	S-2	24/24	5 - 7	4		Olive gray CLAY, trace to little fine Sand, slightly mottled, stiff, damp to moist, CL			
12				6					
13				9					
14				14					
15									
16	S-3	24/24	10 - 12	2		Olive brown fine SAND, trace Clay, Clay seam at 12', mottled, moist, compact SP			
17				5					
18				5					
19				4					
20									
21	S-4	24/18	15 - 17	3		Light to olive brown fine SAND, trace Silt, compact, moist, SP			
22				5					
23				6					
24				7					
25									
26									
27									
28									
29									
30	S-5	24/20	20 - 22	3		Light to olive brown fine SAND, trace Silt, compact, damp, SP			
31				5					
32				9					
33				12					
34									
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36									
37									
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					SOIL BORING LOG			Boring #: B-2	
Drilling Co: Summit Geoengineering Services					Project: Apartment Buildings			Project #: 23172	
Driller: S. Floyd					Location: 1584 Forest Avenue			Sheet: 1 of 1	
Summit Staff: J. Barnes, E.I.					City, State: Portland, Maine			Chkd by: WMP	
Boring Elevation:					Reference:				
Date started: 7/17/2023					Date Completed: 7/17/2023				
DRILLING METHOD		SAMPLER			ESTIMATED GROUND WATER DEPTH				
Vehicle: ATV		Length: 24" SS			Date	Depth	Elevation	Reference	
Model: 9500 AMS		Diameter: 2"OD/1.5"ID			7/17/2023	NE		Measured in 20 ft of Augers	
Method: 2-1/4" HSA		Hammer: 140 lb			7/17/2023	10 ft		Estimated moisture content in samples	
Hammer Style: Auto		Method: ASTM D1586							
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION		Geological/ Test Data	Geological Stratum
	S-1	24/10	0 - 2	1		Dark brown Sandy SILT, rootlets, soft, damp, ML			TOPSOIL
1				1		Brown to light brown fine to medium SAND, trace Gravel, Silt-Clay seam at 2', loose, damp, SP			0.2'
2				3					GLACIAL MARINE
3				4					
4									
5									
6	S-2	24/22	5 - 7	5		Light brown fine SAND, little to some Silt, compact, humid, SP-SM			
7				7					
8				9					
9									
10									
11	S-3	24/17	10 - 12	6		Light brown fine SAND, trace Silt, compact, humid to damp, SP			
12				6					
13				7					
14				9					
15									
16	S-4	24/19	15 - 17	4		Light brown fine to medium SAND, trace Silt, compact, damp, SP			
17				7					
18				9					
19				9					
20									
21	S-5	24/22	20 - 22	9		Light brown fine to coarse SAND, little to some Gravel, trace Silt, compact, damp, SW			
22				12					
				15					
				17					
						End of Exploration at 22'			22'
						Offset Probe Refusal at 44.9'			
Granular Soils		Cohesive Soils		% Composition		NOTES:		Soil Moisture Condition	
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487		PP = Pocket Penetrometer, MC = Moisture Content		Dry: S = 0%	
0-4	V. Loose	<2	V. soft			LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test		Humid: S = 1 to 25%	
5-10	Loose	2-4	Soft	< 5% Trace		Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength		Damp: S = 26 to 50%	
11-30	Compact	5-8	Firm	5-15% Little		Shallow = 0 to 35 degrees		Moist: S = 51 to 75%	
31-50	Dense	9-15	Stiff	15-30% Some		Dipping = 35 to 55 degrees		Wet: S = 76 to 99%	
>50	V. Dense	16-30	V. Stiff	> 30% With		Steep = 55 to 90 degrees		Saturated: S = 100%	
		>30	Hard			Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches			
						Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200			

DRAFT

					SOIL BORING LOG			Boring #: B-3			
Drilling Co: Summit Geoengineering Services					Project: Apartment Buildings			Project #: 23172			
Driller: S. Floyd					Location: 1584 Forest Avenue			Sheet: 1 of 1			
Summit Staff: J. Barnes, E.I.					City, State: Portland, Maine			Chkd by: WMP			
Boring Elevation:					Reference:						
Date started: 7/17/2023					Date Completed: 7/17/2023						
DRILLING METHOD		SAMPLER			ESTIMATED GROUND WATER DEPTH						
Vehicle:	ATV	Length:	24" SS		Date	Depth	Elevation	Reference			
Model:	9500 AMS	Diameter:	2"OD/1.5"ID		7/17/2023	4.7 ft		Measured in 10 ft of Augers			
Method:	2-1/4" HSA	Hammer:	140 lb		7/17/2023	5.0 ft		Measured 15 minutes after completion			
Hammer Style:	Auto	Method:	ASTM D1586								
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION		Geological/ Test Data	Geological Stratum		
1	S-1	24/14	0 - 2	1		Dark brown Sandy SILT, trace Clay, rootlets, firm, damp, ML			TOPSOIL		
2				1		Brown fine SAND, loose, humid, SP			0.8'		
3				3					GLACIAL MARINE		
4				4							
5											
6											
7											
8	S-2	24/24	5 - 7	4		Olive gray CLAY, trace to little fine Sand, slightly mottled, stiff, damp to moist, CL			5'		
9				6							
10				9							
11				14							
12											
13											
14	S-3	24/22	10 - 12	2		Light brown fine to medium SAND, trace Clay and fine Gravel, loose, wet, SW			10'		
15				4							
16				5							
17				7							
18											
19											
20											
21											
22											
23											
24											
End of Exploration at 15' in Running Sands Offset Probe Refusal at 45.8'											
Granular Soils					Cohesive Soils					Soil Moisture Condition	
Blows/ft. Density		Blows/ft. Consistency		% Composition ASTM D2487		NOTES:					
0-4 V. Loose		<2 V. soft		< 5% Trace		PP = Pocket Penetrometer, MC = Moisture Content					
5-10 Loose		2-4 Soft		5-15% Little		LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test					
11-30 Compact		5-8 Firm		15-30% Some		Bedrock Joints Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength					
31-50 Dense		9-15 Stiff		> 30% With		Shallow = 0 to 35 degrees					
>50 V. Dense		16-30 V. Stiff				Dipping = 35 to 55 degrees					
		>30 Hard				Steep = 55 to 90 degrees					
						Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches					
						Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200					
						Dry: S = 0%					
						Humid: S = 1 to 25%					
						Damp: S = 26 to 50%					
						Moist: S = 51 to 75%					
						Wet: S = 76 to 99%					
						Saturated: S = 100%					

DRAFT

					SOIL BORING LOG			Boring #: B-5	
Drilling Co: Summit Geoengineering Services					Project: Apartment Buildings			Project #: 23172	
Driller: S. Floyd					Location: 1584 Forest Avenue			Sheet: 1 of 1	
Summit Staff: J. Barnes, E.I.					City, State: Portland, Maine			Chkd by: WMP	
Boring Elevation:					Reference:				
Date started: 7/17/2023					Date Completed: 7/17/2023				
DRILLING METHOD		SAMPLER			ESTIMATED GROUND WATER DEPTH				
Vehicle: ATV		Length: 24" SS			Date	Depth	Elevation	Reference	
Model: 9500 AMS		Diameter: 2"OD/1.5"ID			7/17/2023	NE		Measured in 10 feet of augers	
Method: 2-1/4" HSA		Hammer: 140 lb			7/17/2023	10 ft		Estimated moisture in samples	
Hammer Style: Auto		Method: ASTM D1586							
Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev. (ft.)	SAMPLE DESCRIPTION		Geological/ Test Data	Geological Stratum
	S-1	24/12	0 - 2	1		Dark brown Sandy SILT, rootlets, soft, damp, ML			TOPSOIL
1				1		Brown to light brown fine SAND, little Silt, loose, damp, SP-SM			0.5'
2				5					GLACIAL MARINE
3									
4									
5									
	S-2	24/18	5 - 7	5		Light brown fine SAND, Silt-Clay seams throughout, compact, humid to damp, SP-SM			
6				7					
7				8					
8				10					
9									
10									
	S-3	24/8	10 - 12	5		Olive brown medium SAND with Clay, loose, wet,			10'
11				5					
12				5					
13									
14									
15									
	S-4	24/12	15 - 17	1		Olive gray Silty CLAY, some fine Sand, firm, wet, CL			15'
16				3					
17				2					
18				4					
19									
20									
	S-5	24/12	20 - 22	5		Olive gray Silty SAND, compact, wet, SM			20'
21				9					
22				10					
				9					
						End of Exploration at 22', No Refusal			22'

Granular Soils		Cohesive Soils		% Composition		NOTES:	Soil Moisture Condition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487			
0-4	V. Loose	<2	V. soft		PP = Pocket Penetrometer, MC = Moisture Content LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test <u>Bedrock Joints</u> Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength Shallow = 0 to 35 degrees Dipping = 35 to 55 degrees Steep = 55 to 90 degrees Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200	Dry: S = 0% Humid: S = 1 to 25% Damp: S = 26 to 50% Moist: S = 51 to 75% Wet: S = 76 to 99% Saturated: S = 100%	
5-10	Loose	2-4	Soft	< 5% Trace			
11-30	Compact	5-8	Firm	5-15% Little			
31-50	Dense	9-15	Stiff	15-30% Some			
>50	V. Dense	16-30	V. Stiff	> 30% With			
		>30	Hard				

DRAFT

ATTACHMENT 4
LID SCORING WORKSHEET

City of Portland ME: Low-Impact Design Requirements				
Owner / applicant name:		Acre Properties		
Representative name:		Alex Coupe		
Project address:		1582 Forest Avenue		
Project CBL:				
Application ID (if known):				
	Maximum Points	How to Apply	Points Awarded	LID Standard / Approach
CORE METHODS: Wetlands, Streams, & Drainage				
Protect natural drainage paths		Required		
Shoreland Zoning		Required		
Meeting DEP and ACOE standards for stream crossings		Required		
Protect wetlands	12	Select one option	12	Select a site that does not have wetlands or vernal pools = 12pts
				Project maintains a 50' set-back / no-disturb buffer to all wetlands = 10pts
				Project maintains a 25' set-back / no-disturb buffer to all wetlands = 7pts
				Project does not place structures in wetlands and avoids wetlands impacts from construction and stormwater discharges = 5pts
				Project replicates impacted wetlands elsewhere on site or within watershed = 3pt
				Project pays wetlands impact fee = 0pts
Permanently protect stream (intermittent and perennial) and riparian buffers (exclusive of approved stream crossings; must include a no-disturb zone with markers installed and deed restriction recorded at registry of deeds)	12	Select one option	12	Select a site with no streams = 12pts
				Permanently protect all 100ft shoreline buffers = 10pts
				Permanently protect all 75ft shoreline buffers = 7pts
				Permanently protect all 50ft shoreline buffers (intermittent streams) = 6pts
				Permanently protect all 50ft shoreline buffers (required minimum for perennial streams) = 5pts
				Permanently protect all 25ft shoreline buffers (required minimum for intermittent streams) = 5pts
Stream crossings	12	Select one option	12	Select a site with no streams = 12pts
				Avoid any stream crossings = 10pts
				All stream crossings use a bridge or open bottom culvert structure sized at 1.2 times the bank full width of the stream = 10pts
				All stream crossings use Maine Stream Smart Principles to preserve natural pre-development drainage pathways = 6pts
CORE METHODS: Natural Areas & Habitat				
Preserve threatened or endangered species habitat		Required (Beginning with Habitat Maps at a minimum)		
Protect 30% of trees over 10" DBH		Required (Tree survey required)		
Protect intact, contiguous forests and native trees over 10" DBH	8	Select one option		All development and land disturbance outside of existing wooded/forested areas (no site clearing in prior 10 years) = 8pts
				Protect 50% of trees over 10" DBH = 6pts
				Protect 40% of trees over 10" DBH = 4pt

CORE METHODS: Soils & Slopes				
USDA Web Soil Survey	Required (provide details how soil limitations will be mitigated)			
Avoid steep slope disturbance	5	Select one option		Selecting a site without slopes 15% or greater = 5pts
				Maintain >20' undisturbed vegetated buffer to all slopes 15% or greater = 3pts
				Maintain 10-20' undisturbed vegetated buffer to all slopes 15% or greater = 2pts
				Maintain 1-10' undisturbed vegetated buffer to all slopes 15% or greater = 1pt
			0	Disturbance of any slope 15% or greater = 0pts
Protect soils	5	Select one option		Redevelopment sites = 5pts
			5	Detailed, site-specific soil survey; preparation of a Soil Management and Protection Plan; protect highly permeable soils = 5pts
Limit site disturbance and earthwork	8	Select one option		Redevelopment limits disturbance to existing footprint = 8pts
				New development disturbs less than 50% of existing undeveloped site area = 8pts
				New development disturbs less than 75% of existing undeveloped site area = 6pts
			0	New development disturbs greater than 75% of existing undeveloped site area = 0pts
Soil preparation & minimizing compaction	6	Select all options that apply		Till soils to a depth of at least 10" prior to revegetation = 3pts
				Organic matter amendments as needed based on soil tests = 3pts
CORE METHODS: Landscaping				
Low-Impact Landscaping	6	Select all options that apply		Redevelopment sites reduce lawn area by 50%, provided no increase in impervious area (lawn becomes landscaping) = 2pt
			2	New development results in >50% non-impervious developed area is landscaping = 2pt
				Use only native vegetation for landscaped areas = 2pts
			2	Using only locally-sourced landscape materials = 2pt
CORE METHODS: Impervious Area & SW Management				
Meeting City's stormwater management standards	Required			
Reduce impervious and increase permeable surfaces	10	Select all options that apply, up to a maximum of 10 points		50% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 6pts
			4	Minimize parking impervious area by using only the minimum required number of parking spaces, the minimum required parking lot dimensions, maximizing compact spaces and utilizing low-turnover standard parking space width reductions = 4pt
				25% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 3pts
			2	Minimize roadway impervious area by developing roadways and driveways at the minimum width and using minimum number of curb cuts = 2pt
			2	Reducing the number of driveways by using a shared driveway design = 2pt
			2	Providing transportation alternatives (such as bike share, car share, or similar) = 2pt
Use GI / natural stormwater treatment systems	12	Select all options that apply		Treatment requirements and conveyance achieved through vegetated systems = 6pts
			3	No more than 1-acre of drainage per treatment system = 3pts
				Increase time of concentration on site (1" 25 year storm event) = 3pts
Limit / eliminate salt use	4	Select one option		Detailed winter maintenance agreement, with annual reporting requirement, limiting chloride use (required in UIS watersheds) = 4pts

Bonus Points				
Bonus points are offered for strategies that may go above and beyond typical approaches; may offer particularly innovative site design or engineering ; or may help achieve the larger goal of low-impact development on a regional scale.	10		10	Utilizing structured parking = 10pts
	10			Utilizing a green roof for at least 50% of a newly developed or redeveloped building roof = 10pts
	10			Restoration of previously disturbed natural resources (minimum 500 square feet of restoration) = 10pts
	10		10	BMPs designed for known water quality impairment within watershed = 10pts
	10			Connecting to City sewer from a site >200 ft from existing City infrastructure = 10pts
	6		6	Detention of 1.5 times the required volume = 6pts
	6			Treatment for 1.5 times the required water quality volume = 6pts
	6		6	Innovative LID site design and/or stormwater improvement = 6pts
	10			Establishing a Traffic Demand Management plan for projects under 50,000ft = 10pts
	Total Possible Points		Total Points Awarded	Minimum points required for approval of LID strategies and techniques 80
	178		90	

ATTACHMENT 8

REVISED EROSION CONTROL REPORT

BASIC STANDARDS
EROSION AND SEDIMENTATION CONTROL REPORT

THE BELFORT LANDING
RESIDENTIAL DEVELOPMENT
PORTLAND , MAINE

Prepared for

ACRE PROPERTIES
27 CYPRESS STREET
PORTLAND, ME 04103

Prepared by

Gorrill Palmer
300 Southborough Drive – Suite 200
South Portland, Maine 04106
207.772.2515

FEBRUARY 2025



Overview

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

Gorrill Palmer has been retained by ACRE Properties to prepare an Erosion and Sedimentation Control Report for a proposed two building 50-unit residential development in Portland, Maine.

Figure 1 is a map showing the project location. This narrative contains the general erosion and sedimentation control measures, which are appropriate for the construction of the project.

This narrative contains the general erosion and sedimentation control measures, which are appropriate for the construction of the project. Erosion and sedimentation control plans and details have also been prepared by Gorrill Palmer to accompany this report.

Existing Conditions and Soil Types

The proposed project site is 66,560 S.F. +/- The City of Portland identifies the property on the Maine Parcel Viewer as Parcel 299, Lot D1011001. Based on field reconnaissance, the existing site is currently undeveloped with the central portion of the site appearing to be previously cleared and compacted by vehicles

Topography in the area of the proposed construction slopes in a generally southerly direction towards Empire Way with slopes in the range of 2% to 10%. A portion of the site drains to the north towards Forest Avenue, to the municipal stormwater system. Another portion of the site drains southeast directly onto Belfort Street into the same closed drainage system. The drainage is conveyed further southeast via a closed drainage system to the end of Belfort Street, which appears to ultimately drain to Capisic Brook.

Abutting land uses include:

- North –Residential Homes and Forest Avenue
- West – Gerald E. Talbot Community School (Developed)
- South – Residential Homes and Empire Way
- East – Residential Homes and Belfort Street

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

Map Symbol	Soil Type	K Value	Hydrologic Soil Group
EmB	Elmwood Fine Sandy Loam	0.32	B
WmB	Windsor Loamy Sand	0.17	A

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

Existing Erosion Problems

Gorrill Palmer is not aware of any existing erosion problems at the project site.

Protected Natural Resources

Preliminary review of available data published by the State of Maine suggests that no significant habitats or protected natural resources lie within the area proposed for development. According to the National Wetland Inventory database it appears no wetlands are present on the proposed parcel.

Based upon the FEMA maps, the site is not located in a 100-year floodplain.

Critical Areas

No critical areas that would require special attention during construction are present on site.

Erosion Control Measures and Site Stabilization

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

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

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

A. Dewatering

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

B. Inspection and Construction Monitoring

As required by the City of Portland Technical Manual Chapter 12, the applicant will be required to enlist a Third-Party Inspector to inspect and direct the maintenance of the erosion control measures to be utilized on site. All areas of disturbance, impervious areas, ESC BMPs, materials storage areas exposed to precipitation, and locations where vehicles enter or exit the Site shall be inspected as follows:

1. Once before any disturbance begins and after all Erosion and Sedimentation Control BMPs specified in the Erosion and Sedimentation Control Plan are in place;
2. At least once a week as well as before and within 24 hours after a storm event (rainfall) or period of thawing and runoff; and
3. Once at project completion to ensure the Site has reached permanent stabilization and all temporary erosion and sedimentation controls have been removed.

The Third-Party Inspector shall submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works and the Development Review Coordinator(s) in Planning. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events in the prior week. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

Maintenance measures shall be applied as needed during the entire construction season. The qualified contractor knowledgeable of DEP standards shall perform repairs as needed to ensure the erosion

control measures are functioning as intended and in accordance with the City of Portland's requirements. Following the temporary and/or final seeding and mulching, the contractor shall in the spring inspect and repair any damages and/or unestablished spots. Established vegetative cover means a minimum of 90% of areas vegetated with vigorous growth.

C. Temporary Erosion Control Measures

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

1. A crushed stone-stabilized construction entrance shall be placed at the approved access drive as depicted on the plans.
2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff- borne sediments until grass areas are revegetated. The silt fence and/or wood waste compost berms shall be installed per the details provided in this package and inspected at least once a week and before and immediately after a storm event of 0.5 inches or greater, and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam. Wood waste compost berms are not to be used adjacent to wetland areas that are not to be disturbed.
3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and October 15th on slopes of less than 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Fabric netting and staples shall be used on disturbed areas within 50' of lakes, streams, and wetlands regardless of the upstream slope. Mulch placed between October 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and equal to or flatter than 2:1, which are to be revegetated, shall receive curlex blankets by American Excelsior or equal. Slopes steeper than 2:1 shall receive riprap as noted on the plans. The mulch application rate for both temporary and permanent seeding is 75 lbs per 1000 sf as identified in Appendix A of this section. Mulch shall not be placed over snow.
4. Temporary stockpiles of stumps, grubblings, or common excavation will be protected as follows:
 - a.) Temporary stockpiles shall not be located within 50 feet of any wetlands which will not be disturbed and shall be located away from drainage swales.
 - b.) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile by a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch, such as hay, straw, or erosion control mix.
 - c.) Stockpiles shall be surrounded by sedimentation barrier at the time of formation.
5. All denuded areas that are within 50 feet of an undisturbed wetland, which have been rough graded and are not located within a building pad, parking area, or access drive subbase area, shall receive mulch or erosion control mesh fabric within 48 hours of initial disturbance of soil. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. In other areas, the time period may be extended to 7 days.
6. For work, which is conducted between October 15th and April 15th of any calendar year, all denuded areas, shall be covered with hay mulch or erosion control mix, applied at twice the normal application

rate and anchored with a fabric netting. The time period for applying mulch shall be limited to 2 days for all areas.

7. Belfort Street shall be swept to control mud and dust as necessary.
8. During grubbing operations stone check dams shall be installed at any evident concentrated flow discharge points and as directed on the Erosion Control Plans.
9. Silt fencing with a minimum stake spacing of 6 feet shall be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence shall be anchored.
10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread in a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained.
11. Water and/or calcium chloride shall be furnished and applied in accordance with MDOT specifications – Section 637 – Dust Control.
12. Loam and seed is intended to serve, as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap. Application rates are provided in Appendix A of this section. Seeding shall not occur over snow.

D. Permanent Erosion Control Measures

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

1. All areas disturbed during construction, but not subject to other restoration (paving, riprap, gravel subbase, etc.) will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas as noted in Temporary Erosion Control Measures paragraph 4 of this report. Native topsoil shall be stockpiled and reused for final restoration when it is of sufficient quality.
2. All storm drain pipe outlets shall have riprap aprons at their outlet to protect the outlet and receiving channel from scour and deterioration. Installation details are provided in the plan set. The aprons shall be installed and stabilized to the extent practicable prior to directing runoff to the tributary pipe or culvert.

Implementation Schedule

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

It is anticipated that construction will begin in spring of 2025, with first occupancy anticipated in the fall of 2026.

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site, this shall be accomplished by limiting the disturbed area. Area shall be limited to no more than the contractor can mulch in one day.

1. Install stabilized construction entrances at the approved location(s).
2. Install perimeter silt fence and/or wood waste berms.
3. Install diversion dikes, or check dams (clear only those areas necessary to install BMP's)

4. Clear and grub site. Install stone check dams at any evident concentrated flow discharge points.
5. Commence installation of drainage appurtenances.
6. Commence earthwork for stormwater facilities.
7. Commence earthwork and grading to subgrade.
8. Commence installation of retaining walls.
9. Commence installation of water and sewer lines.
10. Continue earthwork and grading to subgrade as necessary for construction.
11. Complete installation of underground utilities to within 5' of future buildings.
12. Install light pole foundations and light poles.
13. Complete remaining earthwork operations.
14. Complete installation of drainage appurtenances.
15. Install sub-base and base gravel within parking areas, walkways, and all driveways.
16. Install curbing in parking areas as needed.
17. Install base course paving for drives and parking area as well as concrete surfaces.
18. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
19. Install surface course paving for drives and parking areas. Stripe per plan.
20. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
21. Touch up loam and seed.

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

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to reduce the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.
2. The work shall be conducted in sections which shall:
 - Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.
 - Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 48 hours of initial disturbance of soil for areas within 50 feet of an undisturbed wetland and 7 days for all other areas. Areas within 50 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window.

- Incorporate planned inlets and drainage system as early as possible into the construction phase. The ditches shall be immediately lined or revegetated as soon as their installation is complete.

Erosion, Sedimentation and Stabilization Control Plan

The Erosion Control information is included in the plan set.

Details and Specifications

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

Winter Stabilization Plan

The winter construction period is from November 1 through April 15. If the construction site is not stabilized with pavement, a road gravel base, or riprap by November 15 then the site needs to be protected with over-winter stabilization. An area considered open is any area not stabilized with pavement, vegetation, mulching, erosion control mats, riprap or gravel base on a road.

Winter excavation and earthwork shall be completed such that any area left exposed can be controlled by the contractor. Limit the exposed area to one acre or an area that can be mulched in one day prior to any snow event.

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

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

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

1. Soil Stockpiles

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or at 150 lbs./1,000 square-feet (3 tons per acre) or with a four-inch layer of wood waste erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile shall not be placed (even covered with hay or straw) within 50 feet from any natural resources.

2. Natural Resources Protection

Any areas within 75 feet from any natural resources, if not stabilized with a minimum of 90% mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with erosion control mats. During winter construction, a double line of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) shall be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 75 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

3. Sediment Barriers

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

4. Mulching

An area shall be considered denuded until areas of future loam and seed have been loamed, seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 square-feet or 1.5 tons/acre) and shall be properly anchored. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched with straw or hay at a rate of 150 lb. per 1,000 square feet (3 tons/acre) and adequately anchored that ground surface is not visible through the mulch.

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

5. Mulching of Slopes and Ditches

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

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

6. Seeding

Between the dates of October 15 and April 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been loamed, final graded with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched. Dormant seeding may be selected to be placed prior to the placement of mulch and fabric netting anchored with staples. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 square-feet. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 90% 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.

7. Winter Construction Inspection

After each rainfall, snowstorm or period of thawing and runoff, the qualified contractor knowledgeable of DEP standards shall perform a visual inspection of all installed erosion control measures and perform repairs as needed to insure their continuous function. Inspections shall be performed a minimum of once per week and shall be conducted in accordance with the

Standards for Timely Stabilization of Construction Sites During Winter

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

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

Install a stone lining in the ditch - The applicant shall line the ditch with stone riprap by November 15. The applicant shall hire a registered professional engineer to determine the stone size and lining thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the applicant shall regrade the ditch prior to placing the stone lining so to prevent the stone lining from reducing the ditch's cross-sectional area.

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

Stabilize the soil with temporary vegetation and erosion control mats - By September 1 the applicant shall seed the disturbed slope with winter rye at a seeding rate of 3 pounds per 1,000 square feet and apply erosion control mats over the mulched slope. The applicant shall monitor the growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 75% of the disturbed slope by November 1, then the applicant shall cover the slope with a layer of wood waste compost as described in item iii of this standard or with stone riprap as described in item iv of this standard.

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

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

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

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

Stabilize the soil with temporary vegetation - By September 1 the applicant shall seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet and anchor the mulch with plastic netting. The applicant shall monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 90% of the disturbed soil before November 1, then the applicant shall mulch the area for over-winter protection as described below.

Stabilize the soil with sod - The applicant shall stabilize the disturbed soil with properly installed sod by September 15. Proper installation includes the applicant pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

Stabilize the soil with mulch - By November 15 the applicant shall mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Prior to applying the mulch, the applicant shall remove any snow accumulation on the disturbed area. Immediately after applying the mulch, the applicant will anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

Maintenance of Facilities

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

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

Inspection and Maintenance Frequency and Corrective Measures:

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

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

Vegetated Areas: Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

Roadways and Parking Surfaces: Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

Stormdrain Outlets: Inspect outlets 2 times per year (preferably in Spring and Fall) to ensure that the

outlets are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the outlet and within the conduit. Repair any erosion damage at the storm drain outlet.

Ditches, Swales and other Open Stormwater Channels: Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

Stone Bermed Level Lip Spreader: Inspect 2 times per year (preferably in Spring and Fall) to ensure that they are free of debris and no undesirable growth is impeding water flow through the berm. In addition, the stone bermed level lip spreaders shall be inspected to ensure that runoff is not bypassing the bermed spreader.

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

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

Recertification

As part of the Stormwater Permit, the applicant is required to meet the standards in Appendix B of the Chapter 500 Rules. Appendix B states that a project must submit a certification of the following to the department within three months of the expiration of each five-year interval from the date of issuance of the permit.

- (a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
- (b) Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.
- (c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.
- (d) Proprietary Systems. All proprietary systems have been maintained according to the manufacturer's

recommendations. Where required by the Department, the permittee shall execute a 5-year maintenance contract with a qualified professional for the coming 5-year interval. The maintenance contract must include provisions for routine inspections, cleaning, and general maintenance.

Chapter 500: Appendix C – Good Housekeeping

Authorized non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

1. Discharges from firefighting activity;
2. Discharges from firefighting activity;
3. Fire hydrant flushings;
4. Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
5. Dust control runoff in accordance with permit conditions and Appendix (C)(3);
6. Routine external building washdown, not including surface paint removal, that does not involve detergents;
7. Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated groundwater or spring water;
10. Foundation or footer drain-water where flows are not contaminated;
11. Uncontaminated excavation dewatering (see requirements in Appendix C(5));
12. Potable water sources including waterline flushings; and
13. Landscape irrigation.

Unauthorized non-stormwater discharges. The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non stormwater, other than those discharges in compliance with Appendix C (6). Specifically, the Department's approval does not authorize discharges of the following:

1. Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
2. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
3. Soaps, solvents, or detergents used in vehicle and equipment washing; and
4. Toxic or hazardous substances from a spill or other release.

Conclusion

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

Attachments

Appendix A Seeding Plan

Appendix B Inspection Report

Appendix C Operation & Maintenance Plan

APPENDIX A

Seeding Plan

SEEDING PLAN

Project: Residential Development – Portland, ME

Site Location: Portland, ME

☐ Permanent Seeding ☒ Temporary Seeding

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

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

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

SEEDING PLAN

Project: Residential Development – Portland, ME

Site Location: Portland, ME



Permanent Seeding



Temporary Seeding

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

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

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

APPENDIX B

Inspection Report

STORMWATER POLLUTION PREVENTION PLAN

INSPECTION REPORT

PROJECT INFORMATION

Project Name: Residential Development

Address: 1582 Forest Avenue. Access to the site will be via Belfort Street. Which is approximately 400 feet south of Belfort Street from the intersection of Belfort Street and Forest Ave.

CONTRACTOR/SUBCONTRACTOR INFORMATION

Inspector Name: _____

Firm: _____

Title: _____

Qualifications: _____

INSPECTION SUMMARY

Date of Inspection: _____

Major Observations: _____

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

ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

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

CERTIFICATION STATEMENT:

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

Signature

Typed Name

Title

Date

APPENDIX C

Operation & Maintenance Plan

**THE BELFORT LANDING
1582 FOREST AVENUE
PORTLAND, MAINE**

**STORMWATER MANAGEMENT SYSTEM
OPERATION AND MAINTENANCE MANUAL FOR
STORMWATER FACILITIES**

Prepared for

**ACRE PROPERTIES
27 CYPRESS STREET
PORTLAND, ME 04103**

Prepared by

**Gorrill Palmer
300 Southborough Drive – Suite 200
South Portland, Maine 04106
207.772.2515**

FEBRUARY 2024

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Appendix 1 – Summary Checklist for Inspection and Maintenance

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I. INTRODUCTION

Runoff from developed areas, may contain a number of contaminants especially when emanating from rooftops, paved or lawn areas. This runoff can contain a significant amount of non-point contaminants, which can have an adverse impact on the receiving waters. The installation of soil media filters can significantly reduce the non-point pollution discharge from the developed area.

The effectiveness of stormwater facilities and other components of the system are dependent on their upkeep and maintenance to assure they meet their design function over an extended period of years. It is critical that the stormwater management facilities are inspected on a regularly scheduled basis, and that maintenance is performed on an as needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that transport the flow to the ponds or treatment measures. Thus, maintenance should be directed to the total system.

The purpose of this document is to define in detail the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended on a long-term basis for the Belfort Landing project. This Operations and Maintenance Manual is specific to the existing and proposed stormwater measures utilized to execute a successful stormwater management plan. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need of the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program.

A. Guidelines Overview

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer of the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific

program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project.

B. Responsible Party

The responsible party for operation and maintenance of the stormwater and other site infrastructure will be the applicant or their agents or assigns. The applicant or their agents or assigns must adhere to the City of Portland Technical Manual Section 6 Erosion and Sedimentation Control Standards and the Chapter 32 of the City of Portland Code of Ordinances. A copy of an unexecuted Stormwater Drainage System Maintenance Agreement is included in Appendix 3.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- City of Portland Major Site Plan Approval

A copy of the permits should be appended to this manual as Appendix 4. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Gorrill Palmer for civil engineering for the development project. Gorrill Palmer has prepared the design for the stormwater management facilities and may be contacted at:

Gorrill Palmer
300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

The applicable plans and design documents which apply to the project are:

1. Civil Site Plans Prepared by Gorrill Palmer
2. The Erosion Control/Sedimentation Control Plan for the project
3. The Stormwater Management Plan for the project

A copy of these documents should be retained with this manual.

The proposed design includes inlets, stormwater conveyance lines, subsurface sand filter, and drip strips.

The site is ultimately tributary to Capisic Brook located to the south of the site.

The manual is intended for general guidance; however, any substituted deviations from the manual should be reviewed with respect to provisions of Appendix 4.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff.

A. Stormwater Inlets

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets include catch basins, open culverts, and field inlets. Inlets exist throughout the property.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets on parking lots. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the buildings and exposed culvert inlets.

Frequency: All inlets should be inspected on a quarterly basis, and after/during significant storm events i.e. >1" rainfall).

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project.

B. Tributary Drainage System

Preface: Stormwater from most of the project will be directed through a conveyance (tributary) system which transports the flow to the proposed BMPs, and ultimately to the Capisic Brook. This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment carried by the drainage system is intended to be trapped in structures. Maintenance of this system can play a major role in the long-term maintenance

costs and the effectiveness of the onsite systems. The primary pretreatment measure for the site will be through deep sumped catch basins with hooded outlets.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that the carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sediments to any downstream treatment device or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a temporary filter bag has been designated for the inlet during construction, silt or other deleterious materials, can significantly reduce capacity and the bags should be removed with the sediment and replaced during construction. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the Development. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed.

Frequency: The tributary drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

C. Subsurface Sand Filter

Preface: The subsurface sand filter consists of storage and pretreatment chambers above a sand filter layer for the applicable surface treatment. Stormwater runoff is conveyed to the filter through a closed pipe system from surface runoff. Flow is controlled using a gate valve which can be adjusted to ensure a drainage time between 24-48 hours.

Inspection: The subsurface sand filter will have control structures and maintenance ports to inspect the pretreatment row and storage layer. Inspect system to see if runoff is draining through the system at the outlet and inlet devices. Visual inspections should also occur after large storm events (i.e. >1").

Maintenance: The procedures for maintenance are as follows:

Inlets and Outlets

Inlets and outlets to the subsurface sand filter should be kept open and in good working condition. This is particularly important for the inlet at the pretreatment rows. Outlets should be cleared and, if necessary flushed of any build-up.

Storage Layer

Remove and dispose of any sediment and build-up in the storage layer.

Sedimentation (or Clogging) of Soil Filter Area

If the sand filter appears to be holding water for a period longer than 48-72 hours, the sand mix has, more than likely, become clogged with sediment and/or the underdrains have clogged. To correct a standing water problem, the following remedial actions are recommended:

1. Check to make sure the outlet control valve is open.
2. Evaluate the drainage area to the sand filter area to identify any potential sources of sediment, such as an erosive condition, that may be contributing to the clogging of the device. If a source is identified, it is recommended that that source be eliminated to the fullest extent practicable before proceeding with the remaining recommendations provided below.
3. Flush the underdrains. Use cleanouts to flush the underdrains. Sediment in the drains may be preventing the sand filter from draining. Make sure to provide a way to capture any flushed sediment before it enters the stream environment or storm drain system downstream of the device. If, after flushing the underdrains, the device continues to hold water, the sand filter may be contaminated and need to be replaced.

Frequency: The subsurface sand filter should be inspected semi-annually and maintained as necessary.

Comments: Pretreatment in catch basin sumps and pretreatment row is crucial to long-term function of sand filter.

D. Level Lip Spreader

Inspections should occur at least once a year and following major storms, the level spreader pool should be inspected for sand accumulation and debris that may reduce its capacity. Sediment build-up within the swale should be removed when it has accumulated to approximately 25% of design volume or channel capacity. Remove debris such as leaf litter, branches and tree growth from the spreader. Dispose of the sediments and debris appropriately. The reconstruction of the level spreader may be necessary when sheet flow from the spreader channelize into the buffer. Do not store snow within the area of the level spreader.

E. Drip Strips

Preface: The Drip Strip is critical to the stormwater management plan for the project. It will consist of a stormwater reservoir, filter layer, and a 4" underdrain pipe embedded in the underdrain layer.

Inspection/Monitoring: The drip strip will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Failure to drain in 72 hours will require pipe flushing, or it may require part or all of the filter media to be removed and replaced with new material meeting the filter gradation. The facilities will be inspected after major storms and any identified deficiencies will be corrected. Harvesting and weeding of excessive growth shall be performed as needed. Inspect for unwanted or invasive plants and remove as necessary.

Maintenance: Remove unwanted vegetation and excess leaves, sticks and debris from the filter area. Pipes may require flushing if drip strip fails to drain within 72 hours.

Frequency: Inspect the basin in the late summer or early fall at the end of the growing season. Cutting and removal of additional grass will be required for lengths in excess of 6"-8". The basin should be inspected bi-annually and weeded as necessary.

Comments: None

F. Outlet Control Devices

Preface: Outlet control devices of assorted sizes are commonly utilized to control discharge from stormwater management features. This project uses gate valves and orifices to control discharge from the bio-retention filters and subsurface sand filters.

Inspection: Inspection of gate valves should be performed after each major rainfall event to ensure that stormwater runoff is able to discharge through the gate valve and that it is not clogged or needs to be adjusted.

Maintenance: The gate valve should be opened, and all debris flushed from the pipe. Clogs may be checked with mirror and flashlight method.

Frequency: The outlet control devices should be inspected semi-annually and maintained as needed.

Comments: None

G. Ditches, Swales, and Other Open Stormwater Channels

Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation

growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

H. Roadways and Parking Surfaces

Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

I. Litter

Litter should be removed as a matter of course by workers and as part of the ground's maintenance contract.

IV. PROGRAM ADMINISTRATION

A. General

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities. (Maintenance continues for the lifespan of the development in accordance with this document)
2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.
3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.
4. The administrative body must have the staff to accomplish the inspection and maintenance programs or must have authority to contract for the required services.
5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.
6. A qualified post construction inspector shall be retained by the Owner. His/her duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the City

of Portland. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. Record Keeping

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix 2.

Beyond the initial 5-year time span of the original approval and maintenance plan, the stormwater management system will need to be recertified through the Maine Department of Environmental Protection every 5 years to confirm that there is conformance with the original permit documents. This process will ensure all systems function properly over time. This document will remain valid throughout any subsequent recertification processes.

On or by June 30 of each year, the qualified post construction inspector shall provide a completed and signed certification to the Department of Public Works certifying that the person has inspected, cleaned, and maintained the stormwater management facilities, describing any deficiencies found during inspection of the stormwater management facilities, and certifying that the person has repaired any deficiencies in the stormwater management facilities noted during the annual inspection.

C. Contract Services

In some instances, or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX 1

Summary Checklist Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
Item	Commentary	Frequency				
		Monthly	Quarterly	Semi-Annual	Annual	Long Term
Stormwater Inlets	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.		X		X Clearing	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Subsurface Sand Filter	Inspect maintenance ports after rain events >1" and remove sediment. Check for signs of clogging and flush underdrains if necessary. Remove sediment from isolator row when depth of sediment reaches 3 inches.			X		
Level Lip Spreader	Remove any trash and debris from spreader and swale. Check integrity of spreader and that it does not channelize flow.			X		
Drip Strips	Remove debris from filter area. Inspect after major storm events and clear debris from orifice. May require flushing of pipes. Excessive growth shall be removed as needed.			X		
Orifice Control Devices	Inspect after major storm events and clear debris from orifice. May require flushing of pipes.			X		
Ditches Swales and Other open Stormwater Channels	Inspect to ensure the ditch is not eroding or blocked by debris.			X		
Roadways and Parking Surfaces	Remove accumulated sand.				X	
Litter	Litter should be removed daily.					

APPENDIX 2

Sample Inspection Logs

**ACRE Properties
PORTLAND, MAINE**

**STORMWATER MANAGEMENT
SAMPLE STORMWATER INSPECTION & MAINTENANCE LOG**

This log is intended to accompany the Operation and Maintenance Manual for Stormwater Management and Related Facilities. All stormwater BMPs shall be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions of the DEP Stormwater Permit, shall conduct inspections of the facilities as described in the O&M Manual and on this form, and identified deficiencies must be corrected. This log shall be kept on file for a minimum of five (5) years.

A. General Information			
Project Name:	Inspection Date:		
Parcel/Lot:	Current Weather:		
BMP Owner:	Date/Amount Last Precip.:		
Owner Mailing Address:	Inspection Company:		
Owner Phone #:	Inspection Co. Mailing Address:		
Owner Email:	Inspector Name:		
	Inspector Phone #:		
	Inspector Email:		
B. Stormwater Inlets (Catch Basins)			
Frequency: Annually in the spring	Observations		
Accumulated sediments from inflow channels and pipes between basins have been removed and legally disposed of	☐ Yes ☐ No ☐ NA		
Floating debris and large sediment particles have been removed from inlets.	☐ Yes ☐ No ☐ NA		
Stormwater Inlet Notes:			
C. Tributary Drainage System			
Frequency: Annually spring or late fall and after heavy rains	Observations		
Remove and legally dispose of sediments	☐ Yes ☐ No ☐ NA		
Remove floatables and other objects	☐ Yes ☐ No ☐ NA		
Check for overgrown vegetation impeding flow	☐ Yes ☐ No ☐ NA		
Check pipelines for siltation and clogging	☐ Yes ☐ No ☐ NA		
Repair any slumping side slopes or erosion	☐ Yes ☐ No ☐ NA		
Replace any riprap on areas where any underlying fabric or underlying gravel is exposed.	☐ Yes ☐ No ☐ NA		
Tributary Drainage System Notes:			

D. Subsurface Sand Filter	Observations
Frequency: Semi-annually	
Inspect for debris	☐ Yes ☐ No ☐ NA
Sediment greater than 3"	☐ Yes ☐ No ☐ NA
System working in their intended fasion	☐ Yes ☐ No ☐ NA
Subsurface Detention Chamber Notes:	
E. Level Lip Spreader	Observations
Frequency: Semi-annually	
Inspect for debris	☐ Yes ☐ No ☐ NA
Undesirable growth impeding water flow	☐ Yes ☐ No ☐ NA
Ensure runoff is not bypassing the bermed spreader, repair as necessary	☐ Yes ☐ No ☐ NA
Level Lip Spreader Notes:	
F. Drip Strip	Observations
Frequency: Semi-annually	
Check for signs of clogging, or water is not draining within 48-72 hours	☐ Yes ☐ No ☐ NA
Inspect for debris	☐ Yes ☐ No ☐ NA
No excessive growth, remove as necessary	☐ Yes ☐ No ☐ NA
Roofline / Infiltration Drip Strip Notes:	
F. Outlet Control Devices	Observations
Frequency: Semi-annually	
Check for debris blocking orifice	☐ Yes ☐ No ☐ NA
If applicable, flush underdrain pipe	☐ Yes ☐ No ☐ NA
Roofline / Infiltration Drip Strip Notes:	

G. Ditches, Swales, and Other Open Stormwater Channels	Observations		
Frequency: Semi Annually spring and late fall and after heavy rains			
Remove and legally dispose of sediments	☐ Yes	☐ No	☐ NA
Remove floatables and other objects	☐ Yes	☐ No	☐ NA
Check for overgrown vegetation impeding flow.	☐ Yes	☐ No	☐ NA
Mow to control growth and maintain flow capacity.	☐ Yes	☐ No	☐ NA
Repair any slumping side slopes or erosion	☐ Yes	☐ No	☐ NA
Replace any riprap on areas where any underlying fabric or underlying gravel is exposed.	☐ Yes	☐ No	☐ NA
Ditches Swales and Other Channel Notes:			
H. Roadways and Parking Surfaces	Observations		
Frequency: Annually preferably in spring			
Remove and legally dispose of accumulated winter sand	☐ Yes	☐ No	☐ NA
Repair potholes and other roadway obstructions and hazards.	☐ Yes	☐ No	☐ NA
Roadways and Parking Surfaces Notes:			

APPENDIX 3

Stormwater Drainage System Maintenance Agreement

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

ACRE Properties, LLC/City of Portland City of Portland, Maine – The Belfort Landing at 1582 Forest Street

IN CONSIDERATION OF the site plan approval granted by the Planning Board of the City of Portland to the proposed **The Belfort Landing ID PL- [__TBD__]** - shown on the Overall Site Layout Plan, Grading, & Drainage Plan and Stormwater Management Plan (Exhibits A, B and C) prepared by Gorrill Palmer Consulting Engineers of 300 Southborough Drive, South Portland, Maine dated last revised [__TBD__] and pursuant to a condition thereof, ACRE Properties LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 27 Cypress Street, Portland, Maine 04103, the owner/operator of The Belfort Landing, does hereby agree, for itself, its successors and assigns (the “Owner”), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the subsurface sand filter, drip strips, and related onsite drainage infrastructure, (hereinafter collectively referred to as the “stormwater system”), as shown on the Stormwater Management Plan in Exhibit C and in strict compliance with the approved Stormwater Inspection and Maintenance Manual prepared for the Owner by Gorrill Palmer Consulting Engineers (copy attached in Exhibit D) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request and be made part of the annual Stormwater reporting duties of the applicant to the City.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner’s successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in

which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and lienied if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or lienning it or create a cause of action against the City.

Dated at Portland, Maine this ____ day of _____, 2025.

(name of company)

(representative of owner, name and title)

STATE OF MAINE
CUMBERLAND, ss.

Date: _____

Personally appeared the above-named _____ (name and title), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

Notary Public/Attorney at Law

Print name: _____

Exhibit A: Approved Site Layout Plan
Exhibit B: Approved Grading & Drainage Plan
Exhibit C: Stormwater Management Plan
Exhibit D: Approved Stormwater Inspection and Maintenance Manual

APPENDIX 4

Permits for Project

(To be Added at a Subsequent Time)

ATTACHMENT 5
WASTEWATER CAPACITY APPLICATION

Kassey A. Northrop

From: Kassey A. Northrop
Sent: Friday, February 14, 2025 1:35 PM
To: 'brad@portlandmaine.gov'
Subject: FW: 1582 Forest Avenue
Attachments: abs_ww_2024.11.20.pdf

Hi Brad,

I am contacting you regarding the City of Portland's ability to serve a residential development located on Forest Avenue and Belfort Street. As shown below, I had previously contacted Mike regarding the project, but based on Jon's response, I should have sent this to you.

We received the following Staff Comment on our recent Major Site Plan submission and want to ensure we are meeting all requirements.

- *This project requires a wastewater capacity application. Please submit to DPW for review and authorization.*

Thank you and should you require any additional information, do not hesitate to reach out.

Kassey Northrop | Civil Engineering Technician



300 Southborough Drive, Suite 200 | South Portland, ME 04106
315.600.6037 (cell)
www.gorrillpalmer.com

From: Kassey A. Northrop
Sent: Wednesday, November 20, 2024 4:05 PM
To: dpwhelp@portlandmaine.gov
Subject: 1582 Forest Avenue

Good afternoon Mike,

November 20, 2024

Brad Roland

City of Portland – Public Works Department
212 Canco Rd
Portland, ME 04103

**Subject: Proposed Residential Development
1582 Forest Avenue, Portland, Maine
Request for Ability to Serve**

Dear Coordinator:

On behalf of **ACRE Properties** (Applicant), we would like to verify the City of Portland’s ability to provide sewer service capacity for a fifty-unit residential development located at 1582 Forest Avenue in Portland. A location map is included with this letter for reference. The Applicant is pursuing a Major Site Plan and Subdivision approval from the City of Portland for this development, which necessitates this formal request for ability to serve. Included within Attachment 2 is the City of Portland’s Wastewater Capacity Application.

The development proposes the construction of two, three-story, 7,560 square-foot, multi-family dwellings. Each dwelling will consist of 25 units for a total of 50 units combined. The residential development is proposed to be accessed via Belfort Street with pedestrian access available to/from Forest Avenue by sidewalk. Additionally, there is associated stormwater drainage, sewer, and underground power infrastructure. Please see the attached Layout and Utility Plans for additional information.

ANTICIPATED FLOWS

The proposed residential development will require both fire and domestic water services, as well as automatic sprinkler systems in each building. For the purpose of this analysis, we are anticipating that each unit will produce 120 gpd or 210 gpd, depending on the number of bedrooms. Currently, each multi-family dwelling will contain fifteen – two (2) bedroom units and ten – one (1) bedroom units. For the purposes of this analysis, we are anticipating each of the multi-family units will produce 120 or 210 gpd depending on bedroom count (per Table 5A of the Maine Subsurface Wastewater Disposal Rules). Based on the publication, *Water Supply and Pollution Control, Third Edition*, by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to be about 180% of the average daily use. Based on this information, the project water usage can be estimated using the Maine State Plumbing Code as follows:

Use ¹	Design Flow (GPD)	Peak Daily Design Flow ²
Units – 1 Bedroom (20 units @ 120 gpd)	2,400	4,320
Units – 2 Bedroom (30 units @ 210 gpd)	6,300	11,340

¹ See Section 5 Design Criteria, Part E, Maine Subsurface Wastewater Disposal Rules 2023

² The peak daily flow is considered to be 180% of the average daily flow (*Water Supply and Pollution Control, Third Edition*, by Clark, Viessman and Hammer, Chapter 4, Section 5)



STRUCTURAL



FALL PROTECTION
SAFETY



TRANSPORTATION



SITE DESIGN
Page 257



SURVEY



WATER
RESOURCES



TECHNOLOGY
& INNOVATION

Total	8,700	15,660
--------------	-------	--------

EXISTING AND PROPOSED SERVICE

Based on the "Lot Split and Topographic Survey" for 1582 Forest Avenue, Portland, Maine, completed by Northeast Civil Solutions, dated July 5, 2022, there is an existing sewer main within the right-of-way of both Belfort Street and Forest Avenue. No sewer service currently services the site. The applicant is proposing to extend a 6" gravity sewer service from the existing sewer main with an Inserta Tee at Belfort Street, to a manhole which will collect waste from a on-site 6-foot pumpstation via 3" force main. The existing sewer main on Belfort Street appears to be an 8" gravity sewer main based upon field observation. Please see the attached Layout and Utility Plans for additional information.

We would like to verify the size and location of the existing sewer main on Belfort Street and Forest Avenue and any existing sewer service stubs that may extend into the project site with the City of Portland's Public Works Department.

CLOSURE

As required by the City of Portland, we are writing to request a letter indicating the ability of the City of Portland's ability to serve this project. Specifically, our office is interested in a letter from you indicating the following:

- The ability of the City of Portland's facilities to serve the project.
- Any other factors which may affect the sewer to this site.
- Any connection service or impact fees.
- Verification of size and location for sewer main in Belfort Street.

We are in the process of submitting a Major Site Plan and Subdivision Application to the City of Portland. If you have any questions on the information submitted, please contact our office.

Regards,

GORRILL PALMER



Douglas Reynolds, PE

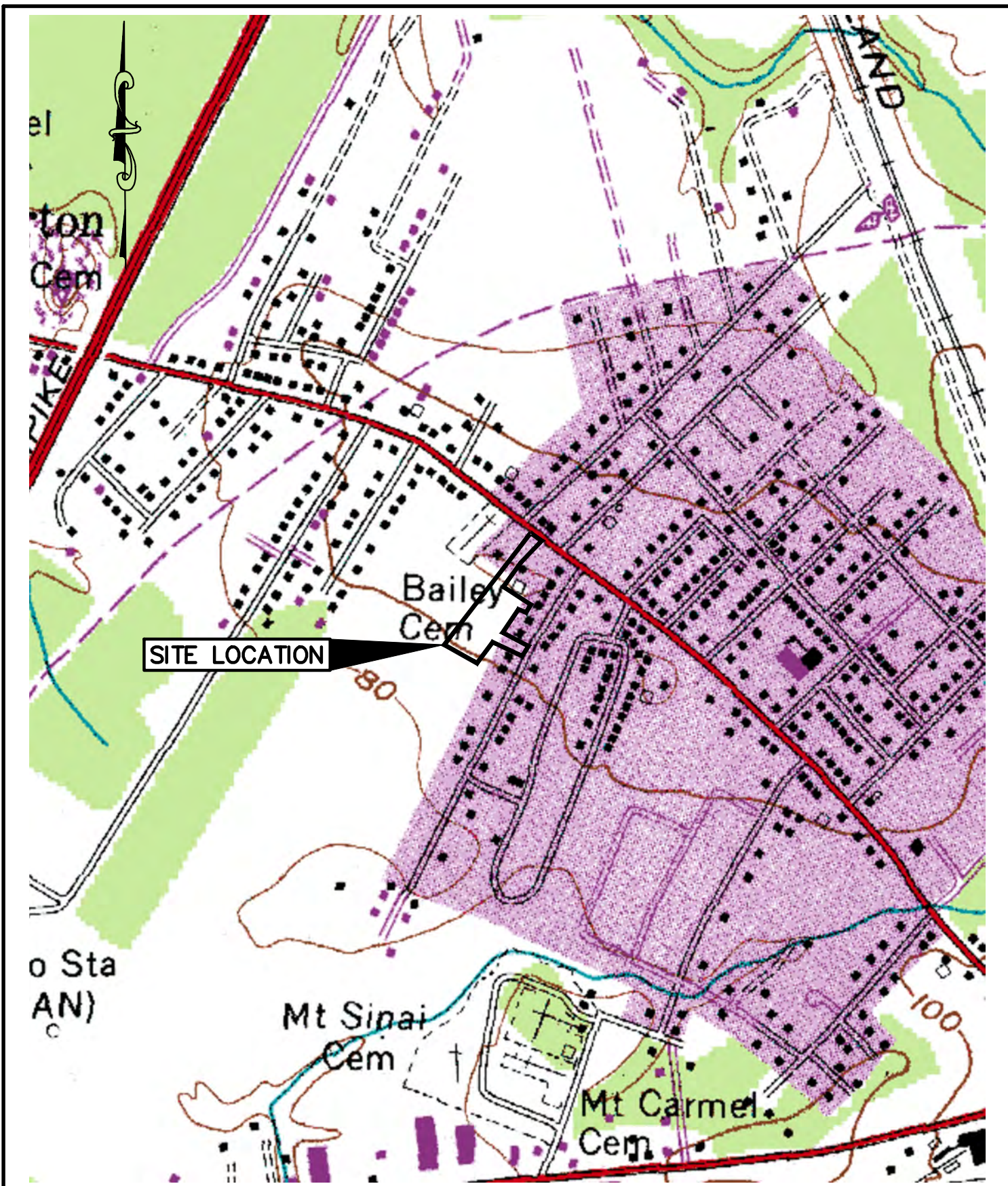
Project Manager

Phone: 207-772-2515

dreynolds@gorrillpalmer.com

Attachments: Location Map
City of Portland Wastewater Capacity Application
Preliminary Layout & Utility Plan

U:\ACRE Properties\4292 - 1582 Forest Ave Belfort Residential - ACRE Properties\H Utilities\Sewer



U.S.G.S. Location Map
 Residential Development - Portland, Maine
 Portland-West, Maine-7.5 Minute Series (Topographic)

Design: EJC	Date: NOV 2024
Draft: EJC	Job No.: 4292
Checked: KN	Scale: None
File Name: 4292-LOCATION.dwg	



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 207.772.2515

Figure
 1

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103



Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

Date: November 21, 2024

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

Site Address: 1582 Forest Avenue, Portland, Maine 04103

Chart Block Lot Number: 299, D027001

Proposed Use: Multi-Family Dwellings

Previous Use: N/A

Existing Sanitary Flows: N/A GPD

Existing Process Flows: N/A GPD

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

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

X

It is proposed that the existing 8" sewer main on Belfort

Street will receive the proposed development sewer via

Inserta Tee. We request size of the main at Belfort Street be confirmed.

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

2. Please, Submit Contact Information.

City Planner's Name: Kevin Kraft Phone: 207-874-8719

Owner/Developer Name: Acre Properties

Owner/Developer Address: 27 Cypress Street, Portland, Maine 04103

Phone: _____ Fax: _____ E-mail: alex@danandersonrealestate.com

Engineering Consultant Name: Gorrill Palmer

Engineering Consultant Address: 300 Southborough Drive, Suite 200, South Portland, Maine 04106

Phone: 207-772-2515 Fax: _____ E-mail: DReynolds@gorrillpalmer.com

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 15,660 GPD

Peaking Factor/ Peak Times: 180% Average Use (8,700 GPD)

Specify the source of design guidelines: (i.e. X "Handbook of Subsurface Wastewater Disposal in Maine,"
"Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, X Other (specify)
Water Supply and Pollution Control, Third Edition, by Clark, Viessman and Hammer, Chapter 4, Section 5

*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. **

**SEE COVER LETTER FOR ADDITIONAL INFORMATION.*

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

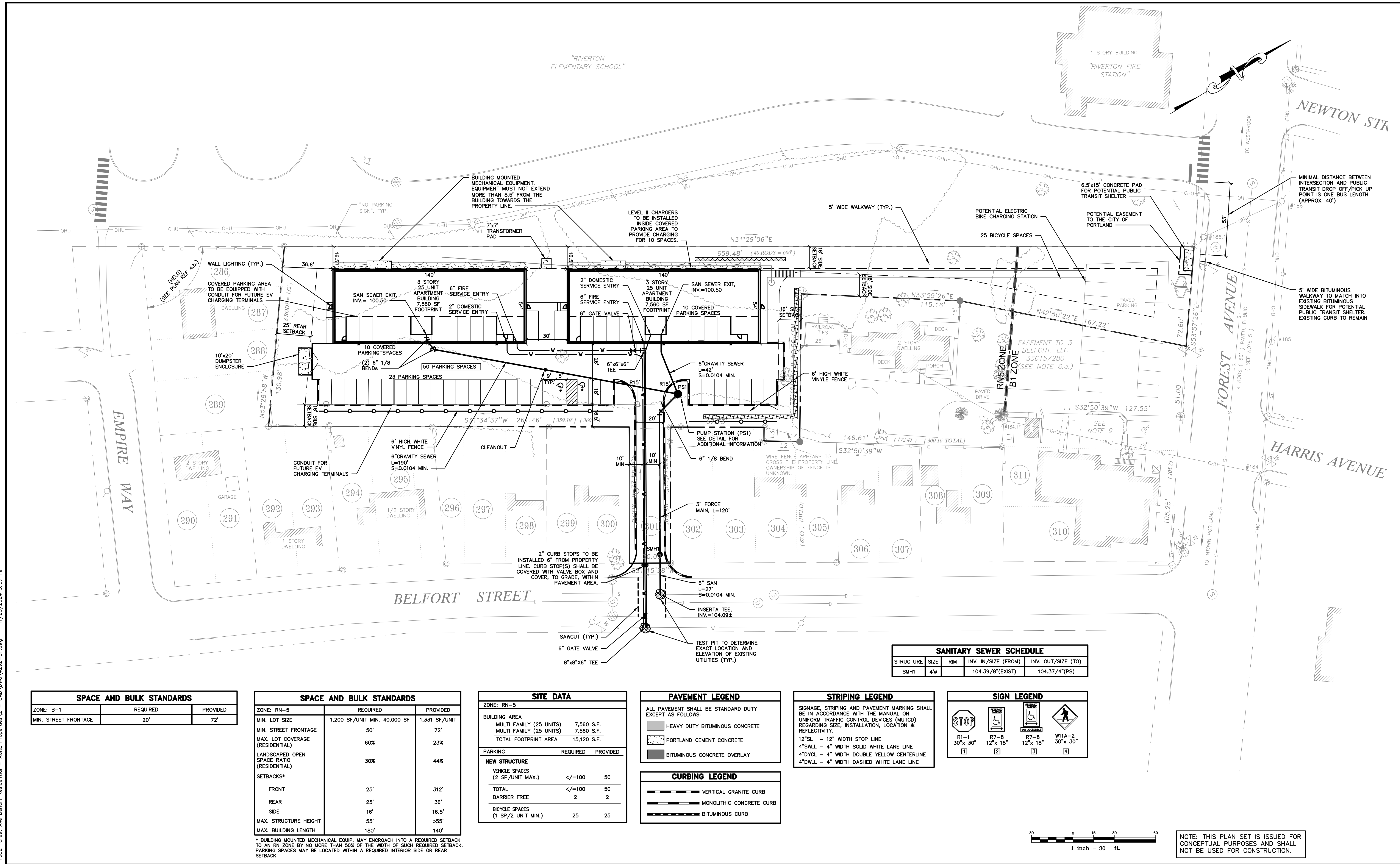
OSHA Standard Industrial Code (SIC): _____ (<http://www.osha.gov/oshstats/sicser.html>)

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.

U:\ACRE Properties\4292 - 1582 Forest Ave Belfort Residential - ACRE Properties\Z - CAD\DWG\4292-SP.dwg 11/20/2024 3:37 PM



SPACE AND BULK STANDARDS		
ZONE: B-1	REQUIRED	PROVIDED
MIN. STREET FRONTAGE	20'	72'

SPACE AND BULK STANDARDS		
ZONE: RN-5	REQUIRED	PROVIDED
MIN. LOT SIZE	1,200 SF/UNIT MIN. 40,000 SF	1,331 SF/UNIT
MIN. STREET FRONTAGE	50'	72'
MAX. LOT COVERAGE (RESIDENTIAL)	60%	23%
LANDSCAPED OPEN SPACE, RATIO (RESIDENTIAL)	30%	44%
SETBACKS*		
FRONT	25'	312'
REAR	25'	36'
SIDE	16'	16.5'
MAX. STRUCTURE HEIGHT	55'	>55'
MAX. BUILDING LENGTH	180'	140'

* BUILDING MOUNTED MECHANICAL EQUIP. MAY ENROACH INTO A REQUIRED SETBACK TO AN RN ZONE BY NO MORE THAN 50% OF THE WIDTH OF SUCH REQUIRED SETBACK. PARKING SPACES MAY BE LOCATED WITHIN A REQUIRED INTERIOR SIDE OR REAR SETBACK

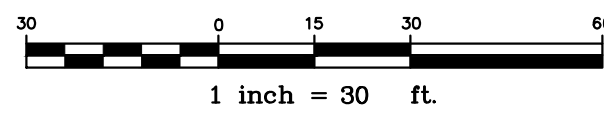
SITE DATA		
ZONE: RN-5		
BUILDING AREA		
MULTI FAMILY (25 UNITS)	7,560 S.F.	
MULTI FAMILY (25 UNITS)	7,560 S.F.	
TOTAL FOOTPRINT AREA	15,120 S.F.	
PARKING	REQUIRED	PROVIDED
NEW STRUCTURE		
VEHICLE SPACES (2 SP/UNIT MAX.)	</=100	50
TOTAL	</=100	50
BARRIER FREE	2	2
BICYCLE SPACES (1 SP/2 UNIT MIN.)	25	25

PAVEMENT LEGEND	
ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:	
	HEAVY DUTY BITUMINOUS CONCRETE
	PORTLAND CEMENT CONCRETE
	BITUMINOUS CONCRETE OVERLAY
CURBING LEGEND	
	VERTICAL GRANITE CURB
	MONOLITHIC CONCRETE CURB
	BITUMINOUS CURB

STRIPING LEGEND	
SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.	
12"SL - 12" WIDTH STOP LINE	
4"SWL - 4" WIDTH SOLID WHITE LANE LINE	
4"CYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE	
4"DWL - 4" WIDTH DASHED WHITE LANE LINE	

SIGN LEGEND	
	R1-1 30"x 30"
	R7-8 12"x 18"
	R7-8 12"x 18"
	W11A-2 30"x 30"

SANITARY SEWER SCHEDULE				
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
SMH1	4"		104.39/8"(EXIST)	104.37/4"(PS)



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

Rev.	Date	Revision

Issued For	Date	By

Design: AJK	Draft: -	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-SP.dwg		
This plan shall not be modified without written permission from Gorrell Palmer. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Gorrell Palmer.		



Gorrell Palmer, an LJB Engineering Company
GorrellPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Site and Utility Plan
Project:	1582 Forest Ave Residential Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
C101

ATTACHMENT 9

ENVIRONMENTAL, NATURAL, AND HISTORIC RESOURCE CORRESPONDENCE

Kassey A. Northrop

From: Ethan Chadwick <echadwick@gorrillpalmer.com>
Sent: Tuesday, November 12, 2024 8:42 AM
To: Perry, John
Cc: 'ifwenvironmentalreview@maine.gov'; Andrew J. Kurmin; emily.robinson@maine.gov
Subject: Wildlife Impact Information
Attachments: MDIFW-Perry.pdf

Mr. Perry,

Please find the attached letter regarding a property in Portland, Maine. A location map is included for your reference. Physical copies of these documents will only be sent through the mail at your request.

Please do not hesitate to contact me with any questions or concerns.

Ethan Chadwick | Design Engineer



300 Southborough Drive, Suite 200 | South Portland, ME 04106
207.595.5195 (mobile) 207.888.2575 (work)
www.gorrillpalmer.com

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November 12, 2024

Attn: Mr. John Perry
Environmental Review Coordinator
Maine Dept. of Inland Fisheries & Wildlife
41 State House Station
Augusta, ME 04333-0041

**Subject: Presence of Essential Habitat
1582 Forest Avenue
Portland, Maine**

Dear Mr. Perry,

Gorrill Palmer has been retained to prepare plans and permit applications for the proposed residential development on an approximately 1.5-acre lot located at 1582 Forest Avenue, Portland. The project site is shown on the attached Location Map. At this time, the applicant is proposing the development of two new buildings and associated parking lot, and sidewalks.

To aid in the development design, and as part of the permit applications, Gorrill Palmer requests information from your department regarding any threatened, endangered, and special status wildlife or fisheries species and/or habitats, within the project area which might be impacted by this project.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer



Ethan Chadwick, EI
Design Engineer
Phone: (207) 772-2515
echadwick@gorrillpalmer.com



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TRANSPORTATION



SITE DESIGN



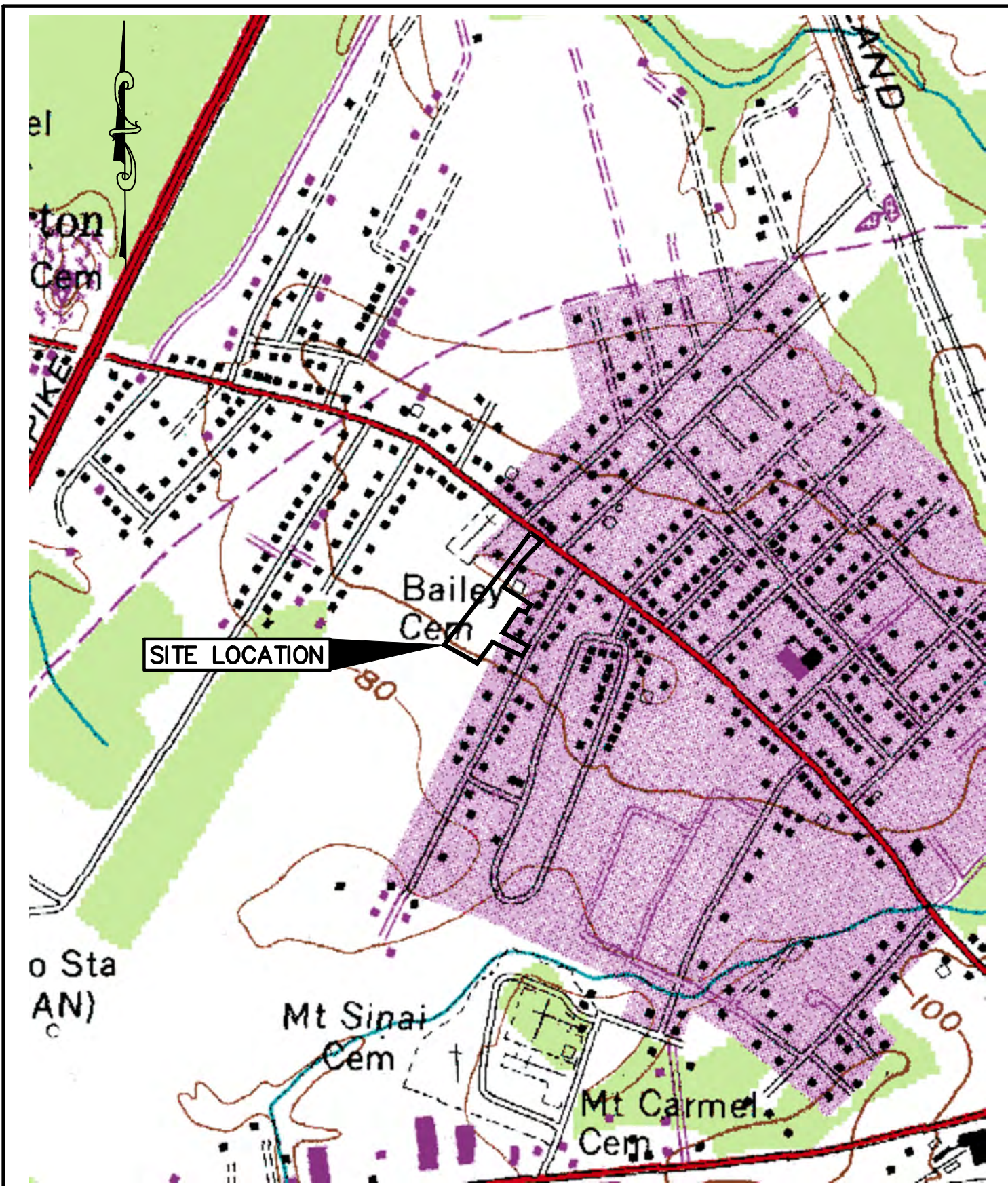
SURVEY



WATER
RESOURCES



TECHNOLOGY
& INNOVATION



U.S.G.S. Location Map
 Residential Development - Portland, Maine
 Portland-West, Maine-7.5 Minute Series (Topographic)

Design: EJC	Date: NOV 2024
Draft: EJC	Job No.: 4292
Checked: KN	Scale: None
File Name: 4292-LOCATION.dwg	



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 207.772.2515

Figure
 1

Kassey A. Northrop

From: Ethan Chadwick <echadwick@gorrillpalmer.com>
Sent: Tuesday, November 12, 2024 8:45 AM
To: MHPC Project Review; Rideout, Megan M
Cc: Andrew J. Kurmin
Subject: Historic Site Information
Attachments: MHPC-Mohney.pdf

Mr. Mohny and Ms. Rideout,

Please find the attached letter regarding a property in Portland, Maine. A location map is included for your reference. Physical copies of these documents will only be sent through the mail at your request.

Please do not hesitate to contact me with any questions or concerns.

Ethan Chadwick | Design Engineer



300 Southborough Drive, Suite 200 | South Portland, ME 04106
207.595.5195 (mobile) 207.888.2575 (work)
www.gorrillpalmer.com

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November 12, 2024

Attn: Mr. Kirk Mohney
State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station
Augusta, ME 04333

Subject: Presence of Historical Areas
1582 Forest Avenue
Portland, Maine

Dear Mr. Mohney,

Gorrill Palmer has been retained to prepare plans and permit applications for the proposed residential development on an approximately 1.5-acre lot located at 1582 Forest Avenue, Portland. The project site is shown on the attached Location Map. At this time, the applicant is proposing the development of two new buildings and associated parking lot, and sidewalks.

To aid in the development design, and as part of the permit applications, Gorrill Palmer requests information from your department relative to the presence of any nearby structure or area with historical, architectural, or archeological significance as defined by the National Historic Preservation Act of 1966.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer



Ethan Chadwick, EI
Design Engineer
Phone: (207) 772-2515
echadwick@gorrillpalmer.com



STRUCTURAL



FALL PROTECTION
SAFETY



TRANSPORTATION



SITE DESIGN



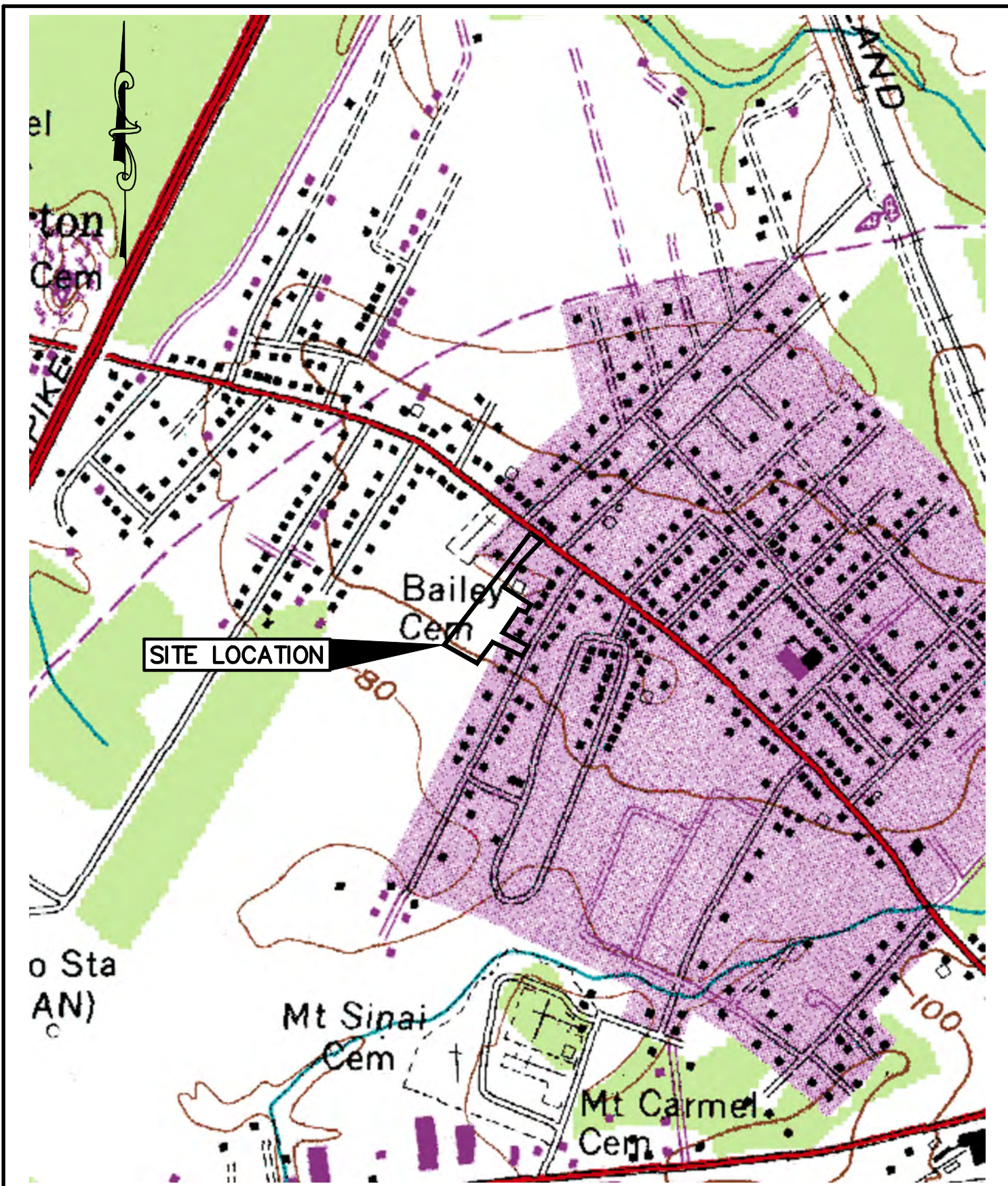
SURVEY



WATER
RESOURCES



TECHNOLOGY
& INNOVATION



U.S.G.S. Location Map
 Residential Development - Portland, Maine
 Portland-West, Maine-7.5 Minute Series (Topographic)

Design: EJC	Date: NOV 2024
Draft: EJC	Job No.: 4292
Checked: KN	Scale: None
File Name: 4292-LOCATION.dwg	



Relationships. Responsiveness. Results.
www.gorrillpalmer.com
 207.772.2515

Figure

1



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 14, 2024

Ethan Chadwick
Gorrill Palmer
300 Southborough Drive, Suite 200
South Portland, ME 04106

Via email: echadwick@gorrillpalmer.com

Re: Rare and exemplary botanical features in proximity to: #4292, Residential Development, 1582 Forest Avenue, Portland, Maine

Dear Ethan Chadwick:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received November 12, 2024 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
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) 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. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine 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 MNAP 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,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

**Rare and Exemplary Botanical Features within 4 miles of
Project: #4292, Residential Development, 1582 Forest Avenue, 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
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	2021-09-19	24	Rocky coastal (non-forested, upland)
Bottlebrush Grass						
	SC	S3	G5	1905-09-13	10	Hardwood to mixed forest (forest, upland)
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Clothed Sedge						
	E	S1	G5	2000-06-06	5	Dry barrens (partly forested, upland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested,
Engelmann's Spikerush						
	PE	SH	G4G5	1916-08-31	2	Open wetland, not coastal nor rivershore (non-forested,
Fern-leaved False Foxglove						
	SC	S3	G5	1902-09-02	13	Dry barrens (partly forested, upland),Hardwood to mixed
Great Blue Lobelia						
	PE	SX	G5	1905-09	3	Forested wetland,Non-tidal rivershore (non-forested,
Hollow Joe-pye Weed						
	SC	S2	G5	2007-10-22	18	Open wetland, not coastal nor rivershore (non-forested,
	SC	S2	G5	2019-08-20	19	Open wetland, not coastal nor rivershore (non-forested,

Hollow Joe-pye Weed						
	SC	S2	G5	2014-06-18	24	Open wetland, not coastal nor rivershore (non-forested,
Horned Pondweed						
	SC	S2	G5	1913-09-13	9	Tidal wetland (non-forested, wetland)
MacGregor's Rye						
	SC	S2	G5	2019-08-20	13	
Marsh Milkwort						
	PE	SH	G5T4	1903-08-18	1	Dry barrens (partly forested, upland),Open wetland, not
Missouri Rockcress						
	T	S1	G5	1905-06-11	5	Rocky summits and outcrops (non-forested,
Mountain Honeysuckle						
	E	S2	G5	2007-07-30	10	Dry barrens (partly forested, upland),Hardwood to mixed
	E	S2	G5	2018-06-02	14	Dry barrens (partly forested, upland),Hardwood to mixed
	E	S2	G5	2015-07-07	17	Dry barrens (partly forested, upland),Hardwood to mixed
Pitch Pine Woodland						
		S3	G2	2005-12-08	28	
Salt-hay Saltmarsh						
		S3	G5	2020-07-02	68	
Screwstem						
	T	S1	G5T3T5	2020-09-17	4	
Small Reed Grass						
	SC	S3	G5	2011-08-28	18	Old field/roadside (non-forested, wetland or upland)
Southern Bog-clubmoss						
	E	S1	G5	2011-08-31	1	Open wetland, not coastal nor rivershore (non-forested,
Spotted Pondweed						
	T	S1	G5	2016-06-22	3	Open water (non-forested, wetland)
Tidal Marsh Estuary Ecosystem						
		S3	GNR	2011-08-25	8	

Upright Bindweed						
	T	S2	G4G5	2007-06-28	5	Dry barrens (partly forested, upland),Old field/roadside
Variable Sedge						
	E	S1	G3	1911-06-29	9	Dry barrens (partly forested, upland),Hardwood to mixed
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)
Wild Garlic						
	SC	S2	G5	1918-07-16	6	Forested wetland,Hardwood to mixed forest (forest,
Wild Leek						
	SC	S3	G5T5	2018-05-02	55	Hardwood to mixed forest (forest, upland),Forested

Date Exported: 2024-11-19 15:33

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 G1	Critically Imperiled – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 G2	Imperiled – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 G3	Vulnerable – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 G4	Apparently Secure – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 G5	Secure – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX GX	Presumed Extinct – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH GH	Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery.
S#S# G#G#	Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU GU	Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR SNR	Unranked – Global or subnational conservation status not yet assessed.
SNA GNA	Not Applicable – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems).
Qualifier	Definition
S#? G#?	Inexact Numeric Rank – Denotes inexact numeric rank.
Q	Questionable taxonomy that may reduce conservation priority – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The “Q” modifier is only used at a global level.
T#	Intraspecific Taxon (trinomial) – The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	Endangered – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	Threatened – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	Special Concern – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	Potentially Extirpated – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	Excellent – Excellent estimated viability/ecological integrity.
B	Good – Good estimated viability/ecological integrity.
C	Fair – Fair estimated viability/ecological integrity.
D	Poor – Poor estimated viability/ecological integrity.
E	Extant – Verified extant, but viability/ecological integrity not assessed.
H	Historical – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	Extirpated – Documented loss of population/destruction of habitat.
U	Unrankable – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	Not Ranked – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
<http://www.maine.gov/dacf/mnap>



ATTACHMENT 1
CONSERVATION FUND AGREEMENT

STATE OF MAINE
BUREAU OF PARKS & RECREATION
LAND & WATER CONSERVATION FUND
and
MUNICIPAL RECREATION FUND
PROJECT AGREEMENT

Political Subdivision City of Portland
Project Title Riverton School Park
Project Period 6/23/75 to 12/31/77 Project No. 23-00276

Project Scope: This project consists of the development by the City of Portland of six (6) tennis courts and a softball field located in the Riverton School Park in the Riverton section of Portland, Cumberland County.

The development will be accomplished in one stage and will include a portion of the Master Site Planning, Engineering, Site Preparation, Paving, Fencing, Backstops, Walks and Finish Grading.

THIS AGREEMENT is hereby made between the STATE OF MAINE, by and through the BUREAU OF PARKS AND RECREATION, hereinafter called the STATE, and the (City) ~~TOWN~~ of Portland, hereinafter called the RECIPIENT.

WITNESS:

WHEREAS, the United States of America, represented by the Director, Bureau of Outdoor Recreation, United States Department of the Interior, and the State of Maine have entered into an agreement (which with its attachments and all regulations and provisions incorporated therein, is hereinafter referred to as the "Agreement") pursuant to the Land & Water Conservation Fund Act of 1965, 78 Stat. 897, (1964) providing for the acquisition and/or construction of the above described project (hereinafter referred to as the "Project"), for the benefit of the RECIPIENT; and,

WHEREAS, the Agreement between the United States of America and the STATE imposes responsibilities upon the STATE which the STATE has assured will apply to the RECIPIENT and which the RECIPIENT agrees to perform;

NOW, THEREFORE, for valuable consideration, the STATE and the RECIPIENT agree as follows:

1. The Agreement is hereby attached and made a part hereof this agreement, and the RECIPIENT hereby agrees to discharge, perform, and fully satisfy all provisions of the Agreement directly or indirectly applicable to the RECIPIENT, and the RECIPIENT further agrees that it shall not, through any act or omission, violate any provision of the Agreement.
2. In connection with all phases of the Project, including all work to be performed in the development thereof, the RECIPIENT agrees as follows:
 - A. RECIPIENT shall comply with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P. L. 91-646; 84 Stat. 1894) including amendments thereto and regulations thereunder, as permitted by Title I M.R.S.A. Chapter 23.
 - B. RECIPIENT agrees to execute and complete the Project strictly within the above referenced Project Scope. Subsequent to this Agreement, any change in the use or the substantial change in the design or arrangement of the Project must have the prior written approval of the STATE and the Bureau of Outdoor Recreation of the U. S. Department of the Interior.
 - C. RECIPIENT shall not advertise any work on the Project for bidding, enter into any contract for work to be performed, or undertake any work on the Project unless and until the RECIPIENT shall have submitted reasonably detailed plans and specifications of the Project to the STATE for approval and shall have received the written approval of the STATE.
 - D. All contracts for work on the Project in excess of \$2,500 shall be awarded through competitive bidding.
 - E. RECIPIENT shall establish a separate account for all funds received and expended in connection with the Project and shall preserve (and permit inspection of) such financial records for a period of three (3) years following final completion of the Project.
 - F. The eligibility of any cost incurred or proposed to be incurred in connection with the Project shall be determined by the criteria set forth in the Bureau of Outdoor Recreation Grants-in-Aid Manual.

3. The RECIPIENT agrees that after completion of the Project it will, at its sole expense, retain the land acquired and/or improvements thereon developed (as the case may be) as a result of the Project (hereinafter referred to as the "Facilities") and operate the Facilities in a first-class manner for the service of the general public for the lifetime of the Facilities. In addition, the RECIPIENT shall comply with the following particular requirements:
- A. The Facilities shall be retained by the RECIPIENT and not transferred or encumbered and shall be used exclusively for public outdoor recreation. The use of the Facilities shall not be changed from that contemplated and approved as of the date hereof, unless prior written approval of such a change is obtained from the STATE and the Bureau of Outdoor Recreation. The Facilities shall be kept open at reasonable hours and times of the year consistent with the type of recreation offered and shall be open to use and entry by all members of the public, regardless of race, color, creed, national origin, sex, or residence, who are otherwise eligible according to reasonable published rules applicable to use of the Facilities.
 - B. The Facilities shall be operated and maintained to present an attractive and inviting appearance to the public. Sanitation and sanitary facilities shall be provided and maintained at least in accordance with applicable State and Local public health laws or regulations. The Facilities shall be kept reasonably safe for public use and shall be kept in good and operable condition and repair, reasonable wear only excepted, throughout the lifetime of the Facilities.
4. If the RECIPIENT fails to comply with any provision of this agreement, including particular provisions relating to operation, maintenance, and repair of the Facilities, the STATE may, in addition to other legal rights it may have, operate the Facilities or perform the required maintenance and repairs, in which event the RECIPIENT, shall, promptly upon request, reimburse the STATE for all funds expended for the operation of and for the maintenance or repairs performed by or at the direction of the STATE.
5. The RECIPIENT shall post in a prominent place on the Facilities, and maintain in good condition, a sign giving permanent public acknowledgment of assistance from the Land and Water Conservation Fund.
6. The Project and Facilities and all records pertaining thereto shall, at all reasonable times, be available for inspection by the STATE OR ITS AGENTS OR DESIGNEES.
7. The STATE shall obligate from the Municipal Recreation Fund (Title 12 M.R.S.A. § 602 Sub § 14) to the RECIPIENT \$ _____, and tender to the RECIPIENT that portion of the obligation which is required to pay the STATE's share of the cost of the Project, which share is to be at a percentage rate of _____%.

8. The following special terms and conditions are made a part of this agreement:

None

IN WITNESS WHEREOF, the parties hereto have, by their duly authorized agents, executed this agreement as of the dates entered hereinbelow.

Date July 3 19 75

STATE OF MAINE
BY Ted M. Bault
Supervisor, Federal Aid
Bureau of Parks & Recreation

Date July 25 19 75

POLITICAL SUBDIVISION
City of Portland
BY John E. Menario
John E. Menario
City Manager

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Outdoor Recreation
Land and Water Conservation Fund Project Agreement

State MAINE	Project Number 23-00 276
--------------------	---------------------------------

Project Title RIVERTON SCHOOL PARK

Project Period APPROVED TO 12-31-77
--

Project Scope (Description of Project)

This project consists of the development by the City of Portland of six (6) tennis courts and a softball field located in the Riverton School Park in the Riverton section of Portland, Cumberland County.

The development will be accomplished in one stage and will include a portion of the Master Site Planning, Engineering, Site Preparation, Paving, Fencing, Backstops, Walks and Finish Grading.

Project Stage Covered by this Agreement

COMPLETE DEVELOPMENT

Project Cost

Total Cost	\$	<u>140,200</u>
Fund Support		<u>50 %</u>
Fund Amount	\$	<u>70,100</u>
Cost of this Stage	\$	<u>140,200</u>
Assistance this Stage	\$	<u>70,100</u>

The following attachments are hereby incorporated into this agreement:

1. General Provisions **dtd. Dec., 1965**
2. Project Proposal
3. _____
4. _____

The United States of America, represented by the Director, Bureau of Outdoor Recreation, United States Department of the Interior, and the State named above (hereinafter referred to as the State), mutually agree to perform this agreement in accordance with the Land and Water Conservation Fund Act of 1965, 78 Stat. 897 (1964), and with the terms, promises, conditions, plans, specifications, estimates, procedures, project proposals, maps, and assurances attached hereto and hereby made a part hereof.

The United States hereby promises, in consideration of the promises made by the State herein, to obligate to the State the amount of money referred to above, and to tender to the State that portion of the obligation which is required to pay the United States' share of the costs of the above project stage, based upon the above percentage of assistance. The State hereby promises, in consideration of the promises made by the United States herein, to execute the project described above in accordance with the terms of this agreement.

The following special project terms and conditions were added to this agreement before it was signed by the parties hereto:

Pre-agreement costs incurred from January 1, 1974 to date of project approval in an amount not to exceed \$10,000 shall be allowable under this agreement.

The State agrees to turn over to the City of Portland all funds granted hereunder.

Section B.2d and D.4 of the General Provisions dated December, 1965 are not binding upon this project.

Reference to \$10,000 in B.2(a), (b) and (c) of the General Provisions is changed to \$2,500.

In witness whereof, the parties hereto have executed this agreement as of the date entered below.

THE UNITED STATES OF AMERICA

By

Paul P. McIntyre
(Signature)

ACTING

Assistant Regional Director

(Title)

Bureau of Outdoor Recreation
United States Department of
the Interior

Date

June 23, 1975

STATE

MAINE

(State)

By

Fred M. Bartlett
(Signature)

Fred M. Bartlett

(Name)

State Liaison Officer

(Title)

INT:1585-74

ATTACHMENT 14

COST ESTIMATE FOR CITY OF PORTLAND PERFORMANCE GUARANTEE

COST ESTIMATE FORM PORTLAND SUBDIVISION/SITE DEVELOPMENT
Cost Estimate of Improvements to be covered by Performance Guarantee

Name of Project:	Residential Development
Address/Location:	1582 Forest Avenue
Application ID #:	
Developer:	Acre Properties
Form of Performance Guarantee:	
Type of Development:	

To submit a Cost Estimate, please breakdown the costs associated with the project in both Public and Private tables below. Once the Cost Estimate is approved and Performance Guarantee posted, this form can be resubmitted up to three times a year for reduction requests, as needed, by indicating items fully completed.

[illegible]

ATTACHMENT 6

NEIGHBORHOOD MEETING PACKAGE

Neighborhood Meeting Certification

I, Doug Reynolds, P.E., hereby certify that a neighborhood meeting was held on Wednesday, February 5, 2025 at the Talbot Community School at 1600 Forest Avenue, Portland, Maine at 5:30 P.M.

I also certify that on January 24, 2025, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.
2. Residents on the "Interested parties" list.

Signed,



Doug Reynolds, P.E.

February 6, 2025

(date)

Attached to this certification are:

1. Copy of notice sent
2. Sign-in sheet
3. Record of feedback

January 24, 2025

Dear Neighbor:

Please join ACRE Properties, for a Neighborhood Meeting to discuss their proposed 50-unit residential development consisting of two, three-story, multi-family dwellings, each with a building footprint of approximately 7,560 square feet at 1582 Forest Avenue, Portland, ME. The City of Portland identifies the property on the Maine Parcel Viewer as Parcel 299, Lot D1011001. The site is to be accessed via Belfort Street with pedestrian access via Forest Avenue.

Meeting Location: Talbot Community School

Meeting Date: February 5th, 2025

Meeting Time: 5:30pm-6:30pm

The City Code requires that the applicant shall mail notice to all property owners within 500 feet of the subject property boundaries, at least 10 calendar days prior to the neighborhood outreach or event. We will take attendance and submit a sign-in sheet to the Planning Board. The meeting will last no more than 60 minutes. If you have any questions, please feel free to contact Doug Reynolds 207.772.2515.

Sincerely,

GORRILL-PALMER



Douglas E. Reynolds, PE
Project Manager
Phone 207-772-2515
DReynolds@GorrillPalmer.com

Note: Under Section 13.5.5(B) Neighborhood Outreach of the City Code of Ordinances, an applicant for a Major Site plan development is required to mail notice to all property owners within 500 feet of the subject property boundaries, at least 10 calendar days prior to the neighborhood outreach or event. The notice shall contain a brief description of the proposal and information about how to access the neighborhood outreach (e.g. the date, time, and place of the neighborhood meeting or event or other relevant information regarding approved forms of neighborhood outreach). A digital copy of the neighborhood notice shall be sent to the Planning Authority, which shall be distributed to the City's list of interested citizens. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8683 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101.

"U:\ACRE Properties\4292 - 1582 Forest Ave Belfort Residential - ACRE Properties\G Abutters\Neighborhood meeting notice.docx"



Neighborhood Meeting Sign-In Sheet
Project: 1582 Forest Avenue, Portland, Maine

Date: February 5th, 2025

Time: 5:30 PM

Location: Talbot Community School

Name	Company	Telephone No.	Email Address
Kassey Northrop	Gorrill Palmer	315-600-6037	knorthrop@gorrillpalmer.com
Ethan Chadwick	Gorrill Palmer	207-595-5195	echadwick@gorrillpalmer.com
Alex Coupe	ACRE Properties	207-838-4546	acoupe@acreproperties.com
LEROY DOUCETTE		207-791-4215	ldoucette@gmail.com
J. L. DORTCH		207-939-3404	jsd84834@gmail.com
SPENCER		207-522-0322	
Lynne Calk		797-6765	FAA
Marianne Carter		207-329-1051	
Carol Di Pietro		207-868-9114	
Patty Debel		207-653-1671	lebel/patty@gmail.com
Jim Mary-JO Brink		207-239-5261	mjbrink1@gmail.com
Alex Rand		207-899-8062	alexrand42@gmail.com
Debbie Pappas		207-807-312	DebPappas@gmail.com
P. J. Kwiecień		732-644-9349	
Tom RANAGHAN		207-233-2100	
Michael J. McLeod			mjm2454@yahoo.com
Amy L. Walsh			amiyotree@gmail.com
Melissa Blanchard		207-899-9034	jorlms41968@gmail.com
Ryan Chamberlain		207-318-4781	ryanchamberlain@yahoo.com
GRANT CHAMBERLAIN		207-212-8447	GRANT-1221@yahoo.com
Lisa Coha		207-232-1416	lizcoha3@verizon.net
Cindy Russell		207-233-5117	cindyrussell76@mc.com
Justin Russell		207-310-7912	timetoclimb@pm.me
James Spear		207-272-7998	james.spear99@gmail.com
Elizabeth Berg		207-272-2922	LBFMGT@yahoo.com
Toni Guica			Rnhappytm@gmail.com
David Guica			
Paul Moore		207-730-3677	75501 Commodo4562@yahoo.com
CHRIS PRICE		207-797-9896	
Haver Markham		716-640-5821	hamarkham@gmail.com
Shane White		207-735-7353	espiuu@gmail.com

RECORD OF FEEDBACK

Project: 1582 Forest Avenue, Portland, Maine

Job #: 4292

Date: February 5, 2025

Time: 5:30 P.M. – 6:30 P.M.

Location: Talbot Community School

Subject: Neighborhood Meeting

Attendees: See Attached Sign-In Sheet

In accordance with the City of Portland's Major Site Plan Requirements, a Neighborhood Meeting was scheduled to discuss the proposed 50-unit residential development consisting of two, three-story, multi-family dwellings, each with a building footprint of approximately 7,560 square feet.

The meeting was held on Wednesday, February 5, 2025 at 5:30 P.M. and Alex Coupe, President of ACRE Properties, LLC (Applicant), as well as Kassey Northrop and Ethan Chadwick, representatives from Gorrill Palmer, were present on site from 5:15 P.M. – 7:00 P.M. Please note that there were approximately seventy-six (76) attendees at the meeting, however only forty-one (41) members of the public were willing to sign in.

ATTACHMENT 3

REVISED ARCHITECTURAL ELEVATION AND RENDERING





Carter Frank <cfrank@portlandmaine.gov>

"Belfort Landing" Development

1 message

'adam pelletier' via Planning Board <planningboard@portlandmaine.gov>

Tue, Apr 1, 2025 at 4:17 PM

Reply-To: adampelletier@yahoo.com

To: "efreeman@portlandmaine.gov" <efreeman@portlandmaine.gov>, "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

Dear Members of the Planning Board,

I am writing to raise my concerns about the proposed development of "Belfort Landing." Our community is experiencing significant overdevelopment, leading to increased traffic congestion, inadequate parking, and a shortage of green spaces. I believe that adding a 50-unit development will only worsen these existing issues and set a precedent for further exploitation by developers. We must prioritize the well-being of our community and draw a line at what is acceptable.

Thank you for considering my concerns.

Adam Pelletier



Carter Frank <cfrank@portlandmaine.gov>

Belfort Landing project

1 message

Alison Cameron <aecameron7@gmail.com>

Wed, Feb 26, 2025 at 10:23 PM

Reply-To: aecameron7@gmail.com

To: planningboard@portlandmaine.gov, efreeman@portlandmaine.gov

I am writing to express my opinion regarding the proposed Belfort Landing project. This project has many flaws and does not belong in our community. I can appreciate the need for housing in Portland, however this is not the place for a project of this nature. One of the major issues is parking. I don't see how it's feasible to think that a 50 unit building of 1-2 bedroom apartments can be functionable with only 50 parking spaces. The proposed access to the development is also positioned in a place that is a natural blindspot that will only worsen because of the overflow parking that will happen on Belfort. This road does not have sidewalks and will place people/children who are walking in danger. I feel that before this project moves forward a traffic study is imperative to keep our community safe. The issues of increased traffic, parking, safety concerns and the general upkeep of this housing project are just a few issues that would cause this project to be detrimental to our neighborhood. Please strongly consider stopping this from happening.

Alison Cameron
80 Verrill St



Carter Frank <cfrank@portlandmaine.gov>

Letter of Reference, Don Law, Chairman of Live Nation

1 message

Aleksandra Tugbiyele <ATugbiyele@baafdn.org>

Tue, Apr 1, 2025 at 12:10 PM

Reply-To: atugbiyele@baafdn.org

To: "Planningboard@portlandmaine.gov" <Planningboard@portlandmaine.gov>

Good afternoon Members of the Planning Board, City of Portland,

I am reaching out on behalf of Denella J. Clark, President and CEO of the Boston Arts Academy to share a reference for Don Law, Chairman of Live Nation. Attached, please find Ms. Clark's letter of reference, and her direct contact information for any questions.

Thank you for your time and consideration.

With kind regards,

Aleksandra Tugbiyele

Aleksandra Tugbiyele (2-B-L-A), she/hers

Chief of Staff and Board Clerk

Boston Arts Academy Foundation

(617) 943-9209 * atugbiyele@baafdn.org



126 Brookline Avenue, 3rd Floor, Boston, MA 02215

Confidentiality Notice

This message is intended exclusively for the individual or entity to which it is addressed. This communication may contain information that is proprietary, privileged, confidential or otherwise legally exempt from disclosure. If you are not the named addressee, you are not authorized to read, print, retain, copy or disseminate this message or any part of it. If you have received this message in error, please notify the sender immediately either by phone (617-943-9209) or reply to this e-mail and delete all copies of this message.

 **D. Law Reference to Planning Board from Denella J. Clark.pdf**
252K

David Orrico <david.e.orrigo@icloud.com>

Mar 1, 2025, 11:13:57 AM (2 days ago)



to planningboard@portlandmaine.gov

Good day, my wife and I are 47 year resident s of Belfort Street. We recently attended a public meeting regarding a proposed 50 unit apartment complex with access from Belfort Street and bordering rhe Riverton school access road, While we am keenly aware the city needs additional housing, we are against this project for the following reasons:

- We were advised the project has one parking space per unit and were told this confirms to zoning requirements. We did ask about overflow parking and was told none was included in the plan. Another resident asked about parking on the access road from Belfort Street into the development and were assured by the developer nobody would park on this roadway. We were also advised public transportation was to be encouraged. Our concern is that Belfort Street residents will have to contend with at least 50 additional car exiting and entering the development daily. We would expect the number to be significantly higher given the number of cars per household, currently at more than one, for existing homes on the street as an example. We also feel cars will be parked wherever there is space, and that includes the development access road and Belfort Street as well. There are no sidewalks on Belfort Street and there is already significant pedestrian traffic. While public transportation might be encouraged, it's wishful thinking, given the current level of use, that this will reduce the vehicular traffic.
- The access to the development is near the crest of the hill at the top of Belfort Street in an area where traffic entering Belfort Street and traffic coming up the hill to exit Belfort Street are all merging. This area is literally an accident waiting to happen when factoring in traffic entering and exiting the Belfort Street side of Moran's Market, current cars parked along both sides of Belfort Street and the narrowing of the street due to snow in the winter. Regardless of the time pf year, when entering Belfort Street it's virtually impossible to see what traffic, vehicular and pedestrian, is exiting Belfort Street until one is at the crest of the hill, which is the exact area access to the development is slated for.
- Finally, one meeting attendee asked about access to the development from the Riverton School access road (to make use of the existing traffic light)as well as from 1569 Forest Ave, which the developer also owns. The meeting was told routing the traffic through 1569 Forest Ave would not be workable. The meeting was also told that due to how the land for the Riverton School was deeded, access to the proposed development from the school road was not permitted. AND YET, by his own words, the developer states he uses the school access road to reach the rear of the property he owns at 1569 Forest Ave rather than using access he already owns. He freely admitted to be in violation of the existing rules simply because it's easier for him. We cannot state forcefully enough we have no faith that he will not as carelessly disregard other rules when nobody is looking

Thank you for your time in reading our comments and your service to the city

David and Malinda Orrico
139 Belfort St
Portland, ME 04103



Carter Frank <cfrank@portlandmaine.gov>

concerned resident - Belfort Landing Project

1 message

Erica Berry <eberrypr@gmail.com>

Mon, Feb 10, 2025 at 10:50 AM

Reply-To: eberrypr@gmail.com

To: efreeman@portlandmaine.gov

Cc: planningboard@portlandmaine.gov, friendsofbelfort@gmail.com

Hi Eric,

My name is Erica Berry, we had spoken a couple of weeks ago about the Belfort Landing project--thanks again for taking my call and answering my initial questions.

I attended the neighborhood meeting for the Belfort Landing project and have a lot of concerns about the proposed project by Alex Coupe--including safety risks due to increased traffic on a small residential street and lack of parking for the number of residents. 50 units and only 50 on site parking spots means the overflow will be on Belfort Street which is a small residential street with no sidewalks. How will fire trucks, plows, anything larger than a car fit down Belfort Street when cars are lined on either side? It's going to cause major traffic issues, it's going to be unsafe for pedestrians. We have children who walk up Belfort Street to catch the bus for school.

The small 20' wide entrance for the proposed complex and its location in the middle of a slope on Belfort poses safety issues for both residents of the complex and residents of Belfort. There is going to be a traffic jam getting out onto Forest Ave. With Moran's Market there, there's already a cluster of cars parked at the top of the street, plus trucks from a local plumber. Add 50 additional households onto our small street and it's going to be dangerous. There will be accidents, people will get hurt. **Will a traffic study be done? And if so, is this commissioned and paid for by Alex Coupe? Why can't the vehicular entrance be on Forest Ave if he owns the property? Will the city conduct their own traffic study? If so, who will pay for this?**

I'm also concerned about privacy and the integrity of the plans.

The renderings presented by Alex Coupe are misleading, and I am concerned that these drawings are going on the record and being considered accurate. The backyard as shown in the renderings will not exist, as that space is actually the existing Talbot School entrance road; nor will the greenery in the front of the building, as that is the backyard of Belfort Street residents.

The renderings also do not show or take into account the land grade of 8 feet, plus the height of a two and a half story building. This will tower over the houses on Belfort Street--shining headlights, parking lot lights, and people's eyeballs directly into backyards and windows. Two and a half stories is taller than any house on Belfort Street, which does not even allow a duplex in its zoning. Given the character of the neighborhood--single family homes--**how is it possible this land was rezoned for this high density?** Belfort Street has only 52 houses, adding this mega complex this will instantly double the residents in a .25 acre space.

Given the sheer size (two mega complexes) and dramatic changes to the land (ie: the 8 foot grade) **how will the city ensure this proposed development won't negatively impact adjacent lots--flooding backyards, basements, etc.? And if it does, how do we get remediation?** According to the site plan, there is a lot of water that's going to be displaced--those numbers below. A house by Alex Coupe at 154 Belfort Street has caused flooding in the basements of the homes on either side of it, something neither homeowner had experienced before, and one resident has lived there for 20 or so years.

- **Total Existing Impervious Area (sf): 3610**
- **Total Impervious Area After Construction (sf): 37787**

During the neighborhood meeting Alex Coupe said it was not lawful for an easement to his proposed complex be allowed on Talbot School road. **If that is the case--is that legal casework public record, and where can I find it? And if that is the case, why is Alex Coupe then currently using the Talbot School entrance road to access the property?** If Alex Coupe is already skirting the system I am greatly concerned what will happen when he's left in charge of a 50 unit mega complex, a scale he's never even come close to managing before. Alex Coupe's largest complex is a 10 unit. He is unproven and putting our neighborhood in danger.

When is the first workshop for the Belfort Landing project proposal?

How do I sign up for notices about changes and updates on the plan? https://selfservice.portlandmaine.gov/EnerGov_Prod/SelfService#/plan/d7216bad-00f8-488a-bb23-9adfd2a1cecd

Have there been any variances on this project?

How would a project like this impact our property values?

Any project should not only benefit the new residents, but also the residents of its surrounding existing neighborhood. Alex Coupe's proposal does not fit with the current character of Belfort Street, and provides absolutely no benefits for the current residents. Alex Coupe's plan is irresponsible and unreasonable for this location. A development of this scope and size will negatively change our neighborhood forever.

I look forward to hearing from you.

Thanks,
Erica



Carter Frank <cfrank@portlandmaine.gov>

Belfort landing Development

1 message

Geoff Wahome <gwahome@une.edu>

Thu, Apr 3, 2025 at 10:13 AM

Reply-To: gwahome@une.edu

To: "efreeman@portlandmaine.gov" <efreeman@portlandmaine.gov>, "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

Geoff Wahome
[60 belfort street](#)
 Portland, ME, 04103
Gwahome@une.edu

To the Members of the Planning Board,

I am writing to express my deep concern regarding the proposed 50-unit apartment complex planned for 1584 Forest Avenue (Plan Number: PL-003161-2024).

As a resident of Belfort Street, I am particularly troubled by the fact that the primary access point for this high-density development is proposed to be through our street. Belfort Street is not a through street—it is part of a small, residential neighborhood consisting of just four streets: Belfort, Empire Way, Verrill Street, and Iffley Street. This is a quiet, family-oriented area that has recently welcomed eight new families with newborns—a testament to the safe and close-knit environment we all value and work hard to preserve. The **safety** of our children and the integrity of our community are paramount.

Compounding this concern is the congestion we already experience. A plumbing business located at the top of the street generates regular commercial traffic and has no designated parking, forcing vehicles to occupy on-street spaces. Additionally, parents frequently park along Belfort Street to drop off their children at the Talbot School to avoid traffic on school grounds. As a result, mornings and afternoons are especially chaotic and dangerous, with cars rushing to get to work or exit onto Forest Avenue.

Parents from adjacent neighborhoods also walk their children to school through Belfort and are often seen flagging down motorists and business vehicles, urging them to slow down. We even had to ask a sheriff who lives on our street to place a speed radar board during school hours in an effort to curb speeding. The addition of a 50-unit apartment complex, with minimal parking, will only force tenants and their visitors to park along Belfort—further increasing the likelihood of another pedestrian being hit.

For me and many of my neighbors, this is not a housing issue—it is a **safety** issue. A building of this magnitude would significantly increase congestion and further endanger pedestrians, cyclists, and families. I know this firsthand: I was struck by a motorist while biking to work. The driver—who had just dropped off a child at the school—was rushing and not paying attention. That incident underscores just how dangerous congestion already is, especially during school and business hours, and highlights why the added pressure of 50 additional units is simply too much.

While I understand the need for more housing and am not opposed to development, a project of this scale is not appropriate for this location. Our roads, infrastructure, and neighborhood layout were never designed to handle this level of density.

Adding to these concerns are statements reportedly made by the developer, Alex, who has claimed that he “has the city in his pocket,” and that the city is offering incentives to push projects like this forward. Whether

true or not, this kind of rhetoric only fuels public distrust and raises real concerns that the voices of residents and the long-term health of our community are being overlooked in favor of aggressive development.

I respectfully urge the Planning Board to reconsider the scale of this project. A smaller, more thoughtfully designed development—perhaps half the size—would better reflect the character of our neighborhood and help preserve the **safety** and quality of life for the families who live here.

Thank you for your time and attention.

Sincerely,
Geoff W

This e-mail may contain information that is privileged and confidential. If you suspect that you were not the intended recipient, please delete it and notify the sender as soon as possible.



Carter Frank <cfrank@portlandmaine.gov>

Development at 1582 Forest Ave

1 message

'grantc_1221' via Planning Board <planningboard@portlandmaine.gov>

Tue, Feb 25, 2025 at 10:54 AM

Reply-To: grantc_1221@yahoo.com

To: planningboard@portlandmaine.gov

To Whom it May Concern,

I am writing in regard to the proposed 'Belfort Landing' development at 1582 Forest Ave in Portland. I know you've already heard from several of my neighbors, and I share many of their concerns about this proposed project. In addition to permanently changing the character of a hundred year old neighborhood, I have serious concerns about the increase in traffic and pedestrian safety after the addition of 50 housing units/apartments on our quiet, little side street.

My biggest concern personally is parking/traffic, so I will start there. The proposed development will feature only 50 parking spaces for 50 units, despite 30 of these units being two bedrooms. This is simply insufficient and will force overflow parking directly on to Belfort Street, which is not equipped to accommodate it. While many current residents park on the street from time to time, this development will likely lead to the segment of Belfort directly in front of my property (34 Belfort) to be lined on both sides with cars that do not fit in the development's 50 parking spaces. This is both a traffic and safety concern. Several neighbors got together on a recent Saturday and parked on both sides of Belfort to simulate what it would be like with the influx of new vehicles and the results were terrible (see attached pictures). This was done with some snow on the ground, but well before our total snowfall doubled over the course of 10-14 days in mid-late February, shrinking the roadway even further. With vehicles parked on both sides of the road, the result was a single lane that was only 9-10 feet wide. While this is passable for a regular passenger vehicle, larger vehicles like delivery trucks, city plows and first responders (fire trucks and ambulances) may or may not fit through this gap depending on how well people parked. I live on the slope of Belfort; if the road isn't properly plowed I likely will not be able to get out of my driveway and up the hill.

Additionally, there is no light at the top of Belfort (intersection with Forest), which makes turning left onto Forest Ave a challenge at certain times of day. Adding 50-100 more vehicles to the mix will only exacerbate this issue. At peak travel times, it's quite likely the traffic waiting to turn onto Forest from Belfort will stretch down Belfort back into the area that will be the primary overflow parking for this development. This will make the road essentially impassable for anyone turning onto Belfort from Forest.

This overflow parking is also a safety concern, for the same reason it is a traffic concern. There are no sidewalks on Belfort, save for the first 50 feet on one side. But we have significant foot traffic, including a large amount of children walking to and from Talbot School multiple times per day. If Belfort becomes a single lane due to the overflow parking, these children will be forced to share this 9-10 ft wide strip of road with vehicles travelling in both directions. Outside of the safety of these school children, roughly 75% of the homes on Belfort St, Verrill St, Iffley St and Empire Way have dogs. Walking your dog on the Belfort loop has always been a very safe option compared to Forest Ave and the surrounding area because Belfort is not a through street so traffic is limited. The combination of the influx of traffic and the increased amount of on-street parking will make the street much less safe for pedestrians of all ages.

I strongly urge the city to require the developer to pay for a traffic study to assess the true impacts the massive influx of vehicles will have on the neighborhood. While I know this property has been zoned for even more units than are actually planned for this development, even the proposed 50 units is way too much for this small side street to accommodate. I also understand there is little the neighborhood can actually do to prevent this development as long as the developer follows all applicable laws and codes, but I would encourage the City to consider at least scaling this project back to ensure that the development will have sufficient parking onsite making overflow parking on Belfort rare to non-existent.

Finally, I'd like to address the character of the neighborhood and the negative impact this development will have on that. Again, I understand that the development site has been rezoned for multi-unit expansion, but the entirety of Belfort St, Iffley St, Verrill St and Empire Way are single-family homes. The proposed 3-story structure will be built on a raised, back-filled lot and will completely dominate the landscape of the entire neighborhood. I believe it will be in full view from literally every house on all of Belfort, Iffley, Verrill and Empire. There simply is no design aesthetic that will prevent this from being anything but an eyesore for the entire neighborhood. The proposed structure will be particularly intrusive for the several properties that abut it directly. Because the lot will be raised prior to construction, the new structure will tower 20-30 feet over houses that sit within 50 feet of it. This new aesthetic, along with the parking situation are likely to drive down property values, especially for those houses in the immediate vicinity of the proposed build (those within a few hundred feet).

In conclusion, this proposed development is simply too large for the area in which it will be built. I understand cancelling the project entirely is probably unrealistic, but I urge the City to consider at least requiring it to be scaled back (to 25 units or fewer) in order to minimize the negative impacts on the surrounding community. I also request that the developer be required to pay for a traffic study to more fully understand the impact this project will have on this quiet side street.

Sincerely,

Grant Chamberlain

34 Belfort St

----- Original message -----

From: grantc_1221 <grantc_1221@yahoo.com>

Date: 2/25/25 10:47 AM (GMT-05:00)

To: efreeman@portlandmaine.gov

Subject: Development at [1582 Forest Ave](#)

Mr. Freeman,

I am writing in regard to the proposed 'Belfort Landing' development at [1582 Forest Ave](#) in Portland. I know you've already heard from several of my neighbors, and I share many of their concerns about this proposed project. In addition to permanently changing the character of a hundred year old neighborhood, I have serious concerns about the increase in traffic and pedestrian safety after the addition of 50 housing units/apartments on our quiet, little side street.

My biggest concern personally is parking/traffic, so I will start there. The proposed development will feature only 50 parking spaces for 50 units, despite 30 of these units being two bedrooms. This is simply insufficient and will force overflow parking directly on to Belfort Street, which is not equipped to accommodate it. While many current residents park on the street from time to time, this development will likely lead to the segment of Belfort directly in front of my property (34 Belfort) to be lined on both sides with cars that do not fit in the development's 50 parking spaces. This is both a traffic and safety concern. Several neighbors got together on a recent Saturday and parked on both sides of Belfort to simulate what it would be like with the influx of new vehicles and the results were terrible (see attached pictures). This was done with some snow on the ground, but well before our total snowfall doubled over the course of 10-14 days in mid-late February, shrinking the roadway even further. With vehicles parked on both sides of the road, the result was a single lane that was only 9-10 feet wide. While this is passable for a regular passenger vehicle, larger vehicles like delivery trucks, city plows and first responders (fire trucks and ambulances) may or may not fit through this gap depending on how well people parked. I live on the slope of Belfort; if the road isn't properly plowed I likely will not be able to get out of my driveway and up the hill.

Additionally, there is no light at the top of Belfort (intersection with Forest), which makes turning left onto Forest Ave a challenge at certain times of day. Adding 50-100 more vehicles to the mix will only exacerbate this issue. At peak travel

times, it's quite likely the traffic waiting to turn onto Forest from Belfort will stretch down Belfort back into the area that will be the primary overflow parking for this development. This will make the road essentially impassable for anyone turning onto Belfort from Forest.

This overflow parking is also a safety concern, for the same reason it is a traffic concern. There are no sidewalks on Belfort, save for the first 50 feet on one side. But we have significant foot traffic, including a large amount of children walking to and from Talbot School multiple times per day. If Belfort becomes a single lane due to the overflow parking, these children will be forced to share this 9-10 ft wide strip of road with vehicles travelling in both directions. Outside of the safety of these school children, roughly 75% of the homes on Belfort St, Verrill St, Iffley St and Empire Way have dogs. Walking your dog on the Belfort loop has always been a very safe option compared to Forest Ave and the surrounding area because Belfort is not a through street so traffic is limited. The combination of the influx of traffic and the increased amount of on-street parking will make the street much less safe for pedestrians of all ages.

I strongly urge the city to require the developer to pay for a traffic study to assess the true impacts the massive influx of vehicles will have on the neighborhood. While I know this property has been zoned for even more units than are actually planned for this development, even the proposed 50 units is way too much for this small side street to accommodate. I also understand there is little the neighborhood can actually do to prevent this development as long as the developer follows all applicable laws and codes, but I would encourage the City to consider at least scaling this project back to ensure that the development will have sufficient parking onsite making overflow parking on Belfort rare to non-existent.

Finally, I'd like to address the character of the neighborhood and the negative impact this development will have on that. Again, I understand that the development site has been rezoned for multi-unit expansion, but the entirety of Belfort St, Iffley St, Verrill St and Empire Way are single-family homes. The proposed 3-story structure will be built on a raised, back-filled lot and will completely dominate the landscape of the entire neighborhood. I believe it will be in full view from literally every house on all of Belfort, Iffley, Verrill and Empire. There simply is no design aesthetic that will prevent this from being anything but an eyesore for the entire neighborhood. The proposed structure will be particularly intrusive for the several properties that abut it directly. Because the lot will be raised prior to construction, the new structure will tower 20-30 feet over houses that sit within 50 feet of it. This new aesthetic, along with the parking situation are likely to drive down property values, especially for those houses in the immediate vicinity of the proposed build (those within a few hundred feet).

In conclusion, this proposed development is simply too large for the area in which it will be built. I understand cancelling the project entirely is probably unrealistic, but I urge the City to consider at least requiring it to be scaled back (to 25 units or fewer) in order to minimize the negative impacts on the surrounding community. I also request that the developer be required to pay for a traffic study to more fully understand the impact this project will have on this quiet side street.

Sincerely,

Grant Chamberlain

34 Belfort St

4 attachments



IMG_4361(1).png
172K



IMG_0017.png
329K



IMG_0014.jpeg
421K



IMG_4361.png
172K

James Spear <jameesspear99@gmail.com>

Feb 15, 2025, 7:40:15 PM (3 days ago)



to Eric Freeman, planningboard@portlandmaine.gov, friendsofbelfort@gmail.com, Liz Berg

My name is James Spear,

My home is 111 Verrill St, Portland, ME 04103.

As I am not 500 feet from the proposed Belfort Landing, I was not alerted to the public's information meeting at Riverton Center. Thankfully, word or mouth from concerned citizens allowed me to block out time to attend.

If there were proponents of the development at the meeting they were mute.
The rest of the room was vocal and opposed, as am I.

I realize there are correct political and legal steps to curtail, oppose, and defy a new development within a community. **Let this letter register myself as a concerned citizen against building Belfort Landing.**

50 apartments with 50 parking spaces with one egress, leading to and from a blind access point half way down a hill, leading to a neighborhood proud of the security in their streets for themselves and their children is not in the interest of this tight knit community.

I understand, with the hope to preserve public safety, and as the first initial avenue of opposition, **a traffic study must be performed.** This is my first request. Please request a detailed traffic report, and provide thorough evaluation for all concerned citizens so we may know what to expect.

With this information we will take the next steps to thwart the next step in the path to the future development of this property, and will continue to do so ad infinitum.

I implore you to recognize the implications of said development; Not just on the 500 feet left and right of the proposed "driveway", but also on the broader effects that will occur on Forest Avenue and the surrounding community. Belfort Ave flows into Forest Avenue one traffic light away from the Fire Station and access to the The Gerald E. Talbot Community School.

I work on Commercial Street in downtown Portland. Turning left onto Belfort Ave is already a nightmare - regardless of the time of day. Traffic impeding my access to my home's neighborhood was the one concern I had to justify when purchasing my house in 2012. I bit the bullet and have been happy with the decision ever since. However, if Belfort Landing had been in place when I was searching for a home for my family, I would have kept looking and you would not be receiving this letter from me.

We all suffer enough through Morrill's Corner, and then again through Woodfords Corner, and have subjugated ourselves to being powerless to the traffic snarl occurring every morning at Starbucks & Reed St. ... Adding another congestion point directly next to vital community services at the juncture of Forest + Belfort + Harris + Morrans Market + Riverton Gas Station + The Gerald E. Talbot Community School access road + the traffic light, and many other junctures serves no one except one contractor for profit. ... Yes he himself may have a family to feed, but he will not do it freely without the educated diplomacy from the affected neighborhood...

Start first with a traffic ordinance please, and then suffer through every ordinance that must be passed.

The community's collective opposition will be forceful and determined at every turn. We realize it is not going to be easy for us, and are prepared to make it uneasy through the decision process at every turn to create the change we can all agree upon. Most importantly, we want to make it a public record that we have been heard and are not delegated to the casualties of "progress". Singularly I sign this with the backing of a community I may or not know by name, but the result is the same. Save everyone lots of wasted time and money. Prevent the development of "Belfort Landing", and make it easy for everyone with an accurate traffic study that details the absurdity of the proposition.

Insisting,

James Spear
111 Verrill St. Portland ME 04103



Carter Frank <cfrank@portlandmaine.gov>

Proposed Belfort Street Apartment Complex

1 message

Jeannie Dorr <jsd84834@gmail.com>

Sat, Feb 8, 2025 at 2:32 PM

Reply-To: jsd84834@gmail.com

To: "efreeman@portlandmaine.gov" <efreeman@portlandmaine.gov>

Cc: Planningboard@portlandmaine.gov

I am very concerned about this new proposed apartment complex and here are some of my thoughts about this proposal.

Sincerely,
Jeannie Dorr



Planning Board-Portland.docx

14K

I am contacting the Planning Board regarding the proposed 50 unit apartment building with access onto Belfort Street. This property would add 50 to 100 cars to Belfort Street and their access onto Forest Ave. The neighborhood is already overcrowded with traffic from the Talbot School. Many of these families park on Belfort St. and Empire St. to drop off and pick up their children because of lack of parking at the school. The increased traffic from this complex would cause a danger to all of the children walking to the Talbot School each and everyday. The lack of sidewalks on Belfort Street just magnifies this issue.

The City of Portland needs to take a closer look at this project and the hazardous impact it would have on our neighborhood children's safety as they walk to and from school. Is the City of Portland so desperate for rental housing it would allow this too large a project in a very small space to be developed?

I have a couple of questions regarding the access road onto Belfort Street. I would like to know just what the setbacks are for the space between this road and the two houses along side it. Does the developer have to build a buffer zone between the access road and these two houses? Is there going to be a buffer zone between all the houses surrounding this total project? Is there enough space to build this zone with all the parking spaces they will need for 50 to 100 cars plus any overflow? Does this complex have enough space to do winter plowing without moving many of these cars onto Belfort Street?

I attended the initial meeting at Talbot School on Feb. 5th. I wish that the Planning Board had been represented at this meeting and perhaps they would have had a true picture of the impact this development would cause to our neighborhood and their children. All of the voices at this meeting were loud and strong against this project.



Carter Frank <cfrank@portlandmaine.gov>

Belfort landing development

1 message

'Lisa Coha' via Planning Board <planningboard@portlandmaine.gov>

Mon, Feb 24, 2025 at 8:32 AM

Reply-To: lcoha3@icloud.com

To: efreeman@portlandmaine.gov

Cc: planningboard@portlandmaine.gov

Dear Mr Freeman

I live down the road behind Belfort street and am very concerned about this new 50 unit development project. If not for my community I wouldn't have even heard of it since I received no prior info. As things stand right now Belfort has issues with incoming and outgoing cars. It is next to

Impossible at times to make a left hand turn on to Forest Ave. There is a heating/plumbing co right on the corner of Belfort where they park their multiple large vans since their parking area is very small and they share it with a barber shop.

Moran's market is on the other side of Belfort where customers exit out of on to Belfort to access Forest Ave. Belfort is not a wide enough street especially when there is snow piled up in the winters. This planned development of 50 units will create a disaster. Most families have multiple cars so with one parking space per unit, the cars will overflow on to Belfort to park. It would than be impossible for emergency vehicles to even get down the street not to mention oil trucks and other large vehicles. We need to have a traffic study done first and foremost before moving forward with this housing project.

Please look at all angles before rushing in to this project. Belfort is also a street without sidewalks where kids access the school that is right there as well. Thank you for taking my concerns seriously

Sent from my iPhone

Liz Berg <lbfmgmt@yahoo.com>
to planningboard@portlandmaine.gov

Feb 6, 2025, 7:23:32 PM (13 hours ago)



To Eric Freedman,

I learned of the subject development plan only this week although I live on Verrill St. We received no prior notification. I learned of the project through the neighborhood grapevine. This development does not belong in the proposed location. Adding 50 households to a neighborhood of 72 single family homes, an increase of 70 % in density would impact the neighborhood in many unintended ways. If the transportation infrastructure could handle this increase, I would be surprised. Belfort has no sidewalks. School children walk up and down to or from Forest Ave. constantly as they are dropped off at the intersection by school buses. Neighborhood kids ride their bikes up and down the street as well. There simply is not enough road shoulder to absorb the added traffic without some very predictable negative consequences. Pedestrian-vehicle accidents, snow plow accidents/damage to vehicles, fire truck failures due to the narrow passageway between parked vehicles, to name only a few.

Please do not support this development in its current form. It needs to be scaled back to fit the neighborhood in its present condition.

Thank you for your consideration.

-Liz

[Liz Berg 111 Verrill St. Portland, Me](#)
[Landlord's Best Friend Property Management](#)
[cel. 207.272.2922](#)
[www.landlordsbestfriend.com](#)

Melissa Blanchard <joelmissy1968@gmail.com>
to Eric Freeman, planningboard@portlandmaine.gov

Feb 19, 2025, 9:14:44 PM (11 hours ago)



Dear Eric Freeman and Planning Board Members,

My name is Melissa Blanchard and I live at 144 Belfort Street. I am very concerned about the project, Belfort Landing, that Alex Coupe wants to build on Belfort Street.

I understand that the land has been rezoned to build on; however that does not make Belfort Street a suitable place to build this enormous 3 to 4 story building for many reasons.

First and foremost; the traffic flow will increase and overflow parking will be on the side of Belfort and Verrill Street.

We now have several group homes on Belfort and Verrill Street. These group homes sometimes require several staff members to care for the residents.

Their cars are often parked on the side of the street. During snow storms, parked cars on the street are often not moved; thus the city plows can't plow the street properly.

The fact that this proposed development only has one parking space per unit and no overflow parking is very alarming. How many people are allowed per unit in a low-income apartment in

the City of Portland? If individual families move in, with more than one car; where will their second car be parked? This is a huge development and Alex Coupe could not give

us a comparison to other projects of this scale because he said he has not built a project of this size before.

I am not opposed to development but this project is too big for our small street. Single family homes on that land would be most better suited for Belfort Street. At the neighborhood

meeting, Alex Coupe said he did not have enough footage to build single family homes. I would ask that he be given an exception to build single family homes; which would be more

reasonable, and comfortable for the tax paying citizens who live here.

I strongly believe the Planning Board members should require Alex Coupe to pay for a traffic study to determine how a 50 unit, 3 to 4 story, apartment complex would increase traffic on

Belfort, and Verrill Street and Forest Ave.

I have to leave for work earlier than required in order to get out of Belfort Street in the morning. Taking a left to go to work is frustrating because of the traffic on Forest Ave. Even if Alex

Coupe puts a traffic light at the top of Belfort, I still believe the cars trying to get out onto Forest Ave would be too great.

Homeowners walk their children to school, and others drive their children to school, others, like myself, have to turn left every morning to go to work. If I don't turn out by 7 am, traffic

picks up significantly.

Other concerns I have are with the amount of people that potentially could live at the Belfort Landing complex. There is potential for an increase in crime and cars speeding up and down Belfort and Verrill Street.

Since the homeless shelter was built on Riverside Street several neighbors on Verrill and Belfort have had their cars ransacked and money and computers stolen. I had money stolen out of my car. Video was taken of a hooded man, near my house, and a stolen computer was traced to the Homeless Shelter on Riverside Street.

Currently, there are people speeding up and down the street; while neighbors are walking their dogs, strolling their babies in baby carriages, walking alone. Also, children ride their bikes and

walk on Belfort and Verrill Street to go to school at Talbot Elementary. It would seem that 50 units with an unknown number of people living in each apartment would increase traffic

on Verrill and Belfort Street significantly; making it a risk to walk on Belfort Street alone, or with dogs and children.

Elected officials of the Planning board, I would ask that you would please come out to our neighborhood and speak with the neighbors on Belfort Street and Verrill street. Discuss with

the residents that live here, what our concerns are, and what we witness living here.

I have lived on Belfort Street since 1969, when my parents built their house at 163 Belfort Street. My grandparents also bought the only house on Verrill Street in 1947 for \$5000 dollars.

I have seen many changes on Belfort Street since the 1970's when I was in elementary school, at Riverton School. I was in third grade in 1977, when Riverton school first opened.

I witnessed Verrill Street being developed in 1995 with single family houses after growing up on Verrill with only one house, my grandparents on Verrill Street. I have seen

group homes move into the neighborhood, and now several homes are being rented out. Alex Coupe even built a large house next to my 936 square foot house on Belfort Street.

I can adjust to these changes; however, to put a complex of that size on Belfort Street would be devastating for the tax paying citizens who bought their homes in this neighborhood because

of the way Belfort and Verrill Street are now.

The other concern is flooding. We have clay soil here. My basement has flooded out so many times that in the fall of 2023 I had to spend \$18,000 dollars to get mold out of my basement.

When I found out Alex Coupe was going to build a house beside my house, the first thing I discussed with the key City of Portland person in charge was I did not want my basement to flood

out and needed to make sure there was proper drainage.

What is left is standing water; a small pond of water between my house and my neighbors house. I was disappointed that standing water was left in a pond with rocks as a drainage method.

Other questions I have are:

1. What environmental studies have been conducted to assess the impact of this development on local ecosystems, waterways, or wildlife?
2. How do you plan to address increased stormwater runoff and potential flooding issues caused by this development?
3. What sustainable design features exist in the building: Energy conservation; water efficiency; low-impact sustainable material procurement; How will heat and air conditioning be powered?
4. What environmental protection measures will be mandated for construction? And how long will construction go on (duration)?

Infrastructure and Community Resources

4. How will this project impact traffic in the neighborhood? Have traffic studies been conducted?
 - a. How is the proposed development going to handle all the extra traffic on Belfort Street? Without a stoplight, it's already tough to turn left onto Forest, and this will make the congestion even worse.
 - b. How is the proposed development going to impact when school is in session during the mornings and afternoons when Forest already gets backed up
 - c. How is the proposed development going to impact when school is in session during the mornings and afternoons when Morrill's Corner is already overwhelmed with traffic
5. How do you plan to accommodate the increased demand for utilities like water, sewage, and electricity?
6. Have you considered the strain this development might place on local schools, emergency services, or healthcare facilities?

Zoning and Compliance

7. How do you justify the scale or density of this project given the character of the surrounding neighborhood?

Economic and Social Impact

9. What guarantees do you offer that this development will benefit current residents and not just new ones?
10. How do you plan to mitigate potential increases in property taxes or housing costs for existing residents?

Transparency and Accountability

11. What feedback from the community have you incorporated into your plans so far?
12. How will you keep the neighborhood informed about changes or issues during construction?

Aesthetic and Quality of Life

13. How will you ensure this development aligns with the aesthetic and character of the neighborhood?
14. What steps will you take to minimize noise, dust, light and trash, and disruption during construction?
15. What steps will you take to minimize disruption after construction?
 - a. **Lighting:** How will the lights from the development parking lot stop from shining in the windows of residents?

- i. The plan discusses lights that are in accordance with Portland zoning regulations. Many multi-unit facilities choose wide-arc LED lighting that operates at a very high "color temperature". These "Daylight" levels would be inappropriate for the existing neighborhood. We ask that you ensure exterior lighting for parking lots, door entrances and perimeters to be closer to the 3000-3500K range to minimize the impact of lighting on the bordering properties.
- b. **Privacy:** How will the development ensure privacy for Belfort Street residents? Very close proximity and higher rise than the houses.
- c. **Noise:** with a parking lot abutting Belfort Street neighbors, how will the development stop traffic noise at all hours of the day and night?
- d. **Smoking:** is there a designated smoking area? How will you ensure folks will not loiter in the parking lot blowing smoke into neighbors yards.
- e. **Trash:** how will the development be sure trash does not accumulate and cause stink/littering/animal issues, etc.

Alternatives

- 15. Have you considered alternative designs, scales, or uses for the property that might meet the scale and density of the existing neighborhood?



Carter Frank <cfrank@portlandmaine.gov>

Major concerns with 50 unit apt. complex going up on Belfort Street.

1 message

Melissa Blanchard <joelmissy1968@gmail.com>

Wed, Apr 2, 2025 at 3:14 PM

Reply-To: joelmissy1968@gmail.com

To: planningboard@portlandmaine.gov

Dear Planning Board,

I respectfully urge you to reconsider your decision regarding the proposed construction of a 3-story, 50-unit apartment complex on Belfort Street.

Have any of you had the opportunity to view Belfort Street during peak hours, when cars are parked along both sides of the road? This makes it incredibly difficult to safely exit onto Forest Avenue, especially during the busy morning hours. At times, two vehicles are parked on opposite sides of Belfort Street, forcing me to wait for one of them to move so I can squeeze by. Additionally, business trucks servicing Mietta's Plumbing, located at the top of Belfort Street, further complicate the situation.

My primary concern lies with the lack of parking for the proposed 50-unit complex. With only one parking space allocated per unit, it seems highly insufficient, particularly considering the possibility of multiple occupants per apartment. For instance, could there be as many as 7 occupants per rental unit, as is sometimes allowed in the City of Portland? If each unit holds two occupants with two cars each, this could add up to 100 additional cars, all of which would need parking. The overflow from this would likely spill over onto Belfort Street, worsening the already limited parking situation.

Furthermore, we are already dealing with the impact of two group homes on Belfort and Verrill Streets, which add to the parking congestion due to the numerous staff members required to care for the residents. With these additional vehicles, the current parking shortage is further exacerbated.

Lastly, I am deeply concerned about the increase in traffic that this project will bring. The higher volume of vehicles presents a serious risk to the safety of young children who walk to Talbot Elementary School.

In light of these concerns, I ask that you carefully reconsider the implications of this development on our neighborhood and if the project must go through, please limit this project to single family homes only which is in character with our current neighborhood.

Thank you for your time and consideration.

Sincerely,

Melissa J. Blanchard

Melissa J. BLanchard
144 Befort Street
Portland, Maine 04103



Carter Frank <cfrank@portlandmaine.gov>

1584 Forest Ave Development (PL-003161-2024)

1 message

Mitchell Thomas <mitchell.t.sacks@gmail.com>

Tue, Apr 1, 2025 at 2:25 PM

Reply-To: mitchell.t.sacks@gmail.com

To: efreeman@portlandmaine.gov

Cc: planningboard@portlandmaine.gov

Dear Planning Board,

As Riverton residents – specifically Verrill St – we have been following along with the proposed [50-unit, two-building residential development of 1584 Forest Ave \(Plan Number: PL-003161-2024\)](#). While we hesitate to add to the "not in our backyard" rhetoric, we want to make our concerns clear to the Planning Board that this proposal, as currently planned, is a bad idea for the Riverton neighborhood and a bad idea for our city. As Portland continues to grow, we recognize the need for increased housing, however we urge the Planning Board to think long-term, strategically, and how development can either hurt communities or strengthen them – on outer Forest Ave, specifically, an opportunity exists to create community development welcomed, celebrated, and enjoyed by EVERYONE. Sacrificing long-term pain for short-term gain (*in the form of high-density, unappealing, cheaply designed housing*) is not the answer.

With the density being proposed at 1584 Forest Ave, there are a number of negative consequences the residents of Belfort, Verrill, Empire Way, Iffley St and surrounding streets will endure. Below are a few points noting the most critical consequences of this development.

On-Property and Street Parking:

The proposal is for a 50-unit multi-building footprint consisting of **twenty (20) 1-bedroom and thirty (30) 2-bedroom apartments with only 50 on-property parking spaces**. An apartment complex of this footprint could yield **100 residents, if not more**. With certainty, 50 parking spaces will not support the volume of residents living or visiting the proposed complex causing both residents & guests to subsequently park along our neighborhood streets – streets where residents walk dogs, jog, kids ride bikes and play, and people enjoy. These streets cannot support the expected volume of cars that will ultimately **clog our streets, diminish our privacy, and eliminate the quiet enjoyment of our properties**. Furthermore, these streets are **utilized by CHILDREN** walking and riding bikes, often unaccompanied by adults, to the Talbot Elementary School & Riverton Community Center from not just our neighborhood, but many neighboring areas. Without appropriate infrastructure such as wide streets, independent raised sidewalks and bike lanes this development will without doubt jeopardize the safety of these children.

Attached I have included a picture (*Belfort_Congestion.jpg*) showing what will become the norm on Belfort St if the proposed complex is approved as is. This picture was taken during a recent holiday get-together at a household on Belfort. As you can see, parking along both sides of the street will create dangerous congestion on a dead-end neighborhood street.

Other concerns include the following:

- On-property snow removal: Will cars be instructed to leave the lot for snow plowing? If so will they park on neighboring streets and impact the ability of snow removal on streets?
- Emergency service vehicles such as firetrucks and ambulances will not be able to access households within the neighborhood if there is significant on-street parking along Belfort, Empire, and Verrill Streets.

Traffic and Safety:

The density proposed at 1584 Forest Ave will create a significant increase to local traffic on Belfort St and Forest Ave, leading to increased congestion, noise pollution, and safety risks. At peak hours during morning & afternoon commutes and school drop-off/pick-up at the Talbot Elementary school, Forest Ave between Riverside Industrial Parkway and the junction to Stevens Ave becomes a near standstill. From Belfort St, it is already often nearly impossible to make a left-hand turn with the traffic heading towards Portland and the congestion that forms at the redlight for cars making a left turn into Talbot Elementary School.

Further, infrastructure does not exist along outer Forest Ave to support alternative forms of transportation such as bike-commuting that could alleviate congestion. Yes, bike lanes exist along this section of Forest Ave, however they were not designed to promote bike safety. As an avid cyclist who has ridden over 20,000 miles over the last few years across New England and Canada, I am most afraid of riding on Forest Ave than any other place in Maine – it's a commuter route with high traffic, high speed, has many intersecting streets in/out of neighborhoods, and poorly designed bike lanes. I am worried that increased density will diminish pedestrian safety for myself, my family, fellow cyclists, and our community.

We urge the planning board to conduct a **NEEDED** traffic study along Forest Ave at peak hours, including but not limited to:

The Belfort St and Forest Ave junction

The entrance to Talbot Elementary and Forest Ave

From the junction of Riverside Industrial Parkway and Forest Ave to the junction of Forest Ave and Warren Ave

Economic Loss:

As a homeowner in the vicinity of the proposed development, the introduction of a large-scale building in a residential neighborhood will have significant negative consequences on property values. Research has shown that the proximity of high-density developments to single-family homes leads to a decrease in home values. This can occur for various reasons, including changes to the neighborhood's aesthetic,

increased traffic congestion, strain on local infrastructure, and potential concerns about overcrowding or overdevelopment. These factors could alter the character of the neighborhood and deter prospective buyers from purchasing homes nearby. Furthermore, residents who have made significant investments in their homes could find that the return on those investments is compromised by the increased density and accompanying changes to the community's overall appeal. I urge the Planning Board to take into consideration the economic ramifications this development may have on property values. In addition to the immediate impact on home values, there is also the long-term effect of reduced equity for homeowners who could face difficulty selling their properties in the future.

Proposed Development Architecture and Aesthetic:

The neighborhoods along Forest Ave largely consist of single-family Cape style homes, including our neighborhood. The proposed 50-unit complex fails to meet the architecture and character of the area. It is clear from the proposed renderings of the complex that no attempt to implement modern, aesthetically pleasing design elements that mimic the character of our city or neighborhood were considered. Rather, it is clear to us that the only goal of the developer is to build the quickest, cheapest complex possible to maximize their profit. There are some really fantastic examples of "development done well" across New England, however this is not one of those cases. We hope that the planning board and developer can take a community approach to any development being proposed at 1584 Forest Ave so something really great for our community can be created – a residential complex that architecturally blends with the neighborhood, as opposed to an eye-sore monstrosity.

Developer Comments at February 5th Community Meeting:

At a February 5th community meeting regarding the development of 1584 Forest Ave, the developer Alex Coupe (ACRE Properties) failed to address concerns from residents of the community – most concerns or questions were unprofessionally "shrugged off" or unanswered. It was clear that Alex Coupe and ACRE Properties has no interest in making Portland a better place, but rather maximizing his own profits at the expense of our community. Further, I'd like to make the Planning Board of two comments made by Alex. These are:

- Noted that overflow apartment parking will be on the streets
- Noted that "Nothing is stopping him" from using the apartment complex as overflow housing for the sober group home on the adjacent property

We decided to make Verrill St our home because of the low-density, proximity to the Talbot Elementary School & Riverton Community Center, and the character of the neighborhood. We hope this neighborhood can continue to be a desirable place to live, work, and enjoy – we know that the inclusion of a 50-unit apartment complex will negatively forever change the neighborhood we love and its community.

If this proposal for development is ultimately approved, we urge the Planning Board to force the developer to incorporate changes proposed by the community to ensure this will be a win-win for all parties affected.

Sincerely,
M. Sacks
Verrill St, Portland

--
Mitchell T. Sacks



Belfort_Congestion.jpg
180K



Carter Frank <cfrank@portlandmaine.gov>

Proposed Belfort St development

1 message

Nicola Kerley <nicolaakerley@gmail.com>

Mon, Feb 24, 2025 at 4:19 PM

Reply-To: nicolaakerley@gmail.com

To: planningboard@portlandmaine.gov

Hello,

I own a property on Lffley St with entry through the Belfort and Verril St

I am very concerned about the size, lack of proposed parking, and building time for the proposed development.

I do not wish for this development to negatively effect my tennents and neighbors.

This new proposed residence, even just on paper, does not seem decent for new incoming tennents of the proposed development, as it is proposed to have the absolute minimum parking allotment per unit with only one entrance and exit at the top of Belfort st. Effecting the whole block with a dangerous amount of traffic.

The last time a building proposal was made in the area of this scale, it was turned down due to ground stability.

This new developer has done a private study, that I do not trust, based on living through that early 2000s proposal's denial.

I worry about possible flood and collapse of something to that scale down the line.

This proposed development is also directly in front of the Gerald E. Talbot Community School (formerly Riverton Elementary). Which would be fine, if the building time wasn't a proposed 18 months straight. Effecting the learning of every child that attends that elementary school for two school years, in a time where these kids are still getting their test scores up from the pandemic.

As a kid who grew up on Lffley St; in the past, houses construction was only done in the summer. I remember a house taking a couple of years to build on Verril St, because they only did construction outside of the school year.

At that time our test scores as a state were in the top 5 of the country. We're circling the bottom now. So why would we actively, as a city, work to curb the education further by creating a distraction to these kids for more than one full school year?

I am also very concerned that this proposed development is being touted as "lower income housing" (something the state truely does need), but will cost individual units pay more than the two story house I currently own and rent out.

How are people in lower income ever be able to afford 800 sqft units, if the rent is more expensive than the rent of a two story house on the same block?

Why should anyone pay more for a 800 sqft unit than a two story house?

Why should anyone pay more for a 800 sqft unit in Portland, ME than I do in the San Francisco Bay area, CA? (I am not on any lower income housing in California, and the proposed rent for a single unit is more than my apartment rent where the minimum wage is CONSIDERABLY higher)

I say this, as I love my home city and i care for my tenants. I do not see simply being a landlord or property owner as a job to earn from. Their rent goes directly to property tax, stormwater, etc. It is only my responsibility to ensure that my tenants are comfortable and content with their residence, until I personally come back home and retire there. No one that actually lives in the area is happy with the size or proposed construction of the development, let alone my tenants who will be directly effected by the construction and traffic created by said proposed development.

In the attached photos, is example of how clogged the street can already get without this new development.

I urge for a unbiased traffic study to be done at the corner of Belfort St and Forest Ave, and an unbiased soil test.

If possible, even a decibel reading from the classrooms of the school to construction sounds of where the development is proposed.

I personally, would be okay with a 5-10 unit development- less risk for building, construction, and would make it easier to charge less for rent- more possibility to have a least two parking spots per unit and/ or guest parking- good for any possible tenants of a state that snows- and an exit route to ALSO be on to Forest Ave - to relieve traffic from Belfort St-

The developer took these suggestions as a personal affront, instead of any form of compromise. Stating, "I don't care, the state will pay me."

Overall leaving a horrible impression for my tenants, old & newer current neighbors, and myself. Especially since the properties were mostly bought off of our deceased and/or widowed neighbors to essentially create personal issue for those alive, instead of creating actual support to those who could actually use it. That's like if I had jacked up the rent of my property, and removed the driveway just because my parents are dead. And said, "I don't care, I'll have more money." I could. Legally. It would only be unconscionable.

I beg for your and the planning board's consideration on this matter.

All the Best,
Nicola Kerley



Carter Frank <cfrank@portlandmaine.gov>

PL-003161-2024

1 message

Rachelle Lambert <friendsofbelfort@gmail.com>

Tue, Apr 1, 2025 at 10:41 AM

Reply-To: friendsofbelfort@gmail.com

To: efreeman@portlandmaine.gov, planningboard@portlandmaine.gov

Dear Planning Board,

I am writing to express my deep concern with the Belfort Landing development proposal. (PL-003161-2024)

My husband and I moved into this neighborhood 5 years ago because it is quite, safe and away from the congestion of city life. We had a baby last year, as did several other neighbor/friends on this street. The appeal of this in particular neighborhood, is that it is low traffic, not a through street and safe. Approving this proposal as is, would be detrimental to life as we know it here.

The developer, Alex Coupe, during the proposal meeting was arrogant and dismissive of our concerns and there are many. He also called us NIMBY's which I find both snide and to be gaslighting.

1. This developer is severely underestimating the affects of his no parking plan for such a large number of units. He is proposing 50 units and ONLY 50 parks spots!!! That's insane! Majority of families have at least 2.5 cars, I confirmed that with our home insurance company, State Farm.
2.
 - a. while using public transportation would be ideal, it's unrealistic to think enough people will use it instead of their cars and even if they do, they'll be leaving their cars parked on Belfort and Verrill.
 - b. there will be, on the very low end, at least 50 additional cars piling onto Belfort St and that's just for the tenants, let alone their family and friends visiting.
 - c. Adding additional traffic and cars is an accident waiting to happen! There are a ton of kids, families and dogs here. Also numerous families who walk their kids to school.
3. We got together as a neighborhood and parked an additional 25 cars at the top of the street and chaos ensued!! Please see the attached photos.
4.
 - a. many people who didn't know we were doing this were overwhelmed by the number of cars and how our street became a single lane road. People had to pull over into someone's driveway to make space for another vehicle to pass.
 - b. If you allow well over 50 cars (that's just tenants) to park along our street, that will eliminate any parking for our friends and family who visit.
 - c. We don't have side walks.

- d. Our neighborhood was not designed with the foresight to accommodate the parking needs of multi-family complexes, it will make navigation a nightmare.
3.
 - i. We will need signage and where will all those cars go during snow storms. The plow is 11 ft, and the distance between 2 cars with snow on both sides of the street is 9 ft. Plows won't be able to plow properly. Where will all those cars go???? there's no parking lots around here.
 - d. plows, fire trucks and delivery trucks will not be able to pass easily as it will be a long single land road, leading to longer response times.
 - e. The traffic at the top of Belfort street is already tough, especially at rush hours. There are multiple businesses, so at times, there could be 6-7 cars waiting to pull out of Moran's, the plumber/barber shop, Harris St, Riverton Station, the gas station and the school driveway. Adding so many more cars to come out of a non-through street will be endangering the safety of that area.
5. We already have a problem with vehicles outside the neighborhood driving too fast up and down our street.
 6.
 - a. we've had radar speed signs on our street in the past
 - b. several neighbors have used the Fix-It app to request speed bumps to try and reduce speeding.
7. Noise pollution
 8.
 - a. The trees currently buffer the noise from the school and fire station and from the very busy Forest Ave, adding at 50 unit will increase the noise immensely.
 9. He has to elevate the land by 8 feet, then build a 3 story building! Talk about invasion of privacy for those of us in front of and across from the monstrous building. Please see the attached photo from a rendering of what it would look like.
 10.
 - a. High-density multi-family units mean more people. This translates to increased pressure on existing infrastructure like roads, sewage systems, and public utilities.
 11. The walking path on Empire that leads to the school used to be called Wirt St. It was closed due to an increase in traffic and the neighborhood found it too dangerous so they turned it into a walking path instead. Why would we invite such a large number of cars to congest our street again when it was already deemed dangerous. And that was just for school/community center traffic.
 12. The developer already admitted he is illegally using the conservation easement on the school driveway to enter the property. He laughed and called himself a 'pirate' due to the piracy of the illegal act. If he's already pulling that, our trust in him is already low.
 13. His rendering are very misleading! There will very limited green space and trees left. They don't adequately show the height in comparison with the surrounding cape style homes. Please again, see the rendering.
 14. where will the snow go? in the winter he'll have to plow the snow somewhere and that again will eliminate even more parking spots, causing more cars onto our street.
 15. The homeless are also a concern for our neighborhood. With the addition of 100 more cars on our street, it makes for an easy target for those experiencing homelessness to attempt car break ins. We have had numerous car break in's in our neighborhood
 16. My husband was also hit by a car while riding his bike to work. He was hit right around the corner from Belfort St, on Forest Ave. He suffered immense bruising to his abdomen, thankfully nothing was broken. Receiving that phone call was unbelievably scary and I don't want that to happen to anyone because that could have ended very differently.

Please reference the photos we took of what only 25 cars looks like, imagine 50-100 more!

This project is wreckless, dangerous and irresponsible.

In conclusion, just because something is suddenly re-zoned, doesn't make it the right choice for the area. Approving this project will be an absolute detriment to our livelihood as we know it. You would be approving an irresponsible project that does not benefit current residents, you would be endangering the lives of our children and families. We live here for the quiet and safety that it currently offers. We are already priced out of Portland, most of us cannot afford the current home prices so we will be stuck having to choose between enduring this project or moving out of Portland completely, which none of us want to do.

He seems to think he has the planning board in his back pocket so I implore you to consider a heavy revision of this proposal and make it reasonable and realistic for what would better suit our neighborhood. He built a 9 unit in Westbrook, that would fit just fine because he can use the rest of the space for parking, like all other apartment complexes in the area offer.

Regards,

Rachelle Lambert

5 attachments



Belfort Commons_Original.jpeg
241K



School View_Original.jpeg
283K



IMG_8632.jpeg
461K



IMG_8633.jpeg
276K



IMG_1674.jpeg
5058K



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Tue, Feb 18, 2025 at 11:45 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Topic: Small Space for Large Buildings

Anyone with a social conscience is aware that the City of Portland has a housing shortage and understands the need to correct this problem. However, the "Belfort Landing" project proposed by Alex Coupe is not a realistic solution.

A 50 unit development on a two acre parcel needs to be intensely scrutinized before any approvals are granted. The "Landing" would have 25 one bedroom units and 25 units with two bedrooms which would conceivably accommodate over 150 residents, but with parking for less than 50 cars. The remaining estimated 100 would be parked on Belfort Street.

This is a laudable project which could help to relieve some of Portland's housing crisis, but not in this limited space. It needs to be built in a location suited for the amount of people it's trying to serve.

My numbers are not exact, but an independent study is definitely warranted. The board should also require a comprehensive traffic study before any approvals go forward.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Ave

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Wed, Feb 19, 2025 at 7:57 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Traffic Study

The neighborhood has been testing the impact of "The Belfort Landing" project on the traffic flow of Belfort Street. With the developer's limited vehicle accommodation, this street is the obvious alternative for a possible 100 plus cars left without places to park.

It was a telling experiment as drivers tried to maneuver in both directions while Verrill Street traffic tried to merge. With an experiment using only 16 parked cars lining both sides, only a single lane was available for two lane travel. Presently, with just casual parking, drivers have to be courteous to each other to allow safe passage.

The Planning Board needs to require a comprehensive traffic study before any approvals go forward.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

Emergency Vehicles

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Thu, Feb 20, 2025 at 9:28 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

In February, "Belforters" created a mini scenario to demonstrate the effects of a possible 100 plus vehicles being forced to park on narrow Belfort Street. Because of the lack of adequate parking at the proposed "Belfort Landing Project" there will be no alternative but this street.

With just 16 cars lining both sides of the street, the snarl of cars piled up in front of my house was very concerning, I quickly realized that anyone with health problems, including myself, should be alarmed. I imagined an ambulance trying to fight it's way through that sort congestion.

This long existing neighborhood is a mixture of cultures, ages and lifestyles. We deserve the same considerations of all other neighborhoods.

The Planning Board needs to require a comprehensive traffic study before any approvals go forward.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Fri, Feb 21, 2025 at 9:02 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Fire Safety

If the proposed "1582 Forest Avenue Development" comes to fruition, with it's limited parking, there will be no other alternative but for more than 100 overflow vehicles to park on each side of Belfort Street. Our city and the Fire Department should be very concerned about the access to our only fire hydrant and for the ability of emergency vehicles to function effectively on a tightly-parked street.

The Planning Board needs to require a comprehensive traffic study before any approvals go forward.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Sat, Feb 22, 2025 at 9:32 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Traffic to Forest Avenue

As a Belfort Street resident and as a driver, I experience the irritation of trying to turn left onto Forest Avenue on a regular basis.

Adding just half the 150 drivers from the proposed "1582 Forest Avenue Development" to an already difficult situation and there will be extreme frustration for everyone.

Imagine the morning chaos when cars parked on the right, facing downward, trying to turn against the flow of cars heading upward to exit onto Forest Avenue; not to mention the Verrill Street drivers trying to merge.

The Planning Board needs to conduct a comprehensive traffic study before any approvals go forward.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Mon, Feb 24, 2025 at 9:31 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Traffic Survey

The City of Portland needs to support family neighborhoods and the safety of its citizens to maintain its integrity.

The "1582 Forest Avenue Development" has proposed a 50 unit project with possibly 150 residents who would be driving vehicles. It is essential that the Portland Planning Board conducts a comprehensive Traffic Study before any approvals go forward.

Belfort Street will obviously be the parking ground for any and all cars that can't park by their own units. This will easily be a 100 plus vehicles over-flowing onto a narrow two lane roadway with no sidewalks.

"Belforters" conducted an informal study which proved that this excessive street parking will result in utter chaos.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Tue, Feb 25, 2025 at 10:11 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Like Housing

My house is a hip roof colonial with two and half stories. It backs up to the "1582 Forest Avenue" lot and seems to be the one that the developer is using as comparative housing. However, this house does not have a car port under it or a full third story. No way does the style, size or impact compare to a 50 unit complex; which will tower over the entire neighborhood.

On a clear day it might be seen from the Observatory on Munjoy Hill. Yes, I'm exaggerating.

Portland needs to support family neighborhoods to maintain the integrity of the city.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Wed, Feb 26, 2025 at 12:25 PM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Public Transportation?

At the informational meeting held by the "1582 Forest Avenue Developer" in early February, he announced he would be holding educational sessions to inform his new occupants about the benefits of Public Transportation. The audience laughed and so did he. Out of the estimated 125 people present, only one person was counted as having ridden a bus.

Looking at driveways on this street, there are two to four cars in every yard. Now think of adding more than 75 vehicles with no other option but to park on narrow Belfort Street because of lack of available parking at their new housing; plus the 50 cars that have parking provided. Now, think of trying to maneuver just some of that mess onto Forest Avenue and we've got grid lock. No one's gettin No where!

A traffic survey should be required before any further considerations.
Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Thu, Feb 27, 2025 at 3:44 PM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board

Reference: Talbot School Enrollment

With the Belfort Landing Project and its possible 50 families, the educational system needs to consider the impact that the increased enrollment will have on Talbot Elementary School. A good education is the greatest investment in our future. Let's not short change our kids.

Also, the Talbot School driveway will need constant patrolling because of the "convenient", though illegal, parking for guests of the proposed project.

Casual visitors are not invested in our community and may feel entitled. Not everyone respects the law or the safety of our kids.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Tue, Mar 4, 2025 at 1:25 PM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board
Reference: Quality of Life

Belfort Street has always been a secure community for walkers and runners. Parents with baby carriages, dogs on leashes, people walking to our locally owned corner store; not to mention neighbors just visiting back and forth; have always felt safe with a clear vision of the entire street from top to bottom. With the proposed 50 unit development and a possible 100 vehicle over-flow parking on both sides of narrow Belfort street, that safety will no longer exist. There are no sidewalks here.

Belforters have moved here because we love the safe and casual lifestyle. However, taking a walk could become a dangerous act.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Wed, Mar 5, 2025 at 11:42 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board
Reference: Children's Safety

We have children from Belfort Street and from neighboring streets who walk Belfort as a route to Talbot School. With the "1582 Forest Avenue Development" and the 100 over-flow cars forced to use both sides of Belfort for parking, it's an obvious danger to any pedestrian traffic, especially our kids. There are no sidewalks here. Imagine an unseen small child stepping out from between parked cars to cross to the school. Now imagine an ambulance trying to rescue that child on this overly parked street. It may seem unlikely, but that tragedy could easily happen.

Portland needs to support family neighborhoods and their safety to maintain the integrity of the city.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

1582 Forest Avenue Development

1 message

Roxanne spizuoco <thespizuocos@gmail.com>

Thu, Mar 6, 2025 at 11:51 AM

Reply-To: thespizuocos@gmail.com

To: planningboard@portlandmaine.gov

Eric Freeman
Portland Planning Board
Reference: What could go wrong?

Portland needs more adequate housing, we all agree on that. However, 1582 Forest Avenue project will cause more problems to the community than it's meant to solve.

Problems that need to be addressed:

- Unrealistic number of units for neighborhood
- Lack of proper acreage for resident foot traffic
- Lack of parking spaces within project
- Impact on Talbot School enrollment
- Safety of vehicle traffic on Belfort and Verrill Streets
- Safety for pedestrian with overflow parking on both sides of Belfort
- Integrity of the neighborhood because of lack of homeowner parking

Roxanna Spizuoco, 37 Belfort Street, Portland, ME

Roxanne spizuoco <thespizuocos@gmail.com>
to planningboard@portlandmaine.gov

Feb 28, 2025, 2:05:32 PM (3 days ago)



Reference: Quality of Life

Every Sunday for the last thirty plus years my children and grandchildren have gathered for family dinner. My concern is that with more than 75 vehicles from the "1582 Forest Avenue Development" added to the Belfort Street sidelines, the quality and enjoyment of Belforters' life and culture will be limited as there will be no parking spaces left available for the homeowners or our visitors.

Memories: "Remember when we went to Nana's house for dinner?"

Roxanna Spizuoco, 37 Belfort Street, Portland, ME

Roxanne spizuoco <thespizuocos@gmail.com>
to planningboard@portlandmaine.gov

Mar 18, 2025, 11:04:41 AM (23 hours ago)



Eric Freeman
Portland Planning Board

Reference: Emergency Route

Forest Avenue is designated by the state as a major Evacuation Route from impending disaster.

With the proposed Belfort Landing and a possible 150 additional cars exiting onto Belfort Street then into the Forest Avenue intersection, it will be a boondoggle. Since the exit from the new project is just feet from the top of the street, Verrill and Belfort Street drivers will be blocked. Families will have to wait until the area's last fleeing car passes.

On an average day, it's a challenge. Imagine the panic in an urgent situation.

Roxanna Spizuoco, 37 Belfort Street, Portland, ME



Carter Frank <cfrank@portlandmaine.gov>

Belfort Landing- One resident's perspective

1 message

Samantha Chappell <chappell.samantha6@gmail.com>

Mon, Feb 10, 2025 at 10:30 AM

Reply-To: chappell.samantha6@gmail.com

To: efreeman@portlandmaine.gov

Cc: planningboard@portlandmaine.gov, ksykes@portlandmaine.gov, Tim Hallowell <timothy.hallowell@gmail.com>

Hi Eric and Planning Board Team,

I am a resident in the Belfort neighborhood (specifically [43 Iffley St](#)). I was unable to make it to the community meeting but heard plenty of details about it, and I'm sure it's clear to you that the neighborhood has very strong feelings about this project.

I'm not 100% against this development- I know the city needs more housing and I do support efforts to create more, however it seems like this particular development is adding more housing at the detriment to its surrounding neighborhood (without providing existing residents with any benefits, yet significantly altering our neighborhood for the worse).

Considering that Belfort Landing feeds directly into Belfort Street, it will have significant negative impacts on the neighborhood and as such, the number of units is far too high. Creating closer to 30 units and ensuring that adequate parking is available within your property, instead of assuming our street will bear much of the burden, would be ideal.

If you've spent much time in our neighborhood, you would know just how many people actively walk through it- with their dogs, their children, and during school drop off and pickup times. Our street has not been designed for excessive street parking, like downtown neighborhoods designed for higher density populations. There are no sidewalks, so significant numbers of cars parked on both sides would both reduce our street to the width of a one-way street (trust us, we parked our cars to determine this), while also eliminating extra room for our residents to safely walk.

From my personal perspective, I am one of the 8+ families who have welcomed babies into the neighborhood this past year. Our neighborhood is incredibly close, and we all hoped to raise our kids together here, but Belfort Landing could change that for us. I used to think this would be the perfect neighborhood for our kids to roam and bike between friends houses. Knowing that 30-50 additional cars could be added to the street (I know from experience, apartment residents often do not take the same consideration driving carefully in places they are just street parking in), that vision for the kids of our neighborhood will not become a reality. I hope you can understand given this context why so many people are upset. (I know there are other concerns too, but this one hits home for all residents, regardless of where our house is placed in the loop)

Thank you in advance for taking the time to read our messages, and I sincerely hope that you will find a way to adapt designs to coexist better with the existing neighborhood.

Sam



Carter Frank <cfrank@portlandmaine.gov>

My concerns regarding: ACRE Properties-1582 Forest Ave.-Belfort Landing project-Plan Number PL-003161-2024

1 message

sharida perrin <stripednitemare@hotmail.com>

Thu, Feb 27, 2025 at 5:30 PM

Reply-To: stripednitemare@hotmail.com

To: "efreeman@portlandmaine.gov" <efreeman@portlandmaine.gov>, "planningboard@portlandmaine.gov" <planningboard@portlandmaine.gov>

On Feb 5, 2025, I attended a meeting at the Talbot Community School regarding the proposal of a 50unit apartment complex consisting of 2-3story buildings being built in my little neighborhood.

The meeting was attended by many of my neighbors who voiced opposing this.

At the meeting, the developer/owner of this property, Alex Coupe, was asked if he has any other projects w/50 units, and he replied, that he has only developed up to a 10 unit.

He seemed snide and impatient towards my neighbors, coming across as if his attendance at the meeting was to simply check off a box in order to get his project approved.

Mr. Coupe was asked why he couldn't build a smaller, less dense project, and his reply was that it's his land, and he could've built an even bigger one than he plans for.

Another neighbor, asked Mr. Coupe if he has been *illegally accessing* the land from the school road, and why doesn't he access it from his other property *legally*? He smiled and shrugged.

There is only one way by vehicle in from Forest Ave., to access my street Belfort, Empire, Iffley, and Verrill.

How is this construction going to affect how I get to my home?

How are the construction vehicles going to access the proposed location...will they too, be illegally accessing via the school road?

How is this going to affect my sewer, water, etc., and not to mention the noise and disruption this will cause in such a tight neighborhood?

There will not be enough room left on our streets for people to walk, children to safely ride their bikes and play on Belfort, Empire, Iffley, or Verrill, because of the overflow parking on our streets from such a large complex of 50 units w/only 50 parking spaces?!

Does the developer think that the 2bedroom apartments won't have renters w/2 vehicles?!

Does the developer think that the renters will never have guests or visitors that need parking?!

Does the developer think that there will be plenty of room for those cars to just park on our streets, or park at the school?!

I cannot even imagine the safety issues this will cause...there's barely enough room as it is now for neighborhood visitors, people parking to pick up their kids from the neighborhood school, mail and delivery trucks, garbage trucks, and snow plows to get through safely.

Of course, it is much tighter in winter with snow piles lining the streets.

There's also an incline on Belfort located where the proposed drive-way from the project onto Belfort is...which could potentially create a sort of blind spot for people pulling out onto Belfort.

Crowded streets=dangerous pedestrian traffic situations.

It is also very concerning all the traffic issues this new influx of people and vehicles will cause coming from Forest to Belfort, and Belfort to Forest .

I am asking, at the least, that you make sure that the developer/builder Alex Coupe, does an *extensive traffic study* for this project and makes it public for my neighborhood and the public to read.

**-Sharida Perrin
64 Belfort St.**



Carter Frank <cfrank@portlandmaine.gov>

Fwd: Concerns - Belfort Street Apartment Complex

1 message

cfr...@portlandmaine.gov <cfrank@portlandmaine.gov>
To: Carter Frank <cfrank@portlandmaine.gov>

Wed, Mar 12, 2025 at 10:14 AM

----- Forwarded message -----

From: Toni Giuca <Unknown>
Date: Monday, March 10, 2025 at 3:14:00 PM UTC-4
Subject: Concerns - Belfort Street Apartment Complex
To: planni...@portlandmaine.gov <Unknown>, Eric Freeman <Unknown>

Dear Members of the City Planning Board,

I hope this message finds you well. I am writing to express my strong opposition to the proposed development of the new apartment complex in our Belfort Street neighborhood. While I understand the need for housing, I have several concerns that I believe need to be addressed before moving forward with this project.

1. **Water Flow Concerns:** There are significant concerns about whether the existing infrastructure can handle the increased water flow that this development will bring. Proper assessments and improvements must be made to ensure there are no adverse effects on our water systems.
2. **Parking Issues:** The proposed number of parking spaces appears insufficient. This will likely lead to overflow parking on Belfort Street, causing inconvenience and safety issues for current residents.
3. **Traffic Congestion:** The changes in traffic patterns due to this development will exacerbate the already existing congestion in our area. A thorough traffic study should be conducted to understand the full impact and propose viable solutions.
4. **School Admission Availability:** Riverton School is already facing challenges with capacity. Adding more residents without addressing the school's capacity issues will negatively impact the quality of education and accessibility for current and future students.
5. **Loss of Green Space:** The proposed development will result in the loss of valuable green space, which is essential for the well-being of our community. Preserving these areas is crucial for maintaining the quality of life in our neighborhood.
6. **Zoning Concerns:** There are questions about whether this development aligns with the current zoning regulations. It is important to ensure that any new development complies with these regulations to maintain the character and integrity of our neighborhood.

Additionally, I would like to know if a thorough traffic study has been conducted and if the proposed parking on the premises is adequate to meet the needs of the new residents. The 1:1 unit/parking ratio will be inadequate.

I urge the City Planning Board to consider these concerns seriously and to engage with the community to find a more suitable solution that addresses these issues. Thank you for your attention to this matter.

Sincerely,

Toni Giuca
[1538 Forest Ave, Portland, ME](#)
runhappyTM@gmail.com

207-370-8664

**GORRILL
PALMER**
An LJB Engineering Company

N.T.S.

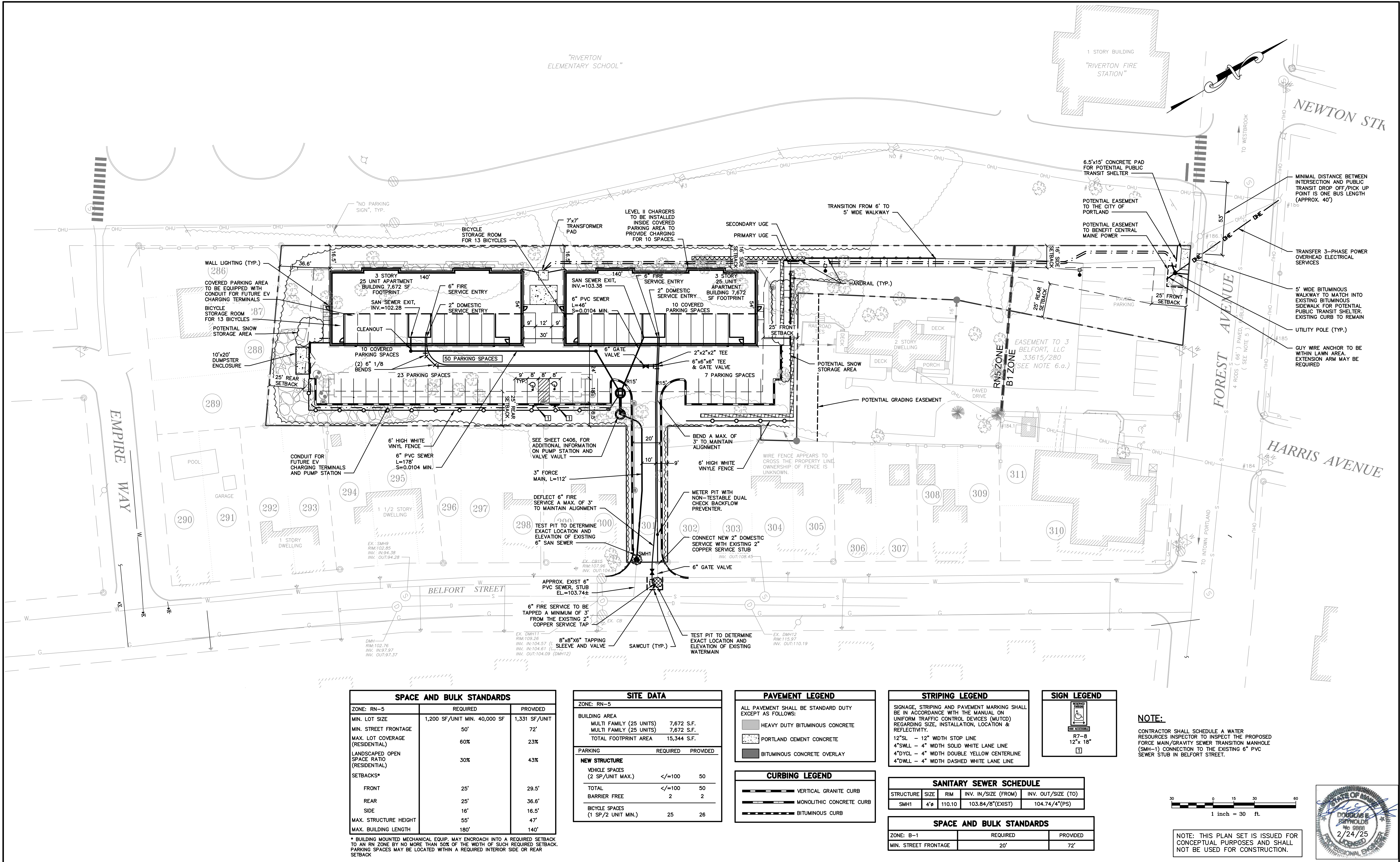
EXISTING	DESCRIPTION	PROPOSED
	BUILDING	
	RIGHT OF WAY	
	PROPERTY LINE	
	BUILDING SETBACK	
	ZONE LINE	
	WETLAND BOUNDARY	
	GUIDE RAIL	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL DRIVE	
	GRADING CONTOUR LINE	
	SPOT ELEVATION	
	TREELINE	
	TREES & HEDGES	
	POLE WITH LIGHT FIXTURE(S)	
	UTILITY POLE	
	FREESTANDING SIGN	
	PAINTED DIRECTIONAL TRAFFIC ARROW	
	OVERHEAD ELECTRIC/TELEPHONE	
	UNDERGROUND ELECTRIC/TELEPHONE	
	WATER LINE	
	STORM DRAIN LINE	
	CULVERT	
	HYDRANT	
	WATER GATE VALVE	
	WATER SHUT OFF VALVE	
	MANHOLE	
	CATCH BASIN	
	TEST PIT	
	IRON ROD (SET)	
	IRON ROD (FOUND)	
	MONUMENT	
	RIPRAP	
	SILT FENCE - PERIMETER	
	STONE SEDIMENT BARRIER	
	FENCE	
	WELL	

ANTICIPATED SUBMITTAL:
2025

GP GORRILL
PALMER
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Drawing No.
C001

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SPACE AND BULK STANDARDS		
ZONE: RN-5	REQUIRED	PROVIDED
MIN. LOT SIZE	1,200 SF/UNIT MIN. 40,000 SF	1,331 SF/UNIT
MIN. STREET FRONTAGE	50'	72'
MAX. LOT COVERAGE (RESIDENTIAL)	60%	23%
LANDSCAPED OPEN SPACE RATIO (RESIDENTIAL)	30%	43%
SETBACKS*		
FRONT	25'	29.5'
REAR	25'	36.6'
SIDE	16'	16.5'
MAX. STRUCTURE HEIGHT	55'	47'
MAX. BUILDING LENGTH	180'	140'

* BUILDING MOUNTED MECHANICAL EQUIP. MAY ENCR OACH INTO A REQUIRED SETBACK TO AN RN ZONE BY NO MORE THAN 50% OF THE WIDTH OF SUCH REQUIRED SETBACK. PARKING SPACES MAY BE LOCATED WITHIN A REQUIRED INTERIOR SIDE OR REAR SETBACK

SITE DATA		
ZONE: RN-5		
BUILDING AREA		
MULTI FAMILY (25 UNITS)	7,672 S.F.	
MULTI FAMILY (25 UNITS)	7,672 S.F.	
TOTAL FOOTPRINT AREA	15,344 S.F.	
PARKING	REQUIRED	PROVIDED
NEW STRUCTURE		
VEHICLE SPACES (2 SP/UNIT MAX.)	</=100	50
TOTAL	</=100	50
BARRIER FREE	2	2
BICYCLE SPACES (1 SP/2 UNIT MIN.)	25	26

PAVEMENT LEGEND	
ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:	
	HEAVY DUTY BITUMINOUS CONCRETE
	PORTLAND CEMENT CONCRETE
	BITUMINOUS CONCRETE OVERLAY

CURBING LEGEND	
	VERTICAL GRANITE CURB
	MONOLITHIC CONCRETE CURB
	BITUMINOUS CURB

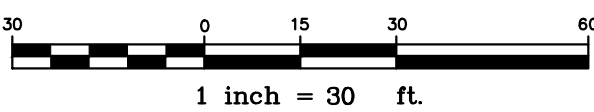
STRIPING LEGEND			
SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.			
12"SL	-	12" WIDTH STOP LINE	
4"SWL	-	4" WIDTH SOLID WHITE LANE LINE	
4"DWL	-	4" WIDTH DOUBLE YELLOW CENTERLINE	
4"DWL	-	4" WIDTH DASHED WHITE LANE LINE	

SANITARY SEWER SCHEDULE			
STRUCTURE	SIZE	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
SMH1	4'6"	110.10	103.84/8"(EXIST) 104.74/4"(PS)

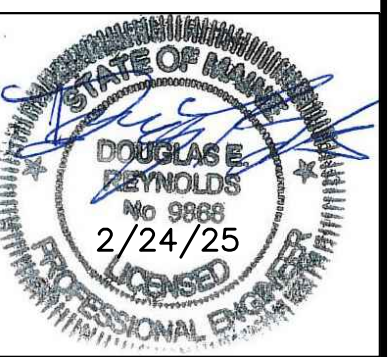
SPACE AND BULK STANDARDS		
ZONE: B-1	REQUIRED	PROVIDED
MIN. STREET FRONTAGE	20'	72'

SIGN LEGEND	
	R7-8 12' x 18'

NOTE:
CONTRACTOR SHALL SCHEDULE A WATER RESOURCES INSPECTOR TO INSPECT THE PROPOSED FORCE MAIN/GRAVITY SEWER TRANSITION MANHOLE (SMH-1) CONNECTION TO THE EXISTING 6" PVC SEWER STUB IN BELFORT STREET.



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



Rev.	Date	Revision

RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-SP.dwg		
This plan shall not be modified without written permission from Gorriil Palmer. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Gorriil Palmer..		

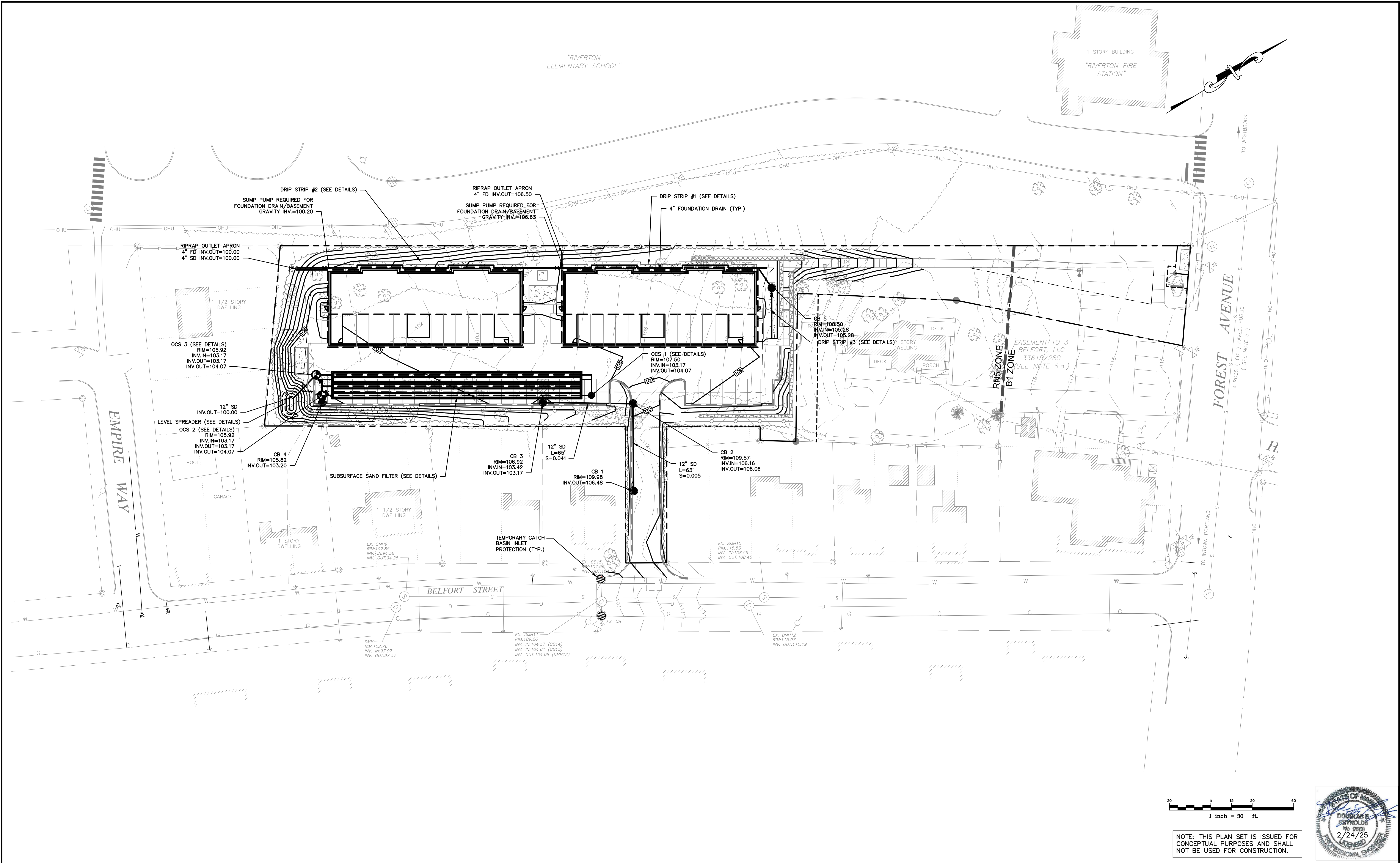


Gorriil Palmer, an LJB Engineering Company
GorriilPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Site and Utility Plan
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
C101

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Rev.	Date	Revision

RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJK	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-GRADE.dwg	This plan shall not be modified without written permission from Gorrill Palmer. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Gorrill Palmer..	

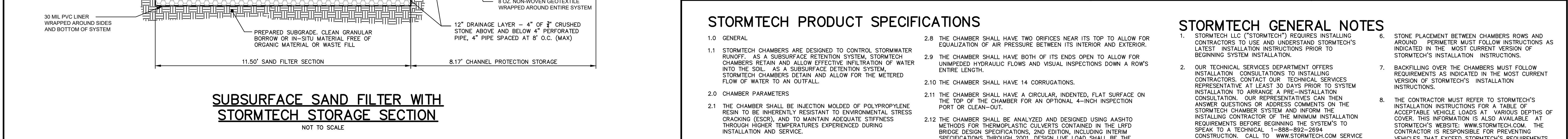
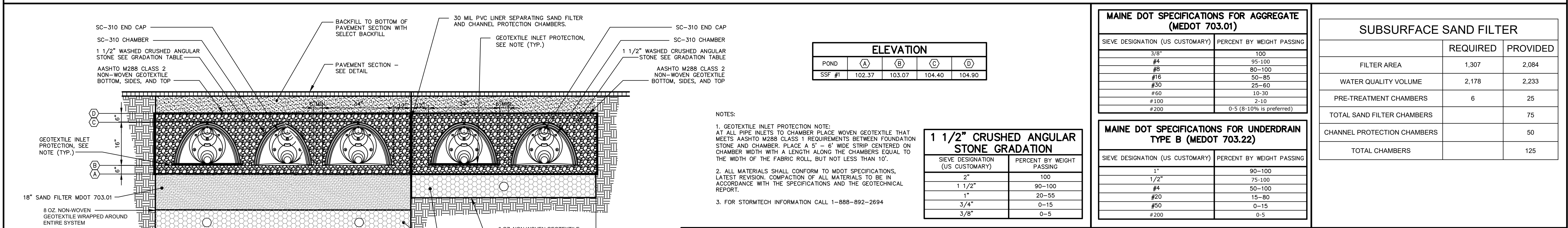
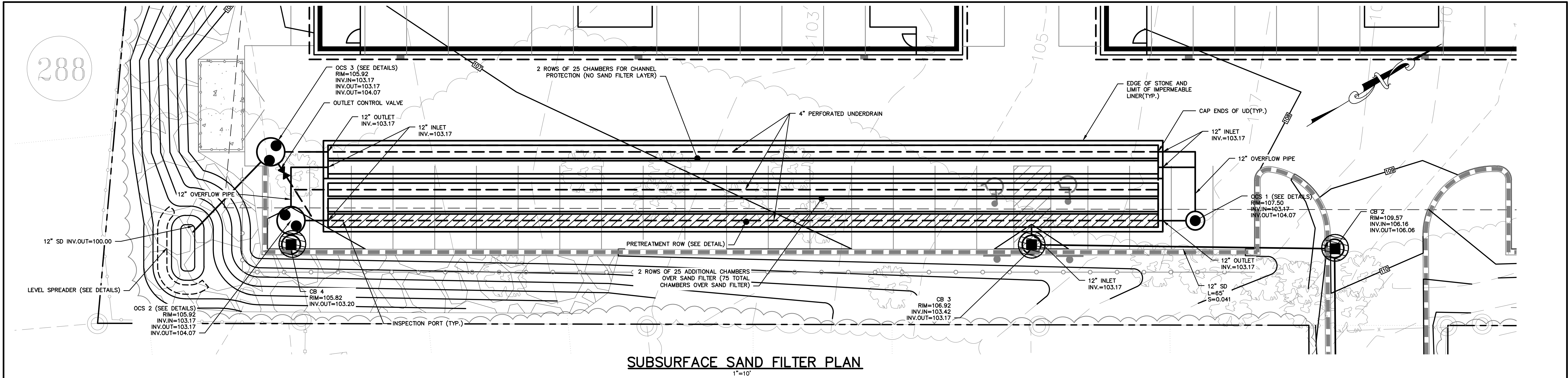


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An LJB Engineering Company

Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Drainage Plan
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.	C103
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STORMTECH PRODUCT SPECIFICATIONS

1.0 GENERAL

1.1 STORMTECH CHAMBERS ARE DESIGNED TO CONTROL STORMWATER RUNOFF. AS A SUBSURFACE RETENTION SYSTEM, STORMTECH CHAMBERS RETAIN AND ALLOW EFFECTIVE INFILTRATION OF WATER INTO THE SOIL. AS A SUBSURFACE DETENTION SYSTEM, STORMTECH CHAMBERS DETAIN AND ALLOW FOR THE METERED FLOW OF WATER TO AN OUTFALL.

2.0 CHAMBER PARAMETERS

2.1 THE CHAMBER SHALL BE INJECTION MOLDED OF POLYPROPYLENE RESIN TO BE INHERENTLY RESISTANT TO ENVIRONMENTAL STRESS CRACKING (ESCR), AND TO MAINTAIN ADEQUATE STIFFNESS THROUGH HIGHER TEMPERATURES EXPERIENCED DURING INSTALLATION AND SERVICE.

2.2 THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-740 SHALL BE 30.0 INCHES TALL, 51.0 INCHES WIDE AND 90.7 INCHES LONG. THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-310 SHALL BE 16.0 INCHES TALL, 34.0 INCHES WIDE AND 90.7 INCHES LONG. THE INSTALLED LENGTH OF A JOINED CHAMBER SHALL BE 85.4 INCHES.

2.3 THE CHAMBER SHALL HAVE A CONTINUOUSLY CURVED SECTION PROFILE.

2.4 THE CHAMBER SHALL BE OPEN-BOTTOMED.

2.5 THE CHAMBER SHALL INCORPORATE AN OVERLAPPING CORRUGATION JOINT SYSTEM TO ALLOW CHAMBER ROWS OF ALMOST ANY LENGTH TO BE CREATED. THE OVERLAPPING CORRUGATION JOINT SYSTEM SHALL BE EFFECTIVE WHILE ALLOWING A CHAMBER TO BE TRIMMED TO SHORTEN ITS OVERALL LENGTH.

2.6 THE NOMINAL STORAGE VOLUME OF A JOINED STORMTECH SC-740 CHAMBER SHALL BE 74.9 CUBIC FEET PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 2.2 CUBIC FEET OF STORAGE/SQUARE FOOT OF BED. THE NOMINAL STORAGE VOLUME OF AN INSTALLED STORMTECH SC-310 CHAMBER SHALL BE 31.0 CUBIC FEET PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 1.3 CUBIC FEET OF STORAGE/SQUARE FOOT OF BED.

2.7 THE CHAMBER SHALL HAVE FORTY-EIGHT ORIFICES PENETRATING THE SIDEWALLS TO ALLOW FOR LATERAL CONVEYANCE OF WATER.

2.8 THE CHAMBER SHALL HAVE TWO ORIFICES NEAR ITS TOP TO ALLOW FOR EQUALIZATION OF AIR PRESSURE BETWEEN ITS INTERIOR AND EXTERIOR.

2.9 THE CHAMBER SHALL HAVE BOTH OF ITS ENDS OPEN TO ALLOW FOR UNIMPEDED HYDRAULIC FLOWS AND VISUAL INSPECTIONS DOWN A ROW'S ENTIRE LENGTH.

2.10 THE CHAMBER SHALL HAVE 14 CORRUGATIONS.

2.11 THE CHAMBER SHALL HAVE A CIRCULAR, INDENTED, FLAT SURFACE ON THE TOP OF THE CHAMBER FOR AN OPTIONAL 4-INCH INSPECTION PORT OR CLEAN-OUT.

2.12 THE CHAMBER SHALL BE ANALYZED AND DESIGNED USING AASHTO METHODS FOR THERMOPLASTIC CULVERTS CONTAINED IN THE LRFD BRIDGE DESIGN SPECIFICATIONS, 2ND EDITION, INCLUDING INTERIM SPECIFICATIONS THROUGH 2001. DESIGN LIVE LOAD SHALL BE THE AASHTO HS20 TRUCK. DESIGN SHALL CONSIDER EARTH AND LIVE LOADS AS APPROPRIATE FOR THE MINIMUM TO MAXIMUM SPECIFIED DEPTH OF FILL.

2.13 THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.

3.0 END CAP PARAMETERS

3.1 THE END CAP SHALL BE INJECTION MOLDED OF POLYPROPYLENE RESIN TO BE INHERENTLY RESISTANT TO ENVIRONMENTAL STRESS CRACKING, AND TO MAINTAIN ADEQUATE STIFFNESS THROUGH HIGHER TEMPERATURES EXPERIENCED DURING INSTALLATION AND SERVICE.

3.2 THE END CAP SHALL BE DESIGNED TO FIT INTO ANY CORRUGATION OF A CHAMBER, WHICH ALLOWS: CAPPING A CHAMBER THAT HAS ITS LENGTH TRIMMED; SEGMENTING ROWS INTO STORAGE BASINS OF VARIOUS LENGTHS.

3.3 THE END CAP SHALL HAVE SAW GUIDES TO ALLOW EASY CUTTING FOR VARIOUS DIAMETERS OF PIPE THAT MAY BE USED TO INLET THE SYSTEM.

3.4 THE END CAP SHALL HAVE EXCESS STRUCTURAL ADEQUACIES TO ALLOW CUTTING AN ORIFICE OF ANY SIZE AT ANY INVERT ELEVATION.

3.5 THE PRIMARY FACE OF AN END CAP SHALL BE CURVED OUTWARD TO RESIST HORIZONTAL LOADS GENERATED NEAR THE EDGES OF BEDS.

3.6 THE END CAP SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.

STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.

2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S TO SPEAK TO A TECHNICAL 1-888-892-2694 CONSTRUCTION. CALL TO WWW.STORMTECH.COM SERVICE REPRESENTATIVE OR VISIT RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.

3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.

4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.

5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.

7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.

8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.

9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL 1-888-892-2694 STORMTECH OR VISIT WWW.STORMTECH.COM.

SUBSURFACE DETENTION SYSTEMS MAY BE SUBSTITUTED WITH AN ENGINEER APPROVED EQUAL WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT

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

Design:	AJK	Draft:	CJG	Date:	NOV 2024
Checked:	DER	Scale:	1"=30'	Job No.:	4292
File Name: 4292-GRADE.dwg					
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RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Gorrell Palmer, an LJB Engineering Company
GorrellPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

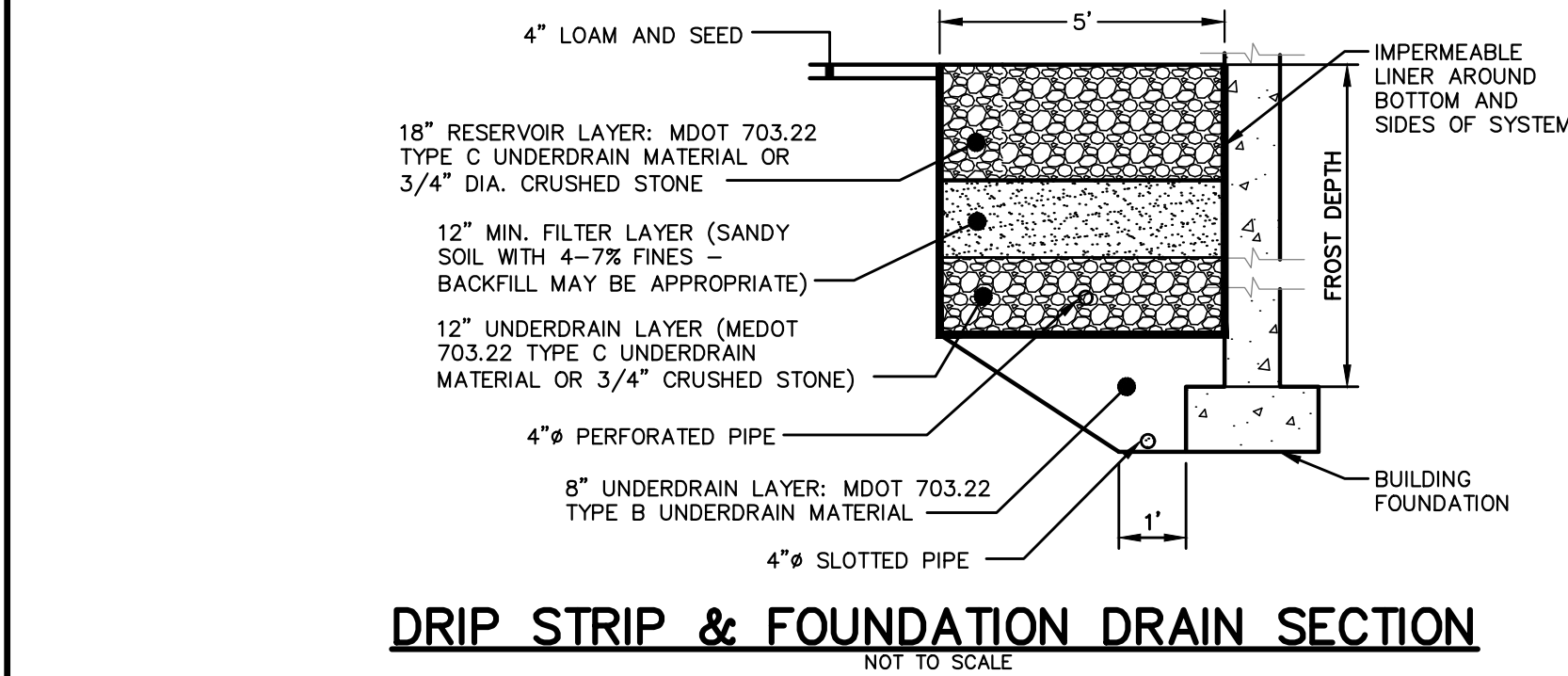
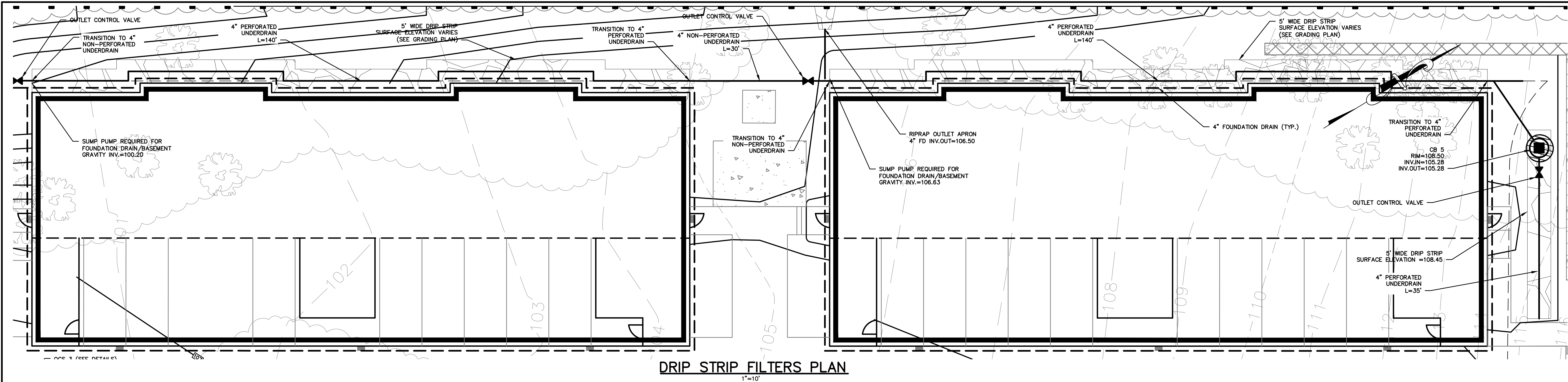
Drawing Name: Subsurface Sand Filter Details

Project: The Belfort Landing
1582 Forest Ave, Portland, Maine

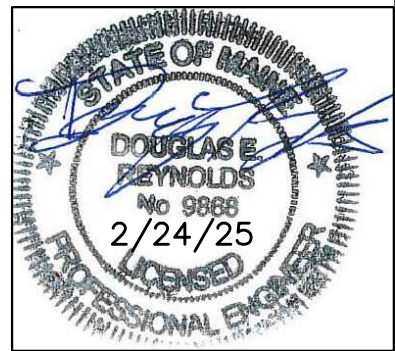
Client: ACRE Properties
27 Cypress Street, Portland, Maine 04103

Drawing No. C301

Page 352



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Rev.	Date	Revision

RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-GRADE.dwg		
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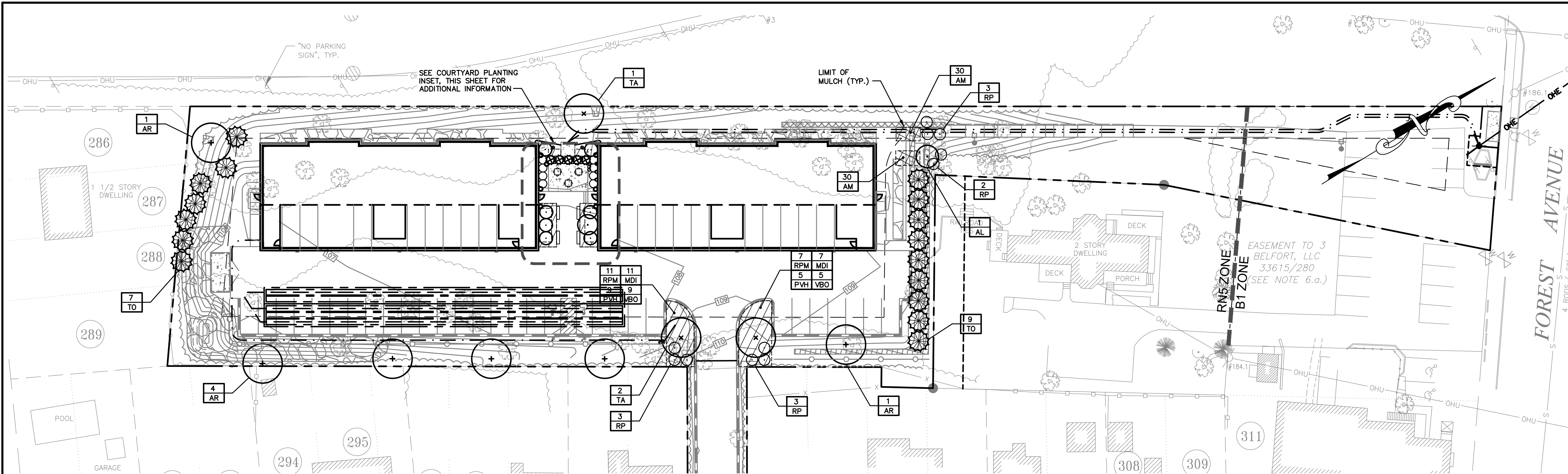


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300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	Drip Strip Details
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

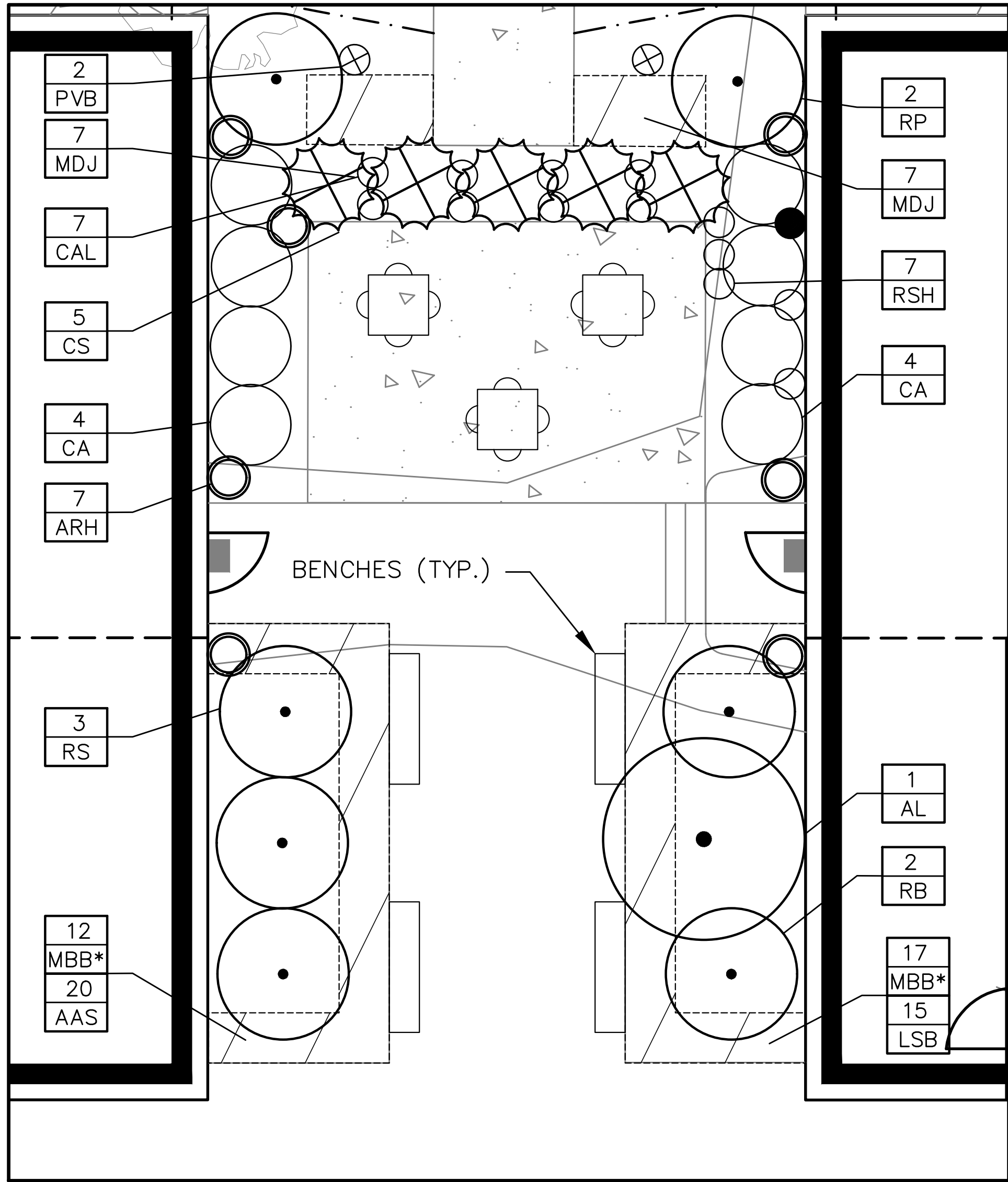
Drawing No.

C302



GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, PLANT QUANTITIES, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 18 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
14. CONTRACTOR SHALL COORDINATE INSPECTION OF PLANT MATERIAL AND LOCATIONS WITH PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANT MATERIAL SHALL BE ON-SITE AND PLACED BEFORE INSPECTION CAN BE COMPLETED. A MINIMUM OF 48 HOUR NOTIFICATION SHALL BE REQUIRED.
15. MAINTENANCE REQUIREMENTS: PRUNE DEAD OR DAMAGED BRANCHES, MAINTAIN GUY POSTS AND WATER AS REQUIRED UNTIL PROJECT COMPLETION AND ACCEPTANCE BY OWNER.
16. WATERING: ALL PLANTINGS SHALL BE THOROUGHLY WATERED UPON INSTALLATION, AND THEN WEEKLY WHENEVER ANY DRY SPELLS OCCUR, UNTIL ACCEPTANCE BY OWNER.
17. LANDSCAPE CONTRACTOR OR PLANT SUPPLIER SHALL GUARANTEE PLANTS AND PROVIDE REPLACEMENTS FOR TWO YEARS FROM INSTALLATION.
18. CONTRACTOR SHALL PLACE 3" SHREDDED BARK MULCH AROUND SHRUB BEDS AND TREE PITS.

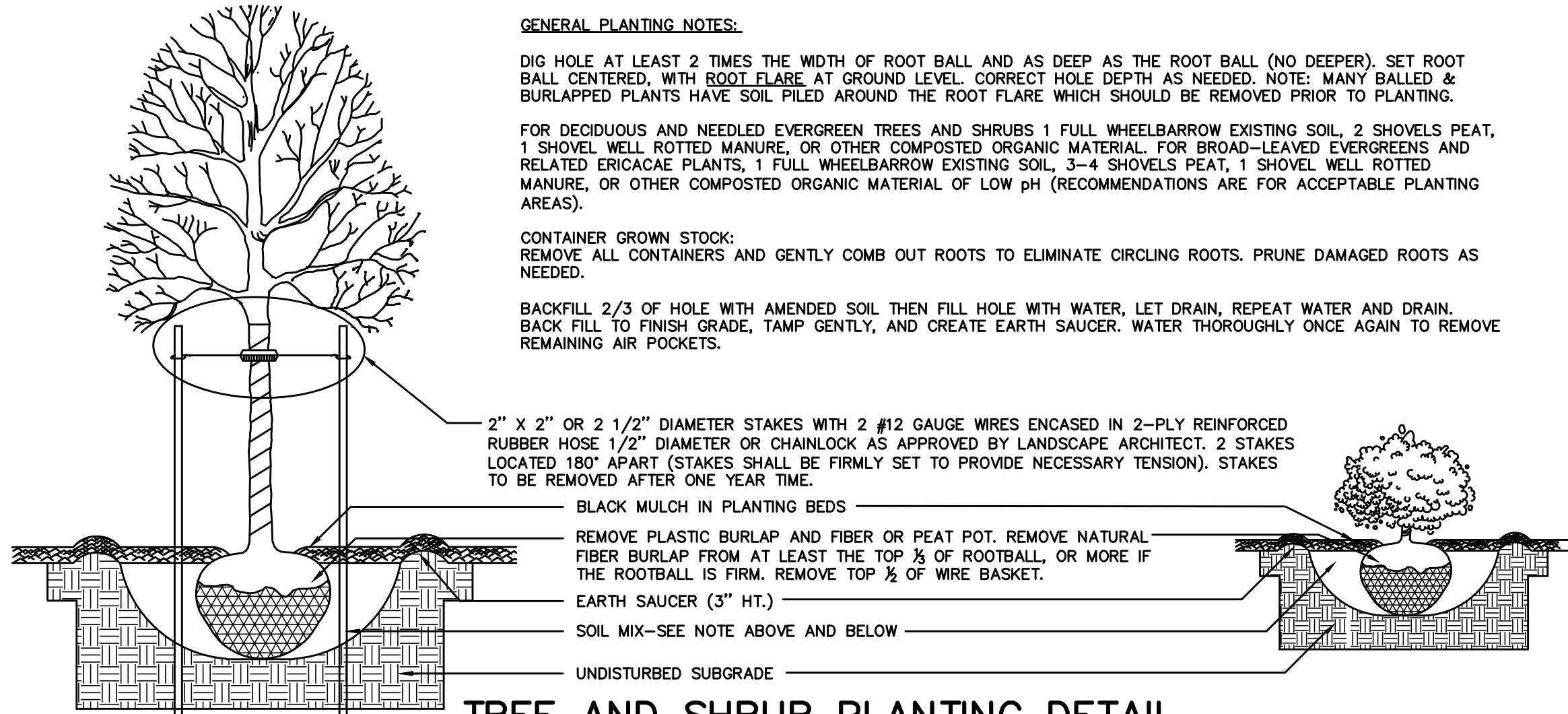


COURTYARD PLANTING DETAIL

1"=5'

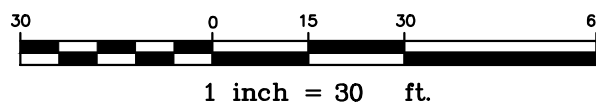
PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
AR	ACER RUBRUM 'BOWHALL'	BOWHALL COLUMNAR RED MAPLE	2-1/2" CAL.
AL	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	8'-10' HGT. CLUMP
TO	THUJA OCCIDENTALIS 'NIGRA'	DARK AMERICAN ARBORVITAE	7'-8' HGT.
TA	TILIA AMERICANA	AMERICAN BASSWOOD	2-1/2" CAL.
SHRUBS			
CA	CLETHRA ALNIFOLIA 'VANILLA SPICE'	VANILLA SPICE SUMMERSWEET	24"- 30" HGT.
CS	CLETHRA ALNIFOLIA 'SUGARTINA CRYSTALLINA'	SUGARTINA CRYSTALLINASUMMERSWEET	#3 GAL.
ML	MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY	#3 GAL.
RP	RHODODENDRON MAXIMUM 'ROSEUM'	PINK ROSEBAY RHODODENDRON	30"-36" HGT.
PERENNIALS			
ARH	ACTEA 'RACEMOSA' 'HILLSIDE BLACK BEAUTY'	HILLSIDE BLACK BEAUTY SNAKE ROOT	NO. 2 CONT.
AAS	ASTILBE 'MILK AND HONEY'	MILK AND HONEY ASTILBE	NO. 1 CONT.
CAL	CALAMAGROSTIS X ACUTIFOLIA 'LIGHTNING STRIKE'	LIGHTNING STRIKE FEATHER REED GRASS	NO. 1 CONT.
EPM	ECHINACEA PURPUREA 'MAGNUS'	MAGNUS PURPLE CONE FLOWER	NO. 1 CONT.
LSB	LEUCANTHEMUM SUPERBUM 'BECKY'	BECKY SHASTA DAISEY	NO. 1 CONT.
MDJ	MONARDA DIDYMA 'JACOB CLINE'	JACOB CLINE BEE-BALM	NO. 1 CONT.
MBB	MONARDA BEE-YOU 'BEE-LIEVE'	BEE-YOU 'BEE-LIEVE' BEE-BALM	NO. 1 CONT.
PVH	PANICUM VIRGATUM 'HEAVY METAL'	HEAVY METAL' SWITCH GRASS	NO. 1 CONT.
RSH	RUDEBECKIA SUBTOMENTOSA 'LITTLE HENRY'	SWEET CONE FLOWER	NO. 1 CONT.
VBO	VERBENA BONARIENSIS	TALL VERBENA	NO. 1 CONT.



TREE AND SHRUB PLANTING DETAIL

NOT TO SCALE



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Rev.	Date	Revision

RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

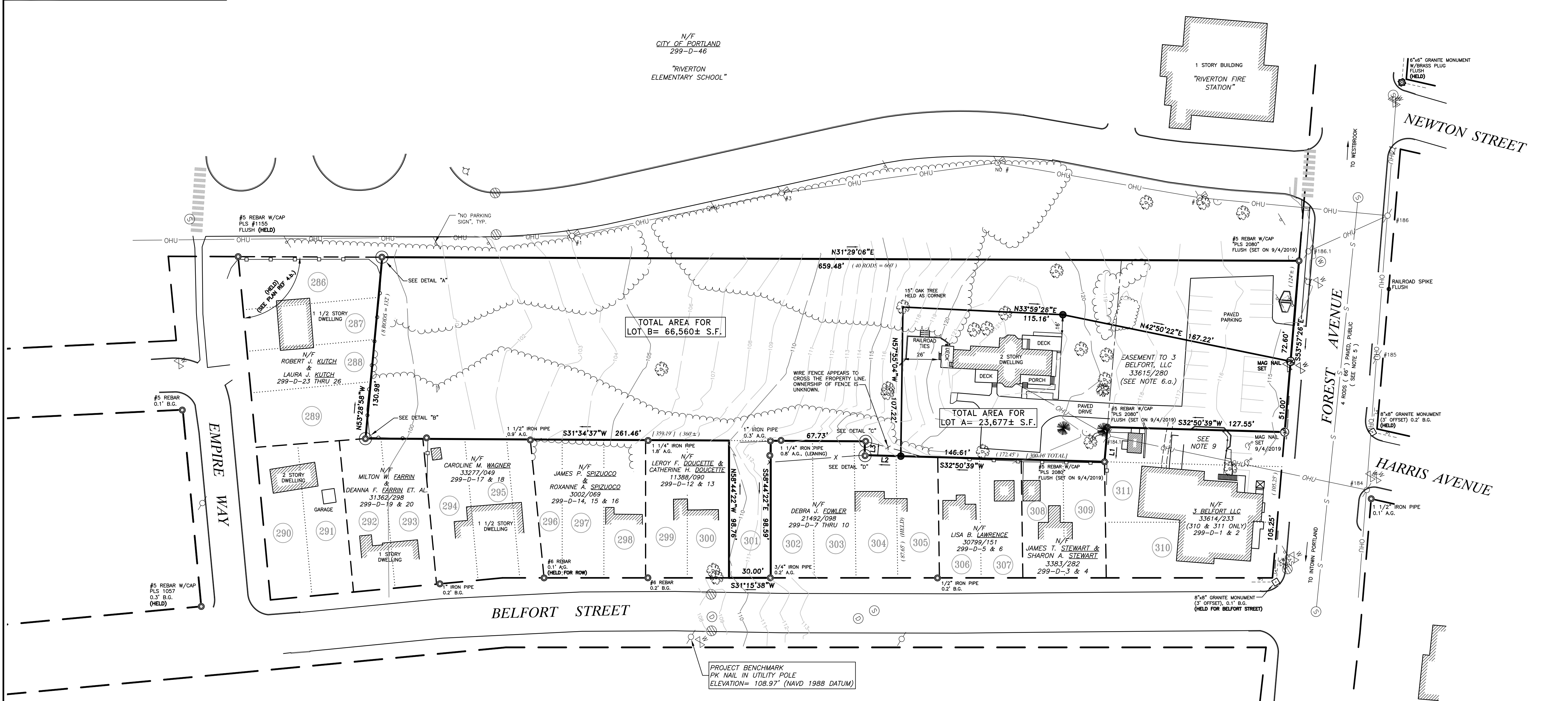
Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-LANDSCAPE.dwg		
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South Portland, ME 04106

Drawing Name:	Landscaping Plan
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
L100



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S53°57'26"E	25.00'
L2	S32°50'39"W	26.00'
L3	N57°55'04"W	9.96'

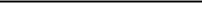
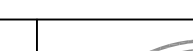
NOTES

1. RECORD OWNER OF THE PARCEL SURVEYED IS ACRE PROPERTIES AS DESCRIBED IN DEED FROM ALEXANDER COUPE, DATED MAY 31, 2022 AND RECORDED IN BOOK 39465, PAGE 256 IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
TOTAL LOT AREA IS: 87,277 S.F. OR 2.00 Ac.
2. THE PARCEL SURVEYED IS IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 299, BLOCK D, PARCEL 027.
3. THE BEARINGS SHOWN ON THIS PLAN ARE BASED ON MAINE COORDINATE SYSTEM OF 1983, WEST ZONE, GRID NORTH.
4. A. PLAN REFERENCES:
a. "PORTLAND VILLA SITES, PORTLAND, CUMBERLAND CO. MAINE, OWNED BY J.W. WILBUR CO., INC." BY ERNEST W. BRANCH, CIVIL ENGINEER, DATED JULY 9, 1918, RECORDED IN PLAN BOOK 14, PAGE 7.
b. "VERRILL & WIRT STREETS, PORTLAND, MAINE, AMENDED RECORDING PLAT" BY LAND USE CONSULTANTS, DATED JULY 10, 1989, RECORDED IN PLAN BOOK 184, PAGE 15.
c. "SUBDIVISION SITE PLAN FOR DAVID CHASE, VERRILL & WIRT STREETS" BY DOWNEAST PARKING AND DEVELOPMENT, DATED DECEMBER 15, 1998, RECORDED IN PLAN BOOK 199, PAGE 129.
d. STREET LINE RECORDS PROVIDED BY CITY OF PORTLAND PUBLIC WORKS
5. THE WIDTH OF FOREST AVE IS 66' BASED ON CITY OF PORTLAND RECORDS. THE LAYOUT OF THE RIGHT-OF-WAY LIMITS IS BASED ON SAID RECORDS AND MONUMENTATION FOUND.
6. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
a. EASEMENT FROM BERNARD N. LARSEN TO 3 BELFORT, LLC FOR INGRESS, EGRESS, PARKING, UTILITIES, OUTDOOR ACTIVITIES AND CONSTRUCTION OF 1 BUILDING RELATED TO THE USE OF THE EASEMENT, DATED NOVEMBER 11, 2016, RECORDED IN BOOK 33615, PAGE 280.
7. AS OF THE ORIGINAL DATE OF THIS PLAN, THE PARCEL SURVEYED IS LOCATED IN THE R3 ZONE, OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT WE RECOMMEND VERIFYING CURRENT ZONE AND ALL APPLICABLE SETBACKS AND RESTRICTIONS WITH THE APPROPRIATE AGENCIES.
8. ELEVATIONS AND CONTOURS ARE BASED ON NAVD 1988 DATUM OBTAINED BY RTK-GPS. SEE PLAN FOR TBM DESCRIPTION.
9. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE (888)DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
10. THE 25' X 127.55' PARCEL WAS ONCE PART OF THE ADJUTING PARCEL INCLUDED WITH LOTS 310 & 311 (SEE BOOK 2176, PAGE 164, MURRAY TO MURRAY'S THRIFT STORE). THE NEXT CONVEYANCE IN THIS CHAIN OF TITLE (BOOK 2357, PAGE 457 MURRAY'S THRIFT STORE TO THOMAS MORAN, JR. & DOROTHY MORAN), AND SUBSEQUENT DEEDS THEREAFTER, APPEAR TO DROP THE 25' X 127.55' PARCEL. THE LAST KNOWN OWNER OF THIS PARCEL IS MURRAY'S THRIFT STORE. TITLE ATTORNEY SHOULD BE CONSULTED TO RESOLVE OWNERSHIP OF THIS AREA.

LOT SPLIT AND TOPOGRAPHIC SURVEY
1582 FOREST AVENUE, PORTLAND, MAINE

Owner:
ACRE PROPERTIES
1326 WASHINGTON AVENUE, PORTLAND, MAINE

Prepared for:
ACRE PROPERTIES

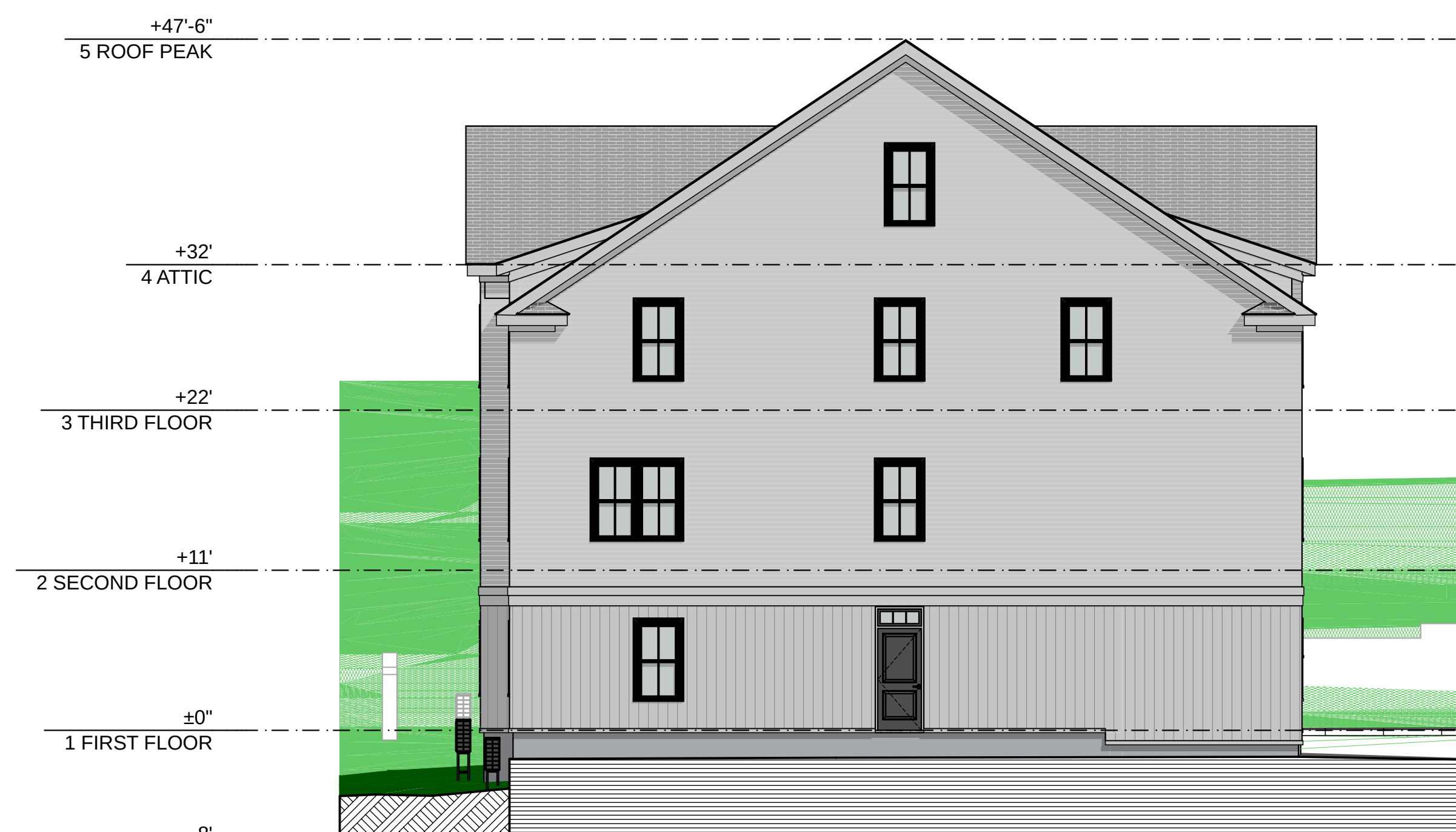
STAMP AND SIGNATURE	
	
TROY F. McDONALD MAINE PROFESSIONAL LAND SURVEYOR No. 2080	DATE <u>01/08/2022</u>



1

SOUTH (BELFORT) ELEVATION

1/8" = 1'-0"



2

WEST ELEVATION

1/8" = 1'-0"



3

EAST (FOREST) ELEVATION

1/8" = 1'-0"



4

NORTH ELEVATION

1/8" = 1'-0"



3.

THIRD FLOOR PLAN



1/8" = 1'-0"

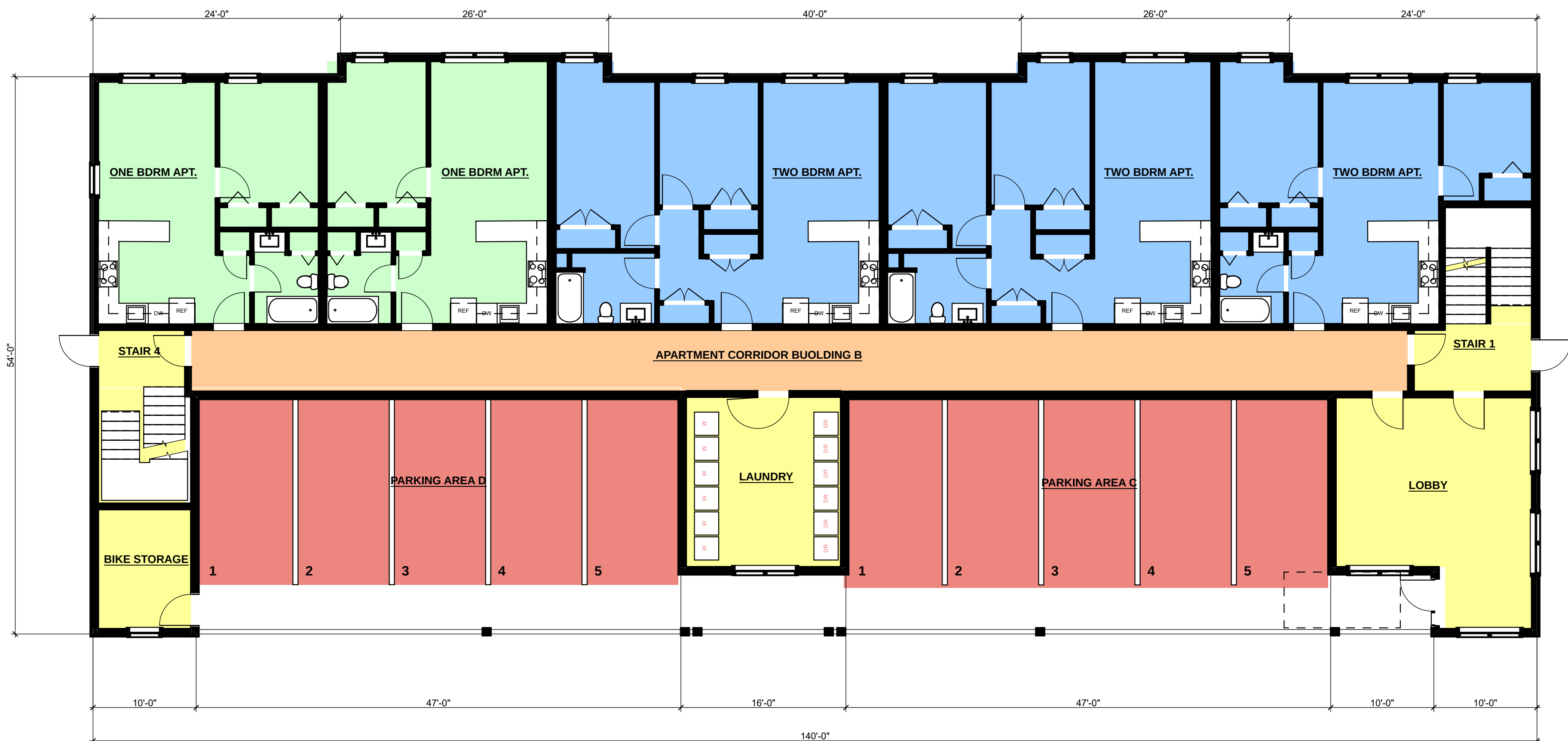


2.

SECOND FLOOR PLAN

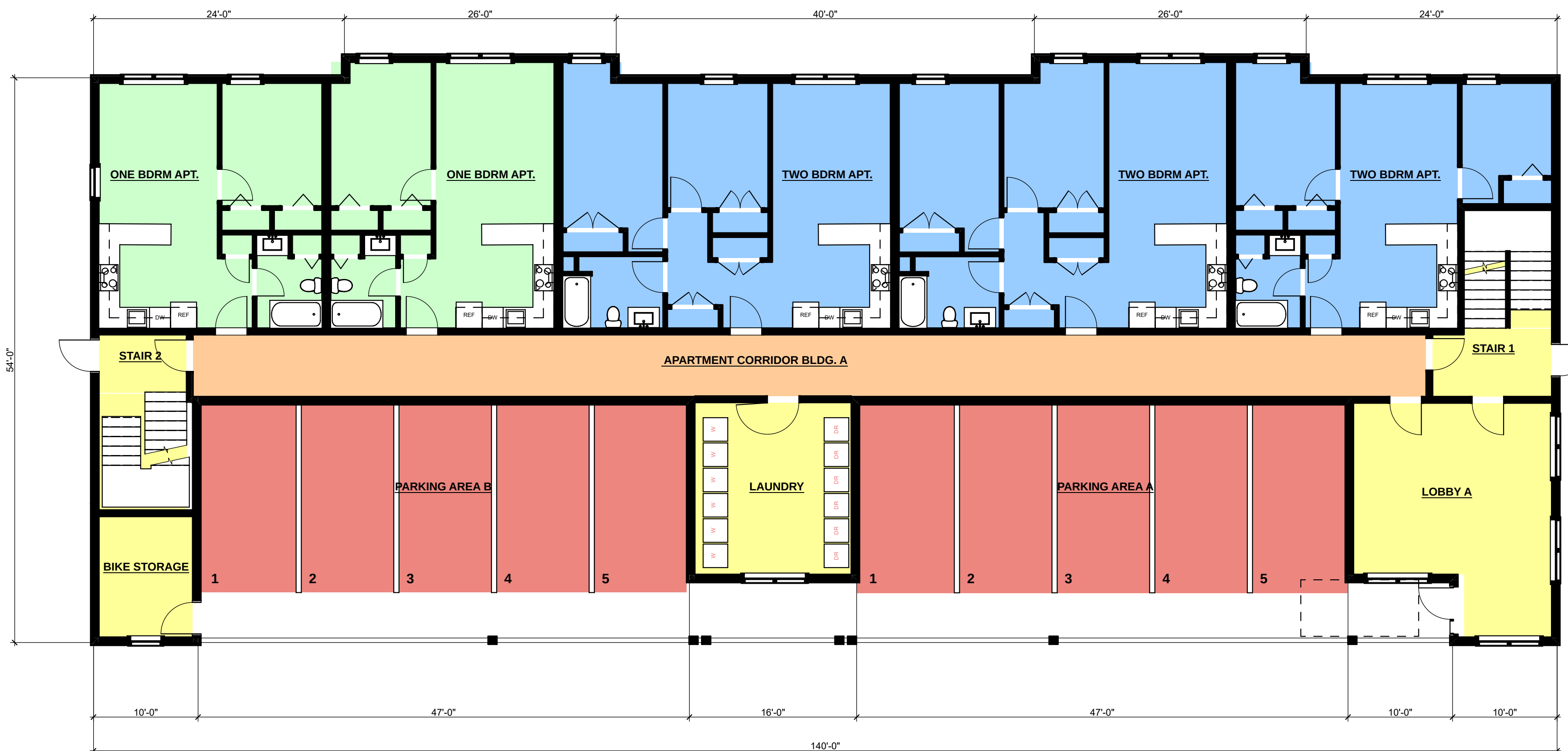


1/8" = 1'-0"



1.

FIRST FLOOR PLAN



1/8" = 1'-0"

ATTACHMENT 10

PHOTOMETRIC PLAN AND LIGHTING CUT SHEETS

RATIO Series

AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as retail, commercial and campus parking lots
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Compact and lightweight design with low EPA
- 3G rated for high vibration applications including bridges and overpasses
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™ and 7-Pin with networked controls
- Best in class surge protection available



CONTROL TECHNOLOGY



SERVICE PROGRAMS

STOCK QS10

SPECIFICATIONS

CONSTRUCTION

- Rectilinear form mimics the traditional shoebox form factor keeping a similar but updated style and appearance, ideal for retrofit applications
- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 80, 160, 320 or 480 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

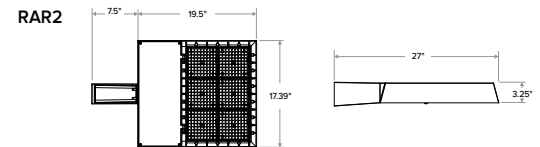
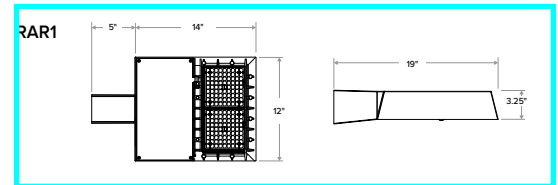
- Standard square arm mount, compatible with B3 drill pattern
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option or accessory for square and round poles.
- Knuckle arm fitter option available for 2-3/8" OD tenon. Max tilt of 60 degrees with 4 degree adjustable increments. (Restrictions apply for 7-pin options)

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- 0- 10 V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor



	Weight	EPA at 0°
RAR1	13.5 lbs / 6.1 kg	.45ft. ² / .13m ²
RAR2	24 lbs / 10.9 kg	.55ft. ² / .17m ²

CERTIFICATIONS

- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to www.designlights.org for the most up-to-date list.
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- Fixture is IP66 rated
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to <https://www.currentlighting.com/resources/america-solutions>)

WARRANTY

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



RATIO Series

AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

Gray Shading

= Service Program
Limit of 15 luminaires

QS10

ORDERING GUIDE

Example: RAR1-80L-25-3K7-2-UNV-ASQ-BL-NXW-BL

CATALOG #

ORDERING INFORMATION

Series	# LEDs - Wattage	CCT/CRI	Distribution	Optics Rotation	Voltage
RAR1 Ratio Area Size 1	80L-25 25W - 3,000 Lumens 80L-39 39W - 5,200 Lumens 80L-50 50W - 6,000 Lumens 160L-70 70W - 9,000 Lumens 160L-100 100W - 12,000 Lumens 160L-115 115W - 15,000 Lumens 160L-135 135W - 18,000 Lumens	3K7 3000K, 70 CRI 4K7 4000K, 70 CRI 5K7 5000K, 70 CRI	2 IES TYPE II 3 IES TYPE III 4W IES TYPE IV 4F IES TYPE IV Forward 5QW IES TYPE V	Blank for no rotation L Optic rotation left R Optic rotation right	UNV Universal 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V
RAR2 Ratio Area Size 2	320L-110 110W - 15,000 Lumens 320L-140 140W - 18,000 Lumens 320L-165 165W - 21,000 Lumens 480L-185 185W - 24,000 Lumens 480L-210 210W - 27,000 Lumens 480L-240 240W - 30,000 Lumens 480L-255 255W - 35,000 Lumens 480L-295 295W - 42,000 Lumens 480L-340 340W - 48,000 Lumens				

Mounting	Color	Control Options Network	Options
ASQ Arm mount for square pole/flat surface ASQU Universal arm mount for square pole/flat surface. Does not include round pole adapt or B3 drill pattern	BLT Black Matte Textured BLS Black Gloss Smooth DBT Dark Bronze Matte Textured DBS Dark Brone Gloss Smooth GTT Graphite Matte Textured LGS Light Grey Gloss Smooth PSS Platinum Silver Smooth WHT White Matte Textured WHS White Gloss Smooth VGT Verde Green Textured	NXWS16F NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{6,7} NXWS40F NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{6,7} NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ^{6,7}	BC Backlight control ⁸ F Fusing ⁵ TB Terminal block 2PF 2 power feed with 2 drivers ²
Mounting Round Poles	Color Option	Control Options Other	
A_ Arm mount for round pole ¹ B3 drill pattern A_U Universal arm mount for round pole ¹	CC Custom Color	SCP_F Programmable occupancy sensor ^{3,4} 7PR 7-Pin twist lock receptacle 7PR-SC 7-Pin receptacle with shorting cap 7PR-MD40F Low voltage sensor for 7PR 7PR-TL 7-Pin PCR with photocontrol ADD AutoDim Timer Based Dimming ADT AutoDim Time of Day Dimming BTS-14F Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens ⁹ BTS-40F Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens ⁹ BTSO-12F Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens ⁹	
Mounting Other			
WB Wall bracket MAF Mast arm fitter for 2-3/8" OD horizontal arm K Knuckle			

Notes:

- 1 Replace "_" with "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
- 2 Not available with 25, 50, 255, 295 & 340W configurations
- 3 At least one SCPREMOTE required to program SCP motion sensor
- 4 Replace "_" with 8F or 40F lens
- 5 Must specify voltage
- 6 Networked Controls cannot be combined with other control options
- 7 Not available with 2PF option
- 8 BC not available on 4F distributions
- 9 BTS and BTSO available for 50 Watts or higher and only on 120-277 voltage

RATIO Series

AREA/SITE LIGHTER

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY



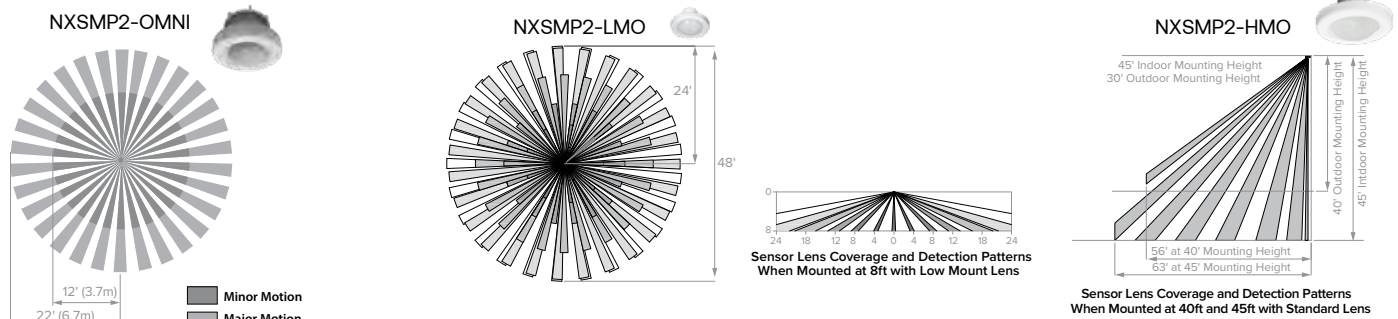
Control Option Ordering Logic & Description		Control Option Functionality								Control Option Components
		Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	
NX Wireless	NXOFM1R1D-UNV	✓	✓	✓	Paired with external control	✓	✓	✓	✓	-  NXOFM-1R1D-UV
	NXW	✓	✓	✓	-	-	✓	✓	✓	-  NXRM2-H
	NXWS16F	✓	✓	✓	✓	✓	✓	✓	✓	16ft  NXSMP2-LMO
	NXWS40F	✓	✓	✓	✓	✓	✓	✓	✓	40ft  NXSMP2-HMO
Independent	BTSO-12F	-	-	-	✓	✓	✓	✓	✓	12ft  BTSM-OMNI-O
	BTS-14F	-	-	-	✓	✓	✓	✓	✓	14ft  BTSM-LMO
	BTS-40F	-	-	-	✓	✓	✓	✓	✓	40ft  BTSM-HMO

DEFAULT SETTINGS

NX Wireless	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7
	Occupancy Sensor Timeout	15 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	0%
	Daylight Sensor	Disabled
	Bluetooth	Enabled
	2.4GHz Wireless Mesh	On
	"Passcode Factory Passcode: HubbN3T!"	Enabled

Stand Alone	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7
	Occupancy Sensor Timeout	8 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	50%
	Daylight Sensor	Disabled

NX WIRELESS COVERAGE PATTERNS



NX LIGHTING CONTROLS FREE APP

CONTROLS TECH SUPPORT 800-888-8006 (7:00 AM - 7:00 PM)



The NX Lighting Controls App is free to use mobile application for programming both NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enable luminaires and program NX system settings.

Apple App: <https://apps.apple.com/us/app/nx-lighting-controls/id962112904>

Google Play: https://play.google.com/store/apps/details?id=io.cordova.NXBTR&hl=en_US&gl=US



Apple App



Google Play

RATIO Series

AREA/SITE LIGHTER

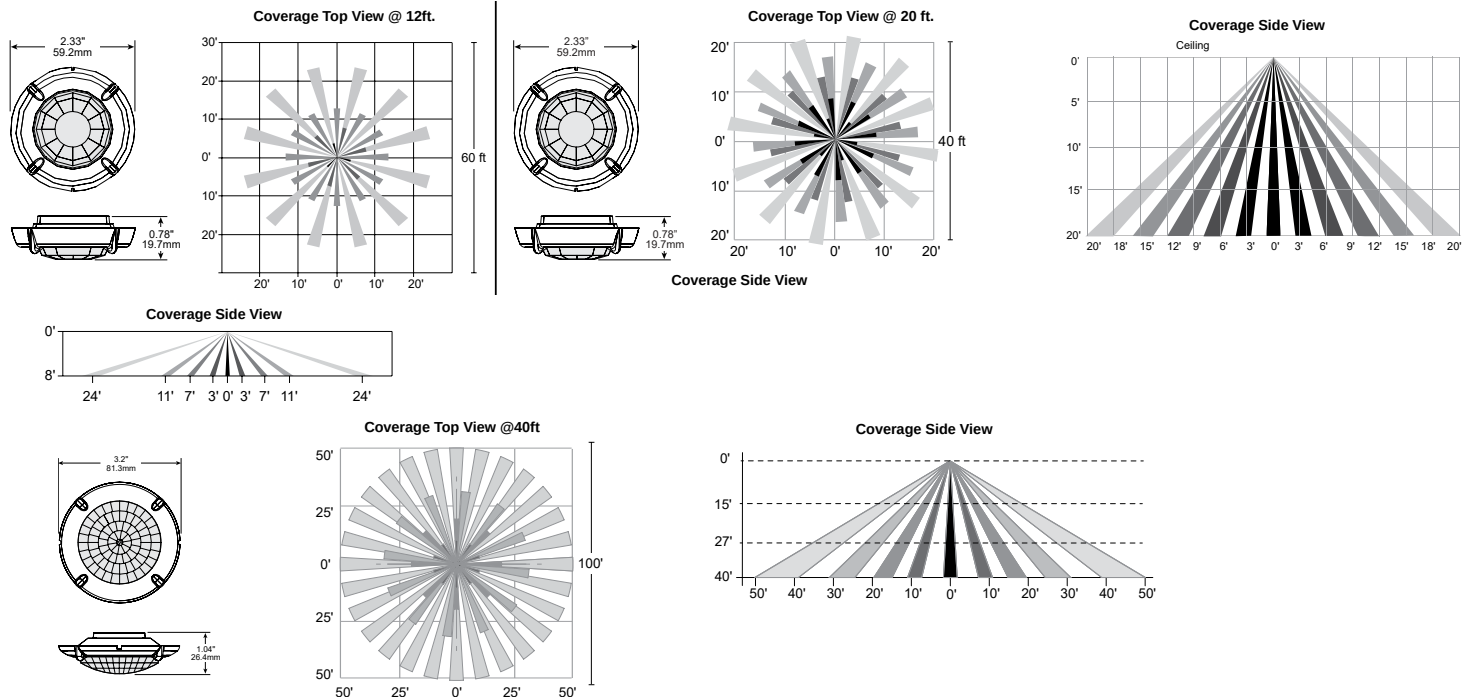
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

Control Option Ordering Logic & Description		Control Option Functionality									Control Option Components
		Networkable	Grouping	Scheduling	Occupancy/Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height	
SCP_F	Sensor Control Programmable, sensor range, reference product specification for height selections	-	-	-	✓	✓	✓	✓	-	8ft or 20ft	SCP_F
ADD	AutoDIM Timer Based Dimming	-	-	✓	-	-	-	✓	-	-	ADD
ADT	AutoDIM Time of Day Dimming	-	-	✓	-	-	-	✓	-	-	ADT
7PR	7-Pin Receptacle	-	-	Paired with external control	-	Paired with external control	-	Paired with external control	-	-	7PR
7PR-SC	7-Pin Receptacle with shorting cap	-	-	-	-	-	-	-	-	-	7PR-SC
7PR-TL	7-Pin with photocontrol	-	-	-	-	✓	-	✓	-	-	7PR-TL

COVERAGE PATTERNS FOR SCP_F



PROGRAMMED CONTROLS

ADD-AutoDim Timer Based Options

- Light delay options from 1-9 hours after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1-9 hours after the light has been dimmed previously.

EX: ADD-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	1-9 Hours	6 - Delay 6 hours
Auto-Dim Brightness	10-100% Brightness	5 - Dim to 50% brightness
Auto-Dim Return	Delay 0-9 Hours	R6 - Return to full output after 6 hours

ADT-AutoDim Time of Day Based Option

- Light delay options from 1AM-9PM after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1AM-9PM after the light has been dimmed previously.

EX: ADT-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	12-3 AM and 6-11 PM	6 - Dim at 6PM
Auto-Dim Brightness	10-100% Brightness	5 - Dim to 50%
Auto-Dim Return	12-6 AM and 9-11P	R6 - Return to full output at 6AM



RATIO Series

AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

STOCK ORDERING INFORMATION

Catalog Number	Lumens	Wattage	LED Count	CCT/CRI	Voltage	Distribution	Mounting	Finish
RAR1-100-4K-3	12,000	100W	160L	4000K/70CRI	120-277V	Type 3	Square Arm	Bronze
RAR1-100-4K-4W	12,000	100W	160L	4000K/70CRI	120-277V	Type 4W	Square Arm	Bronze
RAR1-135-4K-3	18,000	135W	160L	4000K/70CRI	120-277V	Type 3	Square Arm	Bronze
RAR1-135-4K-4W	18,000	135W	160L	4000K/70CRI	120-277V	Type 4W	Square Arm	Bronze
RAR2-165-4K-3	21,000	165W	320L	4000K/70CRI	120-277V	Type 3	Square Arm	Bronze
RAR2-165-4K-4W	21,000	165W	320L	4000K/70CRI	120-277V	Type 4W	Square Arm	Bronze

POLE COMBOS

Catalog Number	Pole	Single or Double Head	Fixture	Lumens	Wattage	Distribution	CCT/CRI	Mounting	Finish
RAR1-100-4K7-3-S20	20' Square Straight Steel	Single Head	RAR1-100-4K-3	12,000	100W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-4W-S20	20' Square Straight Steel	Single Head	RAR1-100-4K-4W	12,000	100W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-3-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR1-100-4K-3	12,000	100W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-4W-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR1-100-4K-4W	12,000	100W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-3-S25	25' Square Straight Steel	Single Head	RAR1-100-4K-3	12,000	100W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-4W-S25	25' Square Straight Steel	Single Head	RAR1-100-4K-4W	12,000	100W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-3-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR1-100-4K-3	12,000	100W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-100-4K7-4W-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR1-100-4K-4W	12,000	100W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-3-S20	20' Square Straight Steel	Single Head	RAR1-135-4K-3	18,000	135W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-4W-S20	20' Square Straight Steel	Single Head	RAR1-135-4K-4W	18,000	135W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-3-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR1-135-4K-3	18,000	135W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-4W-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR1-135-4K-4W	18,000	135W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-3-S25	25' Square Straight Steel	Single Head	RAR1-135-4K-3	18,000	135W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-4W-S25	25' Square Straight Steel	Single Head	RAR1-135-4K-4W	18,000	135W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-3-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR1-135-4K-3	18,000	135W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR1-135-4K7-4W-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR1-135-4K-4W	18,000	135W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-3-S20	20' Square Straight Steel	Single Head	RAR2-165-4K-3	21,000	165W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-4W-S20	20' Square Straight Steel	Single Head	RAR2-165-4K-4W	21,000	165W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-3-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR2-165-4K-3	21,000	165W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-4W-S20-2X	20' Square Straight Steel	Double Head (180°)	RAR2-165-4K-4W	21,000	165W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-3-S25	25' Square Straight Steel	Single Head	RAR2-165-4K-3	21,000	165W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-4W-S25	25' Square Straight Steel	Single Head	RAR2-165-4K-4W	21,000	165W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-3-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR2-165-4K-3	21,000	165W	Type 3	4000K/70CRI	Square Arm	Dark Bronze
RAR2-165-4K7-4W-S25-2X	25' Square Straight Steel	Double Head (180°)	RAR2-165-4K-4W	21,000	165W	Type 4W	4000K/70CRI	Square Arm	Dark Bronze
SSSH-20-40-STK	20' Square Straight Steel	Pole Only	Not Included						
SSSH-25-40-STK	25' Square Straight Steel	Pole Only	Not Included						
SSSH-STK-4-KIT		Kit Only	Not Included						

RATIO Series

AREA/SITE LIGHTER

CONTROLS

Control Options

Standalone

SCPREMOTE Order at least one per project location to program and control

Networked – Wireless

WIR-RME-L LightGRID+ External Fixture Module^{1,2}

NX Networked – Wireless

NXOFM-1R1D-UNV NX Wireless, Daylight Harvesting, BLE, 7 pin twisted lock

Notes:

- 1 Works with external networked photosensor
- 2 LightGRID+ Gateway required for system programming

OPTIONS AND ACCESSORIES - STOCK (ORDERED SEPARATELY)

Catalog Number	Description
☐ RARRPA3DB	Round pole adapter 3.5" to 4.13" for ASQ arm, 3.5" to 4.13" OD pole, dark bronze finish
☐ RARA3UDB	Universal mount for square pole or round pole 3.5" to 4.13", dark bronze finish
☐ RARBC80L	Ratio backlight control 80L
☐ RARBC160L	Ratio backlight control 160L
☐ RARBC320L	Ratio backlight control 320L
☐ RARBC480L	Ratio backlight control 480L

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

Catalog Number	Description
☐ RAR-ASQU-XX	Universal arm mount for square pole/flat surface ²
☐ RAR-A_U-XX	Universal arm mount for round poles ^{1,2}
☐ RAR-RPA_-XX	Round pole adapter ^{1,2}
☐ SETAVP-XX	4" square pole top tenon adapter, 2 3/8" OD slipfitter ²
☐ RETAVP-XX	4" round pole top tenon adapter; 2 3/8" OD slipfitter for max. Four fixtures (90o); order 4" round pole adapters separately ²
☐ BIRD-SPIKE-3	Ratio size 1 bird deterrent/spikes
☐ BIRD-SPIKE-4	Ratio size 2 bird deterrent/spikes
☐ RARWB-XX	Wall bracket - use with Mast Arm Fitter or Knuckle ²

- 1 Replace "-" with "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
- 2 Replace "XX" with desired color/ paint finish

RATIO Series

AREA/SITE LIGHTER

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RAR1	25	25.4	2	3438	135	1	0	1	3445	136	1	0	1	3240	128	1	0	1
			3	3460	136	1	0	1	3467	136	1	0	1	3260	128	1	0	1
			4W	3406	134	1	0	1	3412	134	1	0	1	3209	126	1	0	1
			5QW	3483	137	2	0	1	3490	137	2	0	1	3282	129	2	0	1
	39	39	2	5263	139	1	0	2	5273	139	1	0	2	4960	131	1	0	2
			3	5297	139	1	0	2	5308	140	1	0	2	4991	131	1	0	2
			4W	5200	137	1	0	2	5210	137	1	0	2	4900	129	1	0	2
			5QW	5333	140	3	0	1	5344	141	3	0	1	5025	132	3	0	1
	50	49.8	2	6310	127	1	0	2	6323	127	1	0	2	5946	120	1	0	2
			3	6349	128	1	0	2	6362	128	1	0	2	5983	120	1	0	2
			4W	6233	125	1	0	2	6245	126	1	0	2	5873	118	1	0	2
			5QW	6392	129	3	0	1	6405	129	3	0	1	6023	121	3	0	1
	70	68.4	2	9486	139	1	0	2	9505	139	1	0	2	8938	131	1	0	2
			3	9544	140	1	0	2	9563	140	1	0	2	8993	131	1	0	2
			4W	9395	137	1	0	2	9414	138	1	0	2	8853	129	1	0	2
			5QW	9608	140	4	0	2	9628	141	4	0	2	9054	132	4	0	2
	100	90.0	2	11976	133	2	0	2	12000	133	2	0	2	11285	125	2	0	2
			3	12050	134	2	0	2	12074	134	2	0	2	11354	126	2	0	2
			4W	11861	132	2	0	2	11885	132	2	0	2	11177	124	2	0	2
			5QW	12131	135	4	0	2	12155	135	4	0	2	11431	127	4	0	2
	115	109.7	2	15572	142	2	0	2	15494	141	2	0	2	14871	136	2	0	2
			3	15833	144	2	0	2	15754	144	2	0	2	15121	138	2	0	2
			4W	15281	139	2	0	3	15205	139	2	0	3	14623	133	2	0	3
			5QW	15732	143	4	0	2	15653	143	4	0	2	15024	137	4	0	2
	135	133.3	2	17971	135	3	0	3	17881	134	3	0	3	17163	129	3	0	3
			3	18272	137	2	0	2	18181	136	2	0	2	17450	131	2	0	2
			4W	17635	132	2	0	3	17547	132	2	0	3	16876	127	2	0	3
			5QW	18156	136	4	0	2	18065	136	4	0	2	17339	130	4	0	2

RAR2 Performance Data on next page

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

RATIO Series

AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RAR2	110	100.3	2	15326	153	2	0	3	15357	153	2	0	3	14442	144	2	0	3
			3	15421	154	2	0	3	15452	154	2	0	3	14531	145	2	0	3
			4W	15180	151	2	0	2	15210	152	2	0	2	14304	143	2	0	2
			5QW	15525	155	4	0	2	15556	155	4	0	2	14629	146	4	0	2
	140	133.2	2	19395	146	2	0	3	19434	146	2	0	3	18276	137	2	0	3
			3	19515	147	2	0	3	19554	147	2	0	3	18389	138	2	0	3
			4W	19210	144	2	0	3	19248	145	2	0	3	18101	136	2	0	3
			5QW	19647	148	5	0	3	19686	148	5	0	3	18513	139	5	0	3
	165	153.6	2	21651	141	3	0	3	21695	141	3	0	3	20402	133	3	0	3
			3	21785	142	3	0	3	21828	142	3	0	3	20527	134	3	0	3
			4W	21444	140	3	0	3	21487	140	3	0	3	20206	132	3	0	3
			5QW	21932	143	5	0	3	21976	143	5	0	3	20666	135	5	0	3
	185	174.5	2	26046	149	3	0	3	26098	150	3	0	3	24543	141	3	0	3
			3	26207	150	3	0	3	26259	150	3	0	3	24694	142	3	0	3
			4W	25797	148	3	0	4	25849	148	3	0	4	24308	139	3	0	4
			5QW	26384	151	5	0	3	26437	152	5	0	3	24861	143	5	0	3
	210	198.2	2	28848	145	3	0	4	28906	146	3	0	4	27184	137	3	0	4
			3	29027	146	3	0	4	29085	147	3	0	4	27351	138	3	0	4
			4W	28572	144	3	0	4	28630	144	3	0	4	26924	136	3	0	4
			5QW	29222	147	5	0	4	29281	148	5	0	4	27536	139	5	0	4
	240	226.9	2	32087	141	3	0	4	32151	142	3	0	4	30235	133	3	0	4
			3	32285	142	3	0	4	32350	143	3	0	4	30422	134	3	0	4
			4W	31780	140	3	0	4	31844	140	3	0	4	29946	132	3	0	4
			5QW	32503	143	5	0	4	32568	144	5	0	4	30627	135	5	0	4
	255	257.0	2	37040	144	3	0	4	36854	143	3	0	4	35373	138	3	0	4
			3	37660	147	3	0	4	37472	146	3	0	4	35966	140	3	0	4
			4W	36347	141	3	0	5	36166	140	3	0	5	34782	135	3	0	5
			5QW	37420	146	5	0	4	37233	145	5	0	4	35736	139	5	0	4
	295	294.0	2	41733	142	3	0	4	41524	141	3	0	4	39855	136	3	0	4
			3	42432	144	3	0	4	42220	144	3	0	4	40523	138	3	0	4
			4W	40953	139	3	0	5	40748	139	3	0	5	39190	133	3	0	5
			5QW	42162	143	5	0	4	41951	143	5	0	4	40264	137	5	0	4
	340	347.1	2	48392	139	4	0	5	48150	139	4	0	5	46215	133	4	0	5
			3	49203	142	3	0	4	48957	141	3	0	4	46989	135	3	0	4
			4W	47488	137	4	0	5	47261	136	4	0	5	45443	131	4	0	5
			5QW	48889	141	5	0	5	48645	140	5	0	5	46689	135	5	0	5

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

RATIO Series

AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ELECTRICAL DATA

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RAR1	25	120	0.21	25.4
		208	0.12	
		240	0.11	
		277	0.09	
	39	120	0.32	38.0
		208	0.18	
		240	0.16	
		277	0.14	
	50	347	0.11	49.8
		480	0.08	
		120	0.42	
		208	0.24	
	70	240	0.21	68.4
		277	0.18	
		120	0.57	
		208	0.33	
	100	240	0.29	90.0
		277	0.25	
		120	0.75	
		208	0.43	
	115	240	0.38	109.7
		277	0.32	
		120	0.91	
		208	0.53	
	135	240	0.46	133.3
		277	0.40	
		347	0.32	
		480	0.23	

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RAR2	110	120	0.84	100.3
		208	0.48	
		240	0.42	
		277	0.36	
	140	120	1.11	133.2
		208	0.64	
		240	0.56	
		277	0.48	
	165	120	1.28	153.6
		208	0.74	
		240	0.64	
		277	0.55	
	185	120	1.45	174.5
		208	0.84	
		240	0.73	
		277	0.63	
	210	120	1.65	198.3
		208	0.95	
		240	0.83	
		277	0.72	
	240	120	1.89	226.9
		208	1.09	
		240	0.95	
		277	0.82	
	255	120	2.14	257.0
		208	1.24	
		240	1.07	
		277	0.93	
	295	347	0.74	294.0
		480	0.54	
		120	2.45	
		208	1.41	
	340	240	1.23	347.1
		277	1.06	
		347	0.85	
		480	0.61	

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0° C	32° F	1.03
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	0.99
40° C	104° F	0.98
50° C	122° F	0.97

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

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	TM-21-11 L90 36,000	50,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.97	0.95	0.93	0.86	238,000
40°C / 104°F	0.99	0.96	0.95	0.93	0.85	225,000

MICRO STRIKE LUMEN MULTIPLIER

Micro Strike Lumen Multiplier			
CCT	70 CRI	80 CRI	90 CRI
2700K	x	0.841	x
3000K	x	0.861	0.647
3500K	x	0.9	x
4000K	1	0.926	0.699
5000K	1	0.937	0.791
Phosphor Coated Amber Multiplier			
AP	0.71		

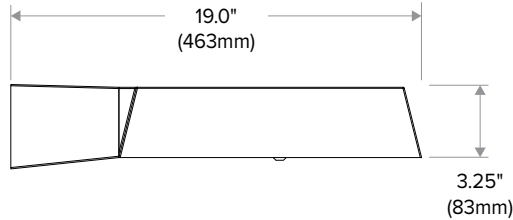
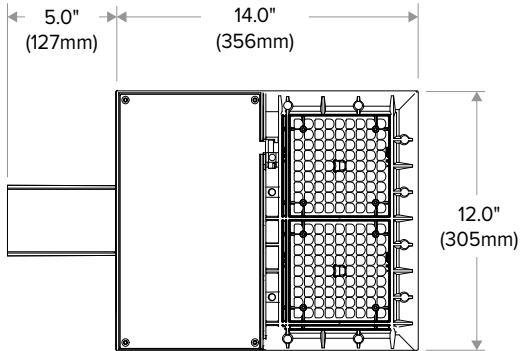
RATIO Series

AREA/SITE LIGHTER

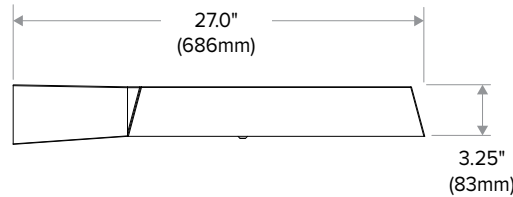
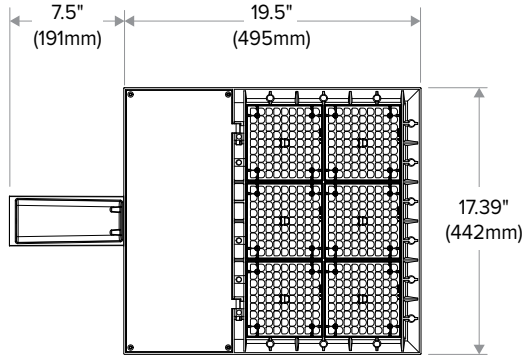
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

DIMENSIONS

RAR1

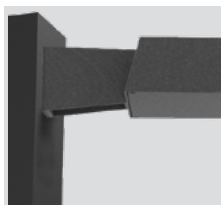


RAR2



ADDITIONAL INFORMATION

MOUNTING



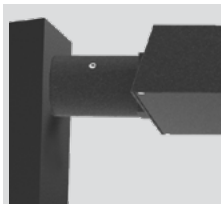
Arm Mount – ASQ: Fixture ships with integral arm for ease of installation.



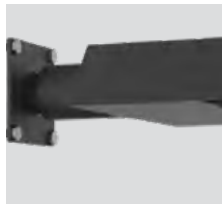
Knuckle – Knuckle mount 15° aiming angle increments for precise aiming and control, fits 2-3/8" tenons or pipes.



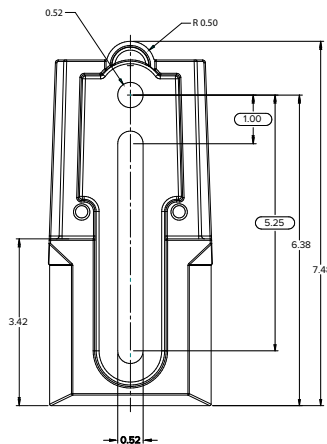
Universal Mounting – Universal mounting block for ease of installation. Compatible with drill patterns from 2.5" to 4.5" and S2 and B3 drill patterns



MAF – Fits 2-3/8" OD arms Roadway applications.



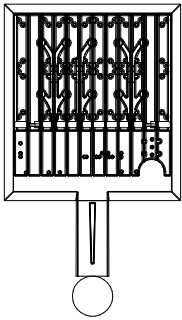
Wall Mount – Wall mount bracket designed for building mount applications.



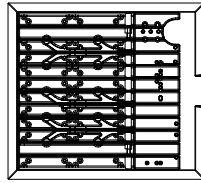
RATIO Series

AREA/SITE LIGHTER

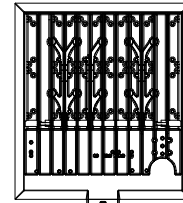
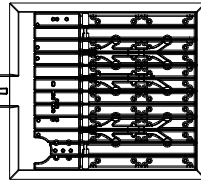
EPA (RAR1)



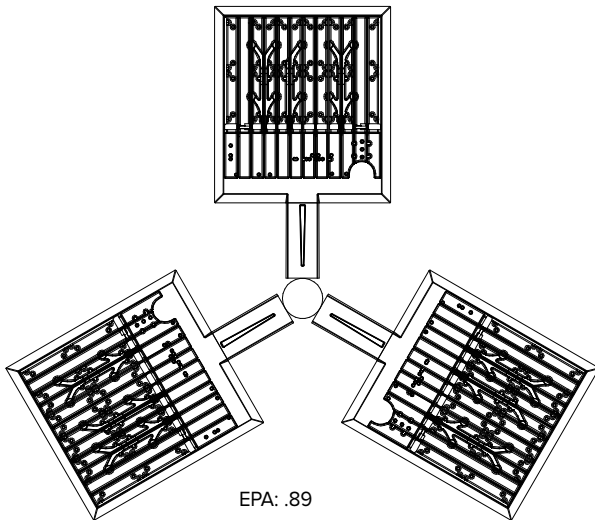
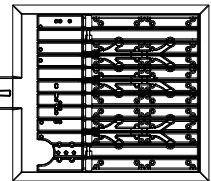
EPA Knuckle Mount 0 degrees: .43
EPA Knuckle Mount 30 degrees: .55
EPA Arm Mount: .0 degrees 38



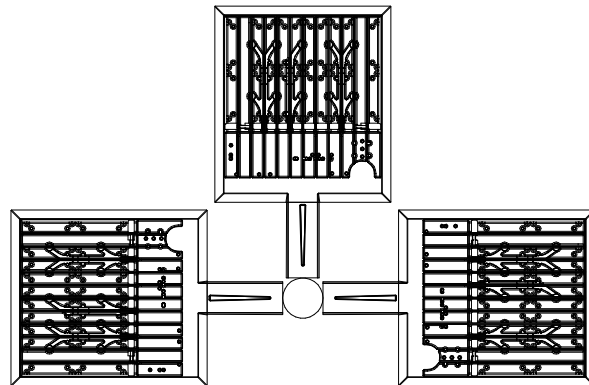
EPA: .99



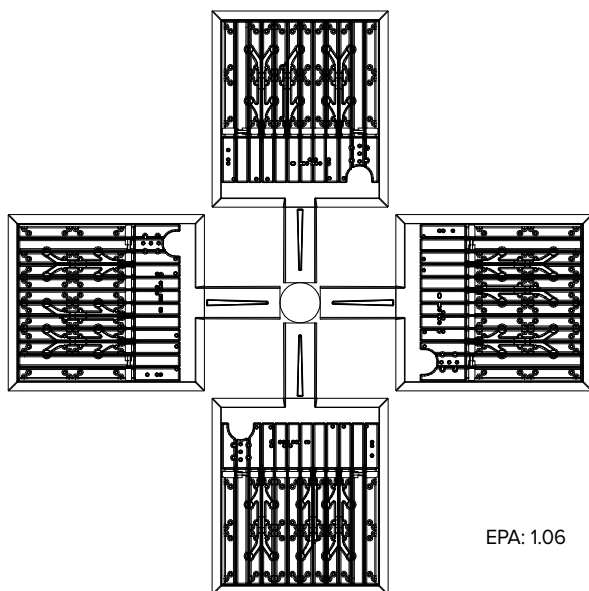
EPA: .62



EPA: .89



EPA: .99

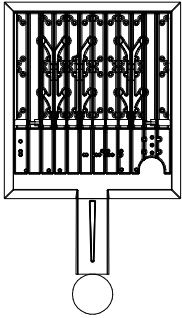


EPA: 1.06

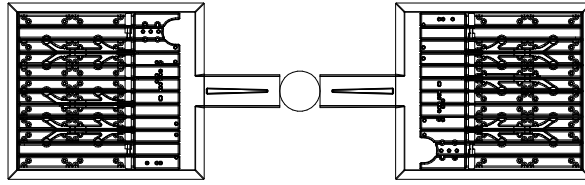
RATIO Series

AREA/SITE LIGHTER

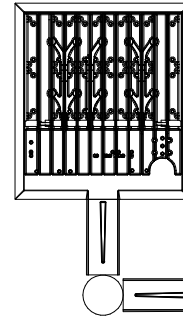
EPA (RAR2)



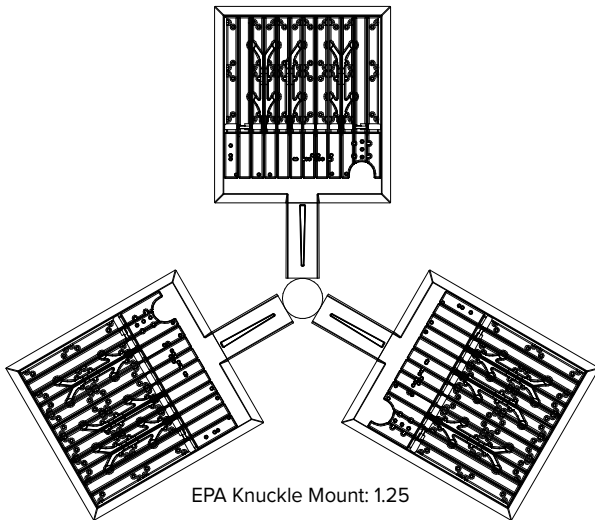
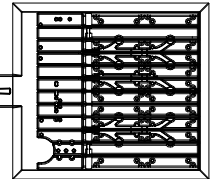
EPA Knuckle Mount: .52
EPA Arm Mount: .55



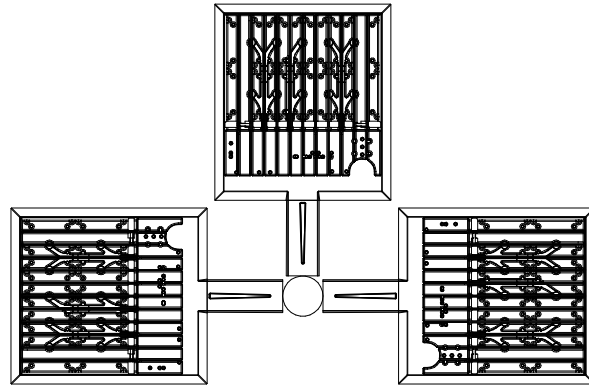
EPA: 1.486



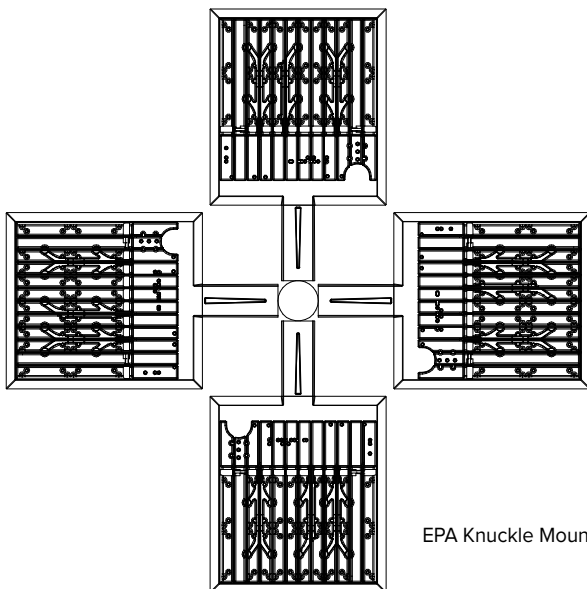
EPA Knuckle Mount: .87



EPA Knuckle Mount: 1.25



EPA Knuckle Mount: 1.41



EPA Knuckle Mount: 1.56

RATIO Series

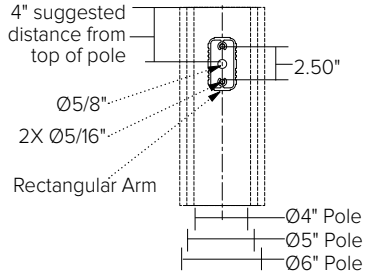
AREA/SITE LIGHTER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ADDITIONAL INFORMATION (CONT'D)

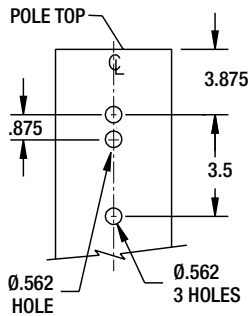
ARM MOUNT (ASQ)

Compatible with Pole drill pattern B3



UNIVERSAL MOUNTING (ASQU)

Compatible with pole drill pattern S2



PROGRAMMED CONTROLS

ADD-AutoDim Timer Based Options

- Light delay options from 1-9 hours after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1-9 hours after the light has been dimmed previously.

EX: ADD-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	1-9 Hours	6
Auto-Dim Brightness	0-9% Brightness	5
Auto-Dim Return	Delay 0-9 Hours	R6

ADT-AutoDim Time of Day Based Option

- Light delay options from 1AM-9PM after the light is turned on to dim the light by 10-100%. To return the luminaire to its original light level there are dim return options from 1AM-9PM after the light has been dimmed previously.

EX: ADT-6-5-R6

ADD Control Options	Configurations Choices	Example Choice Picked
Auto-Dim Options	12-3 AM and 6-11 PM	6
Auto-Dim Brightness	0-9% Brightness	5
Auto-Dim Return	12-6 AM and 9-11P	R6

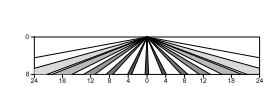
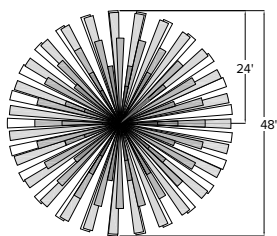
RATIO Series

AREA/SITE LIGHTER

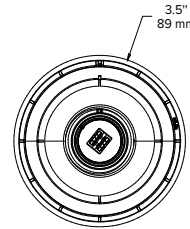
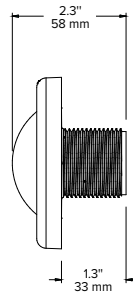
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ADDITIONAL INFORMATION (CONT'D)

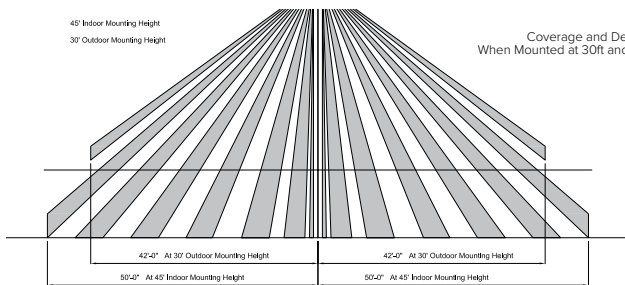
NXSP-14F



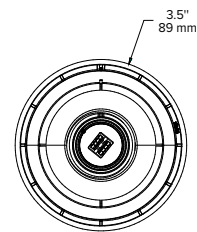
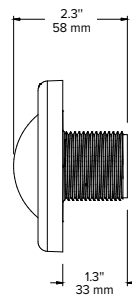
Sensor Lens Coverage and Detection Patterns
When Mounted at 8ft with Low Mount Lens



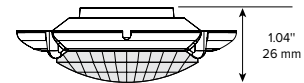
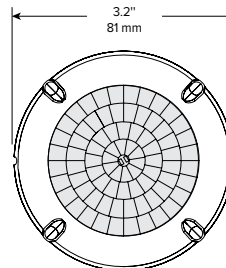
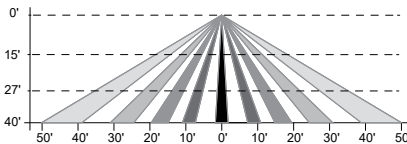
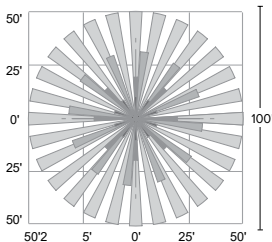
NXSP-30F



Coverage and Detection Patterns
When Mounted at 30ft and 45ft with Standard Lens



SCP-40F



RAR1 EPA

RAR-1	
EPA at 0°	EPA at 30°
.45ft. ² .13m ²	.56ft. ² .17m ²

RAR2 EPA

RAR-2	
EPA at 0°	EPA at 30°
.55ft. ² .17m ²	1.48ft. ² .45m ²

SHIPPING

Catalog Number	G.W(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
RAR1	15 (6.8)	20.75 (52.7)	15.125 (38.4)	6.9375 (17.6)
RAR2	19 (8.6)	25 (63.5)	15.125 (38.4)	6.9375 (17.6)

RATIO Series

AREA/SITE LIGHTER

DATE: _____ LOCATION: _____

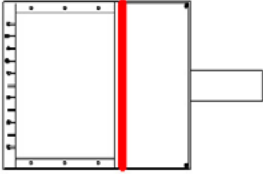
TYPE: _____ PROJECT: _____

CATALOG #: _____

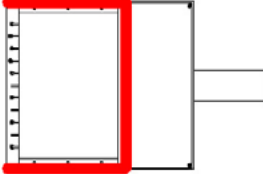
ADDITIONAL INFORMATION (CONT'D)

RATIO HOUSE SIDE SHIELD

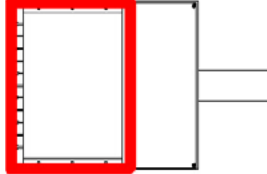
RARx HSS-90-B-xx



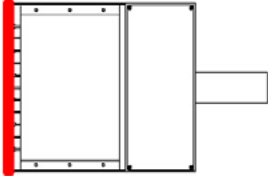
RARx HSS-270-BSS-xx



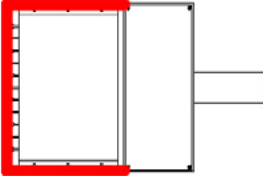
RARx HSS-360-xx



RARx HSS-90-F-xx

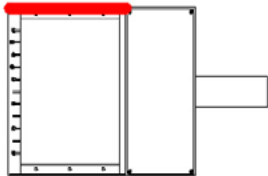


RARx HSS-270-FSS-xx

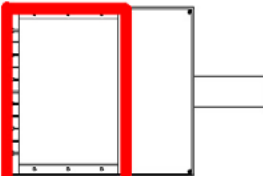


Note: Not to be used with
Occupancy Sensors as the shield
may block the light to the sensor

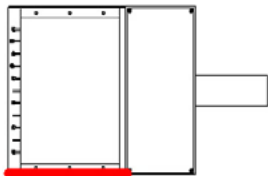
RARx HSS-90-S-xx



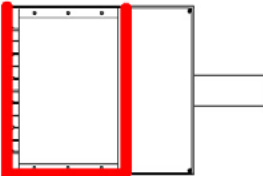
RARx HSS-270-FSB-xx



RARx HSS-90-S-xx



RARx HSS-270-FSB-xx



RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Strike and Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, LightGRID+ and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, LightGRID+ and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W
- Ambient operating temperature -40°C to 40°C
- Driver RoHS and IP66

SERVICE PROGRAM

QS10

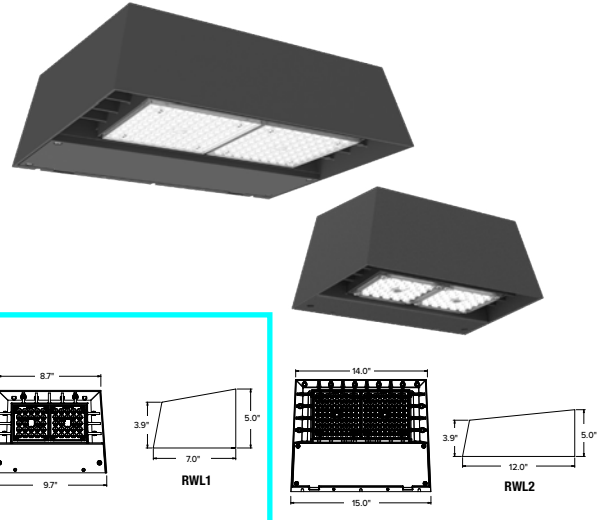
ELECTRICAL (CONTINUED)

- 10kV Surge Protector optional
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options can not be included in one same fixture.
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C. RWL1 battery is 12.5W RWL2 battery is 18W

MICRO STRIKE | **STRIKE** OPTICS



	Weight
RWL1	6.5 lbs / 2.95 kg
RWL2	16.5 lbs / 7.48 kg

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- Certified to UL 1598 and CSA 22.2#250.0-24 for wet locations
- IP65 rated housing
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to <http://www.designlights.org> for the most up-to-date list.
- Emergency battery backup options are California Energy Commission (CEC) Title 20 Compliant
- Meets IDA requirements using 3K CCT configuration at 0 degrees or tilt

WARRANTY

- 5 year limited warranty



RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

Gray Shading = Service Program Limit of 15 luminaires **QS10**

ORDERING GUIDE

Example: RWL1-48L-10-3K7-2-UNV-BLS-E

CATALOG #

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Micro Strike Optics	48L-10 1,000 Lumens ^{5,6}	3K7 3000K, 70 CRI	2 IES TYPE II	UNV 120-277V	BLT Black Matte Textured
	48L-15 2,000 Lumens ^{5,6}	4K7 4000K, 70 CRI	3 IES TYPE III	120 120V	BLS Black Gloss Smooth
	48L-20 2,500 Lumens ^{5,6}	5K7 5000K, 70 CRI	4F IES TYPE IV Forward	208 208V	DBT Dark Bronze Matte Textured
	48L-25 3,500 Lumens	3K8 3000K, 80 CRI	4W IES TYPE IV Wide	240 240V	DBS Dark Bronze Gloss Smooth
	48L-35 4,500 Lumens	4K8 4000K, 80 CRI		277 277V	GTT Graphite Matte Textured
	48L-45 5,500 Lumens ^{5,6}	5K8 5000K, 80 CRI		347 347V	LGS Light Grey Gloss Smooth
RWL2 Micro Strike Optics	160L-45 6,500 Lumens			480 480V	LGT Light Grey Matte Textured
	160L-50 7,500 Lumens				PSS Platinum Silver Smooth
	160L-65 9,500 Lumens				WHT White Matte Textured
	160L-80 11,000 Lumens				WHS White Gloss Smooth
	160L-95 13,000 Lumens				VGT Verde Green Textured
	160L-115 15,000 Lumens				
	160L-135 17,500 Lumens				
	160L-155 19,500 Lumens				
RWL2 Strike Optics	36L-39 5,500 Lumens, Strike				
	36L-55 7,500 Lumens, Strike				
	36L-85 10,000 Lumens, Strike				
	36L-105 12,500 Lumens, Strike				
	36L-120 14,000 Lumens, Strike				

Control Options Network	Distribution
NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ^{2,7}	F Fusing ⁴
NXWS16F NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{2,7}	E Emergency Battery Backup ^{3,8,9}
NXWS40F NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{2,7}	EH Emergency Battery w/ Heater Option ^{3,8,9}
WIR LightGRID+ In-Fixture Module ^{2,9}	2DR Dual Driver ^{3,9,10}
Stand Alone Sensors	2PF Dual Power Feed ^{3,9,10}
SCP-8F Remote control programmable line voltage sensor ^{1,2,4,5,6,8}	PC Button Photocontrol ^{5,6,11}
SCP-20F Remote control programmable line voltage sensor ^{1,2,4,5,6,8}	SP 10kA Surge Protector ¹¹
BTS-14F Bluetooth® Programmable, PIR Occupancy/Daylight Sensor ^{1,2,5,7,8}	
BTS-40F Bluetooth® Programmable, PIR Occupancy/Daylight Sensor ^{1,2,5,7,8}	
BTSO-12F Bluetooth® Programmable, PIR Occupancy/Daylight Sensor, up to 12' mounting height ^{1,2,5,7,8}	
Control Options	
7PR_ 7-Pin Receptacle ⁸	

- Notes:
- Not available in RWL1
 - Cannot be combined with E, EH, 2DR, 2PF due to space constraints
 - Cannot be combined with Controls due to space constraints
 - Must specify voltage
 - Not available in 347V
 - Not available in 480V
 - Available in 480V in 95W, 115W, 155W only
 - Cannot be combined with 2DR or 2PF
 - Located in integral backbox which will be automatically added to the fixture if selected
 - Not available in RWL1-48L in 10W, 15W, or 20W
 - SP and PC cannot be combined due to space constraints
 - Based on space limitations, some options may not be combined. Consult Factory.

CONTROLS

Control Options

Standalone

SCPREMOTE Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

Catalog Number	Description
WP-BB-XXX	Accessory for conduit entry ¹

- Notes:
- replace "xxx" with color option

RATIO Wall

RWL1/RWL2 LED WALLPACK

CONTROLS FUNCTIONALITY

OUTDOOR LIGHTING CONTROLS OPTIONS

LIGHTGRID⁺



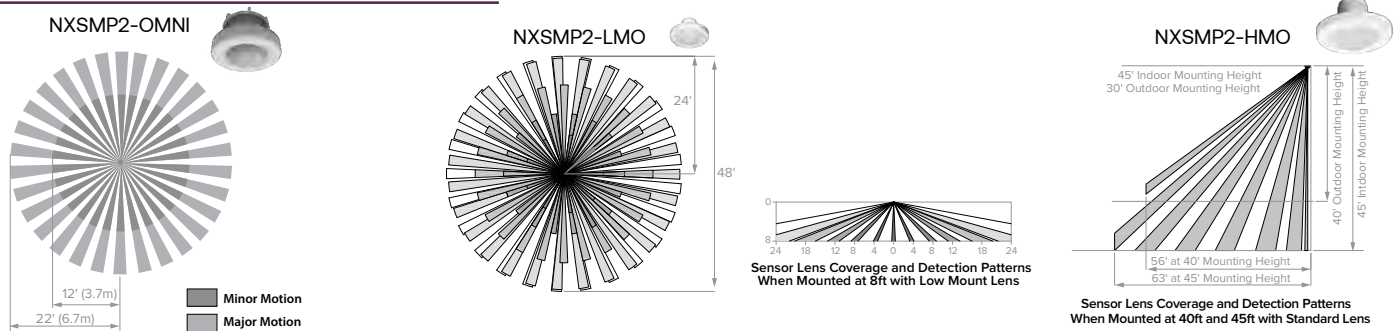
Control Option Ordering Logic & Description			Control Option Functionality									Control Option Components	
			Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height		
NX Wireless	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	✓	✓	✓	-	-	✓	✓	✓	-		NXRM2-H
	NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming	✓	✓	✓	✓	✓	✓	✓	✓	16ft		NXSMP2-LMO
	NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming	✓	✓	✓	✓	✓	✓	✓	✓	40ft		NXSMP2-HMO
LightGRID+	WIR	LightGRID+ In-Fixture Module	✓	-	✓	-	-	✓	✓	Gateway	-		WIR
Independent	BTSO-12F	Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens	-	-	-	✓	✓	✓	✓	✓	12ft		BTSMP-OMNI-O
	BTS-14F	Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens	-	-	-	✓	✓	✓	✓	✓	14ft		BTSMP-LMO
	BTS-40F	Bluetooth® Programmable, BTSMP-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens	-	-	-	✓	✓	✓	✓	✓	40ft		BTSMP-HMO

DEFAULT SETTINGS

NX Wireless	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7
	Occupancy Sensor Timeout	15 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	0%
	Daylight Sensor	Disabled
	Bluetooth	Enabled
	2.4GHz Wireless Mesh	On
	"Passcode Factory Passcode: HubbN3T!"	Enabled

Stand Alone	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7
	Occupancy Sensor Timeout	8 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	50%
	Daylight Sensor	Disabled

NX WIRELESS COVERAGE PATTERNS



NX LIGHTING CONTROLS FREE APP

CONTROLS TECH SUPPORT 800-888-8006 (7:00 AM - 7:00 PM)



The NX Lighting Controls App is free to use mobile application for programming both NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enable luminaires and program NX system settings.

Apple App: <https://apps.apple.com/us/app/nx-lighting-controls/id962112904>

Google Play: https://play.google.com/store/apps/details?id=io.cordova.NXBTR&hl=en_US&gl=US



Apple App



Google Play

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE: LOCATION:

TYPE: PROJECT:

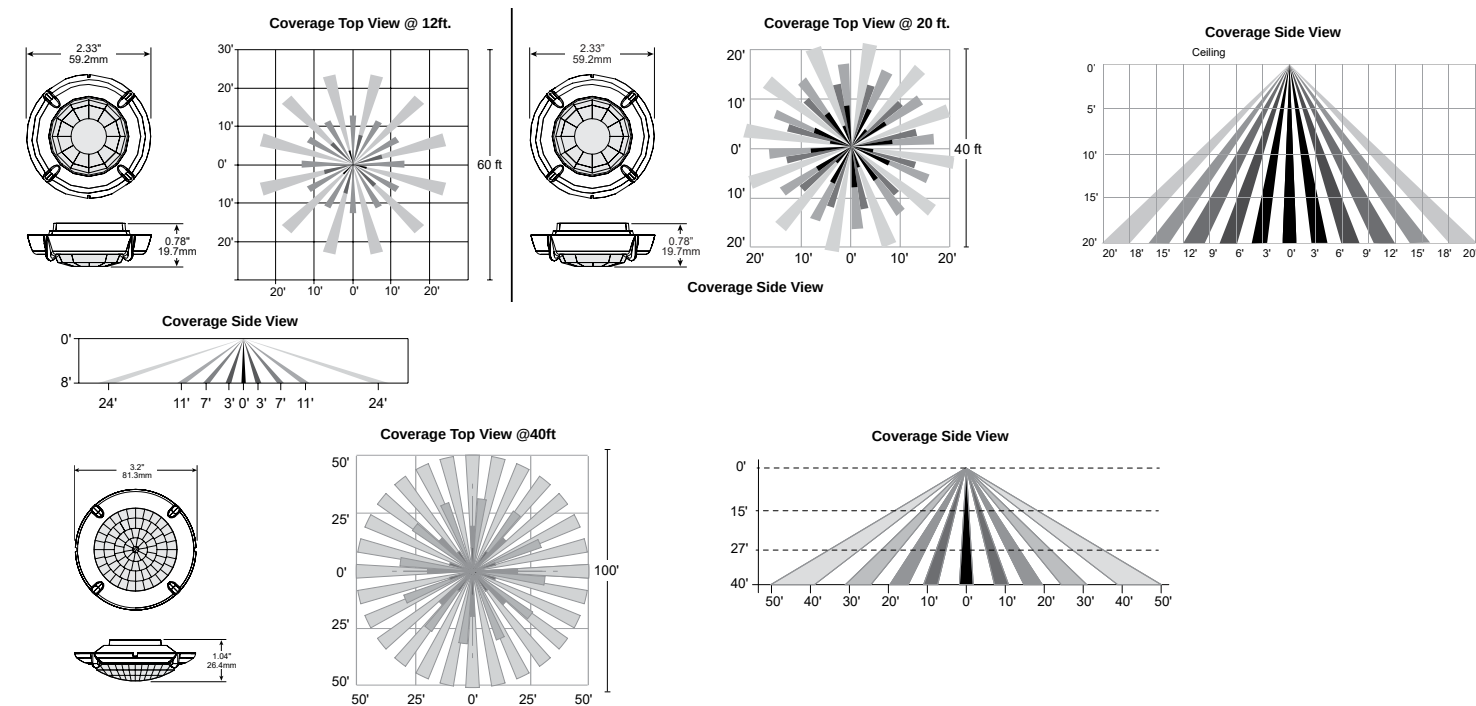
CATALOG #:

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

Control Option Ordering Logic & Description		Control Option Functionality									Control Option Components	
		Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height		
Independent	SCP_F	Sensor Control Programmable, sensor range, reference product specification for height selections	-	-	-	✓	✓	✓	✓	-	8ft or 40ft	SCP_F
	7PR	7-Pin Receptacle	-	-	Paired with external control	-	Paired with external control	-	Paired with external control	-	-	7PR

COVERAGE PATTERNS FOR SCP_F



RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PERFORMANCE DATA: MICROSTRIKE

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RWL1	10	10.1	3	1362	135	0	0	1	1355	134	0	0	1	1303	129	0	0	1
			4W	1343	133	0	0	1	1336	132	0	0	1	1285	127	0	0	1
	15	14.5	3	1972	136	1	0	1	1962	135	1	0	1	1887	130	1	0	1
			4W	1945	134	0	0	1	1935	133	0	0	1	1861	128	0	0	1
	20	19.9	3	2722	137	1	0	1	2709	136	1	0	1	2605	131	1	0	1
			4W	2685	135	1	0	1	2672	134	1	0	1	2569	129	1	0	1
	25	28.0	3	3749	134	1	0	1	3732	133	1	0	1	3588	128	1	0	1
			4W	3698	132	1	0	1	3680	131	1	0	1	3538	126	1	0	1
	35	36.9	3	4751	129	1	0	2	4728	128	1	0	2	4546	123	1	0	1
			4W	4685	127	1	0	2	4663	126	1	0	2	4483	121	1	0	2
	45	46.5	3	5812	125	1	0	2	5784	124	1	0	2	5562	120	1	0	2
			4W	5731	123	1	0	2	5704	123	1	0	2	5485	118	1	0	2
RWL2	45	46.1	2	6701	145	1	0	2	6668	145	1	0	2	6412	139	1	0	2
			3	6812	148	1	0	2	6780	147	1	0	2	6519	141	1	0	2
			4W	6678	145	1	0	2	6646	144	1	0	2	6390	139	1	0	2
	50	54.0	2	7747	143	1	0	2	7710	143	1	0	2	7413	137	1	0	2
			3	7876	146	1	0	2	7838	145	1	0	2	7537	140	1	0	2
			4W	7720	143	1	0	2	7683	142	1	0	2	7388	137	1	0	2
	65	67.2	2	9539	142	1	0	2	9494	141	1	0	2	9129	136	1	0	2
			3	9699	144	2	0	2	9652	144	2	0	2	9281	138	2	0	2
			4W	9507	141	2	0	2	9461	141	2	0	2	9097	135	2	0	2
	80	80.8	2	11228	139	2	0	2	11174	138	2	0	2	10745	133	2	0	2
			3	11416	141	2	0	2	11361	141	2	0	2	10924	135	2	0	2
			4W	11190	138	2	0	2	11136	138	2	0	2	10708	133	2	0	2
	95	93.2	2	13148	141	2	0	2	13085	140	2	0	2	12582	135	2	0	2
			3	13368	143	2	0	2	13304	143	2	0	2	12792	137	2	0	2
			4W	13103	141	2	0	2	13040	140	2	0	2	12539	135	2	0	2
	115	109.8	2	15102	138	2	0	3	15030	137	2	0	3	14452	132	2	0	3
			3	15354	140	2	0	3	15281	139	2	0	3	14693	134	2	0	3
			4W	15050	137	2	0	3	14978	136	2	0	3	14402	131	2	0	3
	135	137.1	2	17533	128	2	0	3	17449	127	2	0	3	16778	122	2	0	3
			3	17826	130	2	0	3	17740	129	2	0	3	17058	124	2	0	3
			4W	17473	127	2	0	3	17389	127	2	0	3	16720	122	2	0	3
	155	156.8	2	19495	124	2	0	3	19402	124	2	0	3	18656	119	2	0	3
			3	19821	126	2	0	3	19726	126	2	0	3	18967	121	2	0	3
			4W	19542	125	2	0	3	19448	124	2	0	3	18700	119	2	0	3

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PERFORMANCE DATA: STRIKE

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RWL2	39	45.1	2	5618	125	1	0	1	5723	127	1	0	1	5251	116	1	0	1
			3	5644	125	1	0	2	5749	127	1	0	2	5274	117	1	0	2
			4F	5662	126	1	0	2	5768	128	1	0	2	5291	117	1	0	2
			4W	5652	125	1	0	2	5757	128	1	0	2	5282	117	1	0	2
	55	63.1	2	7458	118	1	0	2	7659	121	1	0	2	6970	110	1	0	2
			3	7552	120	1	0	2	7694	122	1	0	2	7058	112	1	0	2
			4F	7577	120	1	0	2	7718	122	1	0	2	7081	112	1	0	2
			4W	7564	120	1	0	3	7705	122	1	0	3	7069	112	1	0	3
	85	88.0	2	10121	115	2	0	2	10311	117	2	0	2	9459	107	2	0	2
			3	10167	116	1	0	3	10357	118	1	0	3	9502	108	1	0	3
			4F	10200	116	1	0	2	10390	118	1	0	2	9532	108	1	0	2
			4W	10182	116	1	0	3	10372	118	1	0	3	9516	108	1	0	3
	105	111.7	2	12022	108	2	0	2	12247	110	2	0	2	11235	101	2	0	2
			3	12075	108	2	0	3	12301	110	2	0	3	11285	101	2	0	3
			4F	12115	108	1	0	3	12341	110	1	0	3	11322	101	1	0	2
			4W	12093	108	2	0	3	12319	110	2	0	3	11302	101	1	0	3
	120	126.2	2	12889	102	2	0	2	13130	104	2	0	2	12046	95	2	0	2
			3	12947	103	2	0	3	13189	105	2	0	3	12100	96	2	0	3
			4F	12989	103	1	0	3	13232	105	1	0	3	12139	96	1	0	3
			4W	12966	103	2	0	3	13208	105	2	0	3	12118	96	1	0	3

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.97

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS		
	0	25,000	TM-21-22 60,000
25°C / 77°F	1.00	0.91	0.83
40°C / 104°F	0.99	0.90	0.82

Lumen maintenance values calculated per TM-21 using six times the LM-80 test time for the LED and in-situ thermal testing of the luminaire.

MULTIPLIER

Micro Strike Lumen Multiplier			
CCT	70 CRI	80 CRI	90 CRI
2700K	–	0.841	–
3000K	0.977	0.861	0.647
3500K	–	0.900	–
4000K	1	0.926	0.699
5000K	1	0.937	0.791

Strike Lumen Multiplier			
CCT	70CRI	80CRI	90CRI
2700K	0.900	0.810	0.62
3000K	0.933	0.853	0.659
3500K	0.959	0.894	0.711
4000K	1.000	0.900	0.732
5000K	1.000	0.900	0.732
Monochromatic Amber Multiplier			
Amber	See Amber Spec Sheet		

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

ELECTRICAL DATA: MICROSTRIKE

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL1	10	120	0.08	10.1
		208	0.05	
		240	0.04	
		277	0.04	
		347	0.03	
		480	0.02	
	15	120	0.12	14.5
		208	0.07	
		240	0.06	
		277	0.05	
		347	0.04	
		480	0.03	
	20	120	0.17	19.9
		208	0.10	
		240	0.08	
		277	0.07	
		347	0.06	
		480	0.04	
	25	120	0.23	28.0
		208	0.13	
		240	0.12	
		277	0.10	
		347	0.08	
		480	0.06	
	35	120	0.31	36.9
		208	0.18	
		240	0.15	
		277	0.13	
		347	0.11	
		480	0.08	
	45	120	0.39	46.5
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	

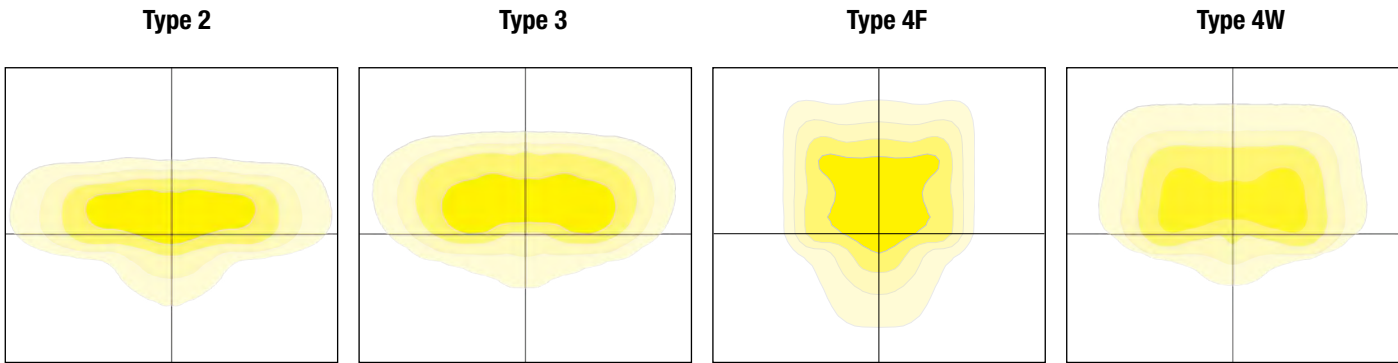
# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL2	45	120	0.38	46.1
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	
	50	120	0.45	54.0
		208	0.26	
		240	0.23	
		277	0.19	
		347	0.16	
		480	0.11	
	65	120	0.56	67.2
		208	0.32	
		240	0.28	
		277	0.24	
		347	0.19	
		480	0.14	
	80	120	0.67	80.8
		208	0.39	
		240	0.34	
		277	0.29	
		347	0.23	
		480	0.17	
	95	120	0.78	93.2
		208	0.45	
		240	0.39	
		277	0.34	
		347	0.27	
		480	0.19	
	115	120	0.92	109.8
		208	0.53	
		240	0.46	
		277	0.40	
		347	0.32	
		480	0.23	
	135	120	1.14	137.1
		208	0.66	
		240	0.57	
		277	0.49	
		347	0.40	
		480	0.29	
	155	120	1.31	156.8
		208	0.75	
		240	0.65	
		277	0.57	
		347	0.45	
		480	0.33	

ELECTRICAL DATA: STRIKE

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL2	39	120	0.38	45.1
		208	0.22	
		240	0.19	
		277	0.16	
		347	0.13	
		480	0.09	
	55	120	0.53	63.1
		208	0.30	
		240	0.26	
		277	0.23	
		347	0.18	
		480	0.13	
	85	120	0.73	88.0
		208	0.42	
		240	0.37	
		277	0.32	
		347	0.25	
		480	0.18	
	105	120	0.93	111.7
		208	0.54	
		240	0.47	
		277	0.40	
		347	0.32	
		480	0.23	
	120	120	1.05	126.2
		208	0.61	
		240	0.53	
		277	0.46	
		347	0.36	
		480	0.26	

PHOTOMETRY

Mounting Height: 30ft



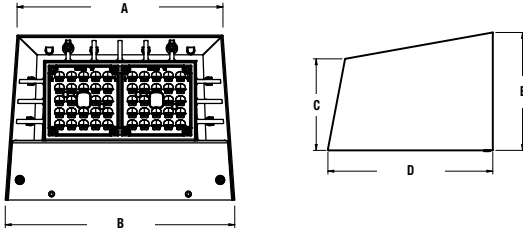
RATIO Wall

RWL1/RWL2 LED WALLPACK

DIMENSIONS

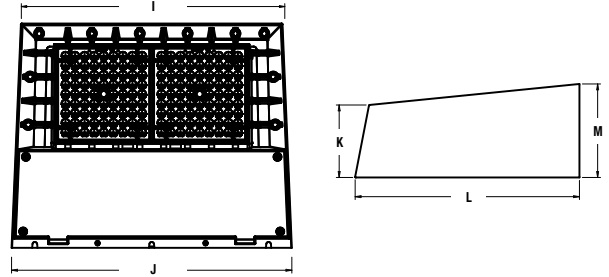
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

RWL1



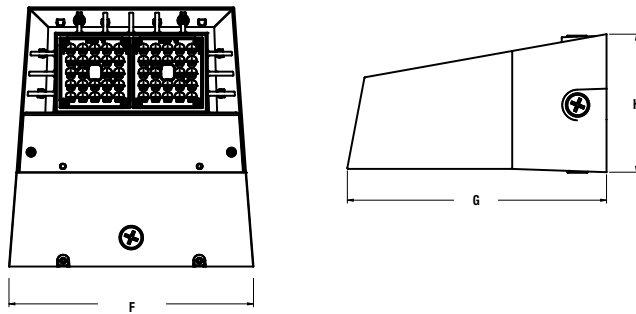
A	B	C	D	E	Weight
8.7"	9.7"	3.9"	7.0"	5.0"	6.5 lbs (2.95 kgs)
221mm	246mm	99mm	178mm	127mm	

RWL2



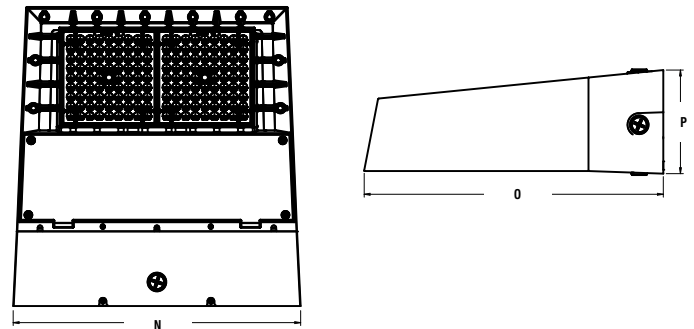
I	J	K	L	M	Weight
14.0"	15.0"	3.9"	12.0"	5.0"	16.5 lbs (7.48 kgs)
356mm	381mm	99mm	305mm	127mm	

**RWL1 with
Integral Back Box**



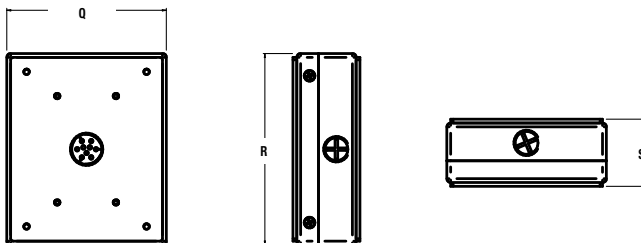
F	G	H
10.4"	11.0"	5.9"
264mm	279mm	150mm

**RWL2 with
Integral Back Box**



N	O	P
15.4"	16.0"	5.5"
391mm	406mm	140mm

Back Box Accessory



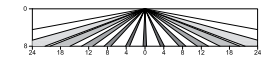
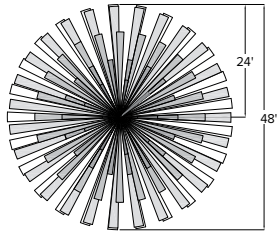
Q	R	S
4.9"	5.9"	2.1"
124mm	150mm	53mm

RATIO Wall

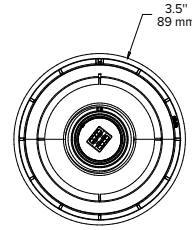
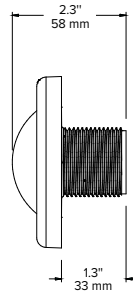
RWL1/RWL2 LED WALLPACK

ADDITIONAL INFORMATION

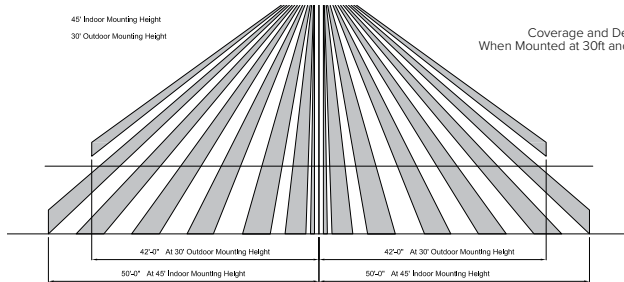
NXSP-14F



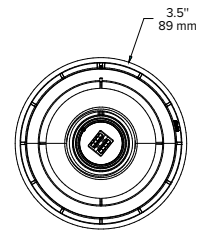
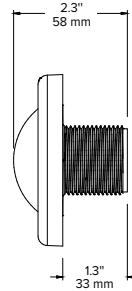
Sensor Lens Coverage and Detection Patterns
When Mounted at 8ft with Low Mount Lens



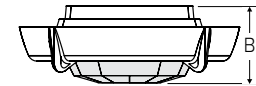
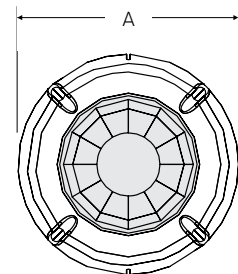
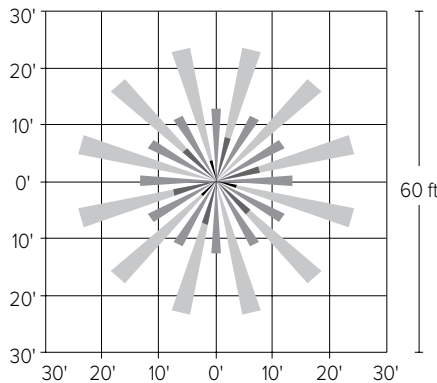
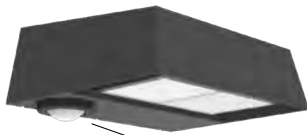
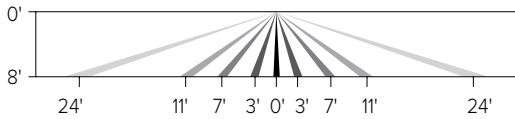
NXSP-40F



Coverage and Detection Patterns
When Mounted at 30ft and 45ft with Standard Lens

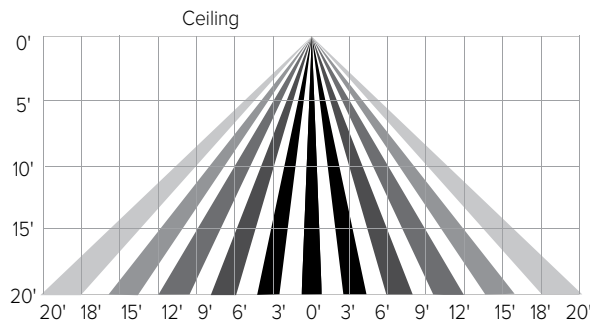


SCP-8F

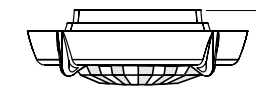
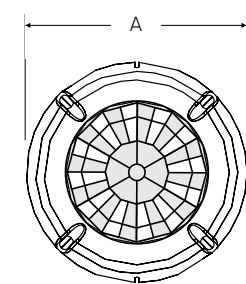
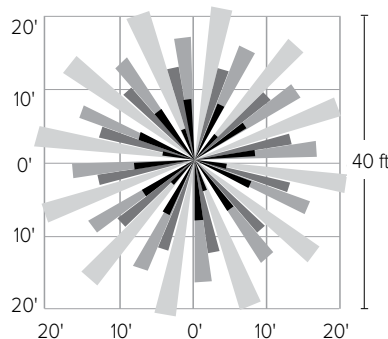


A	B
2.3" (59mm)	.8" (20mm)

SCP-20F

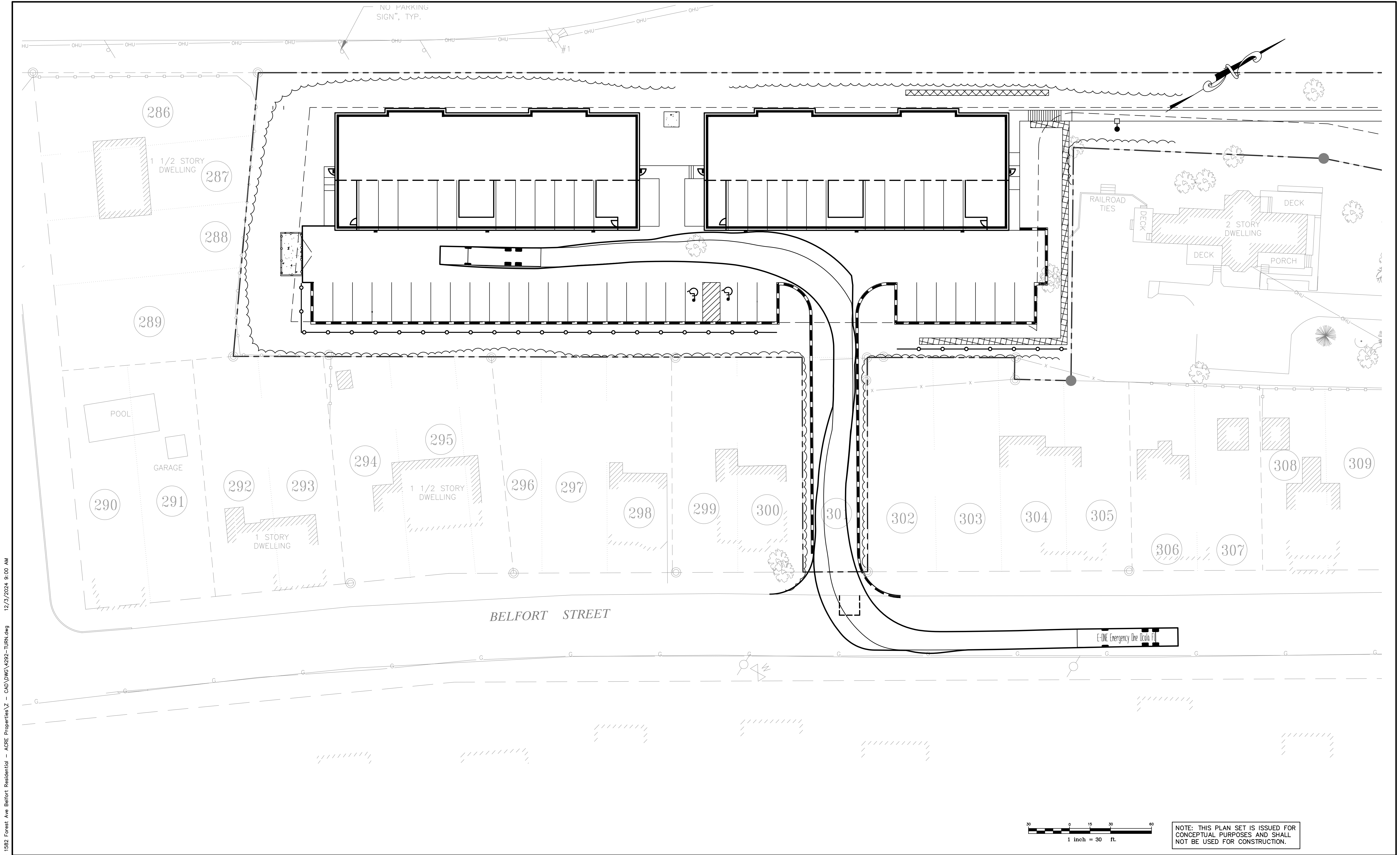


Ceiling



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

ATTACHMENT 12
FIRE TRUCK TURNING FIGURE



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Design: AJK	Draft: --	Date: NOV 2024
Checked: DER	Scale: 1"=30'	Job No.: 4292
File Name: 4292-TURN.dwg		
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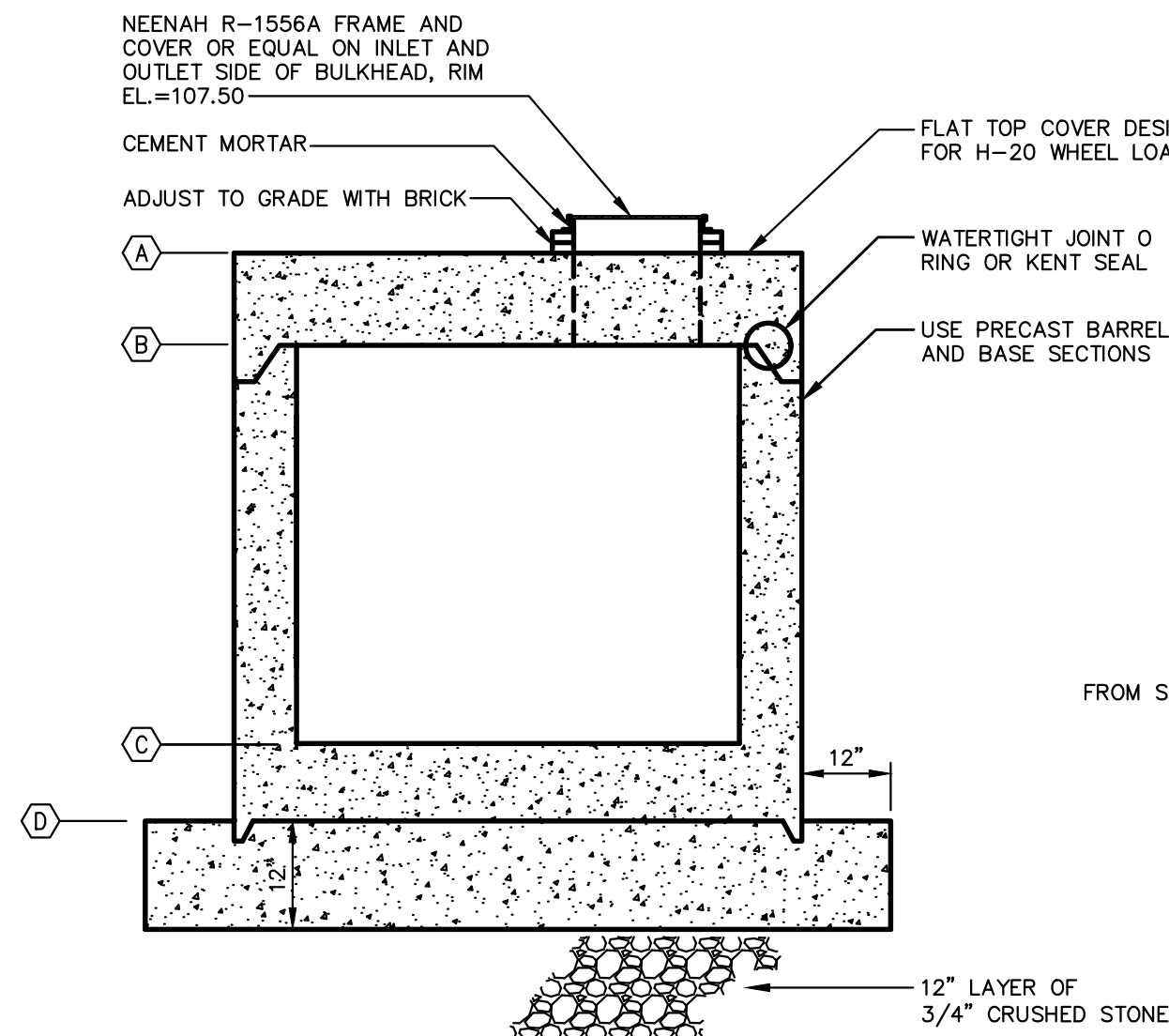


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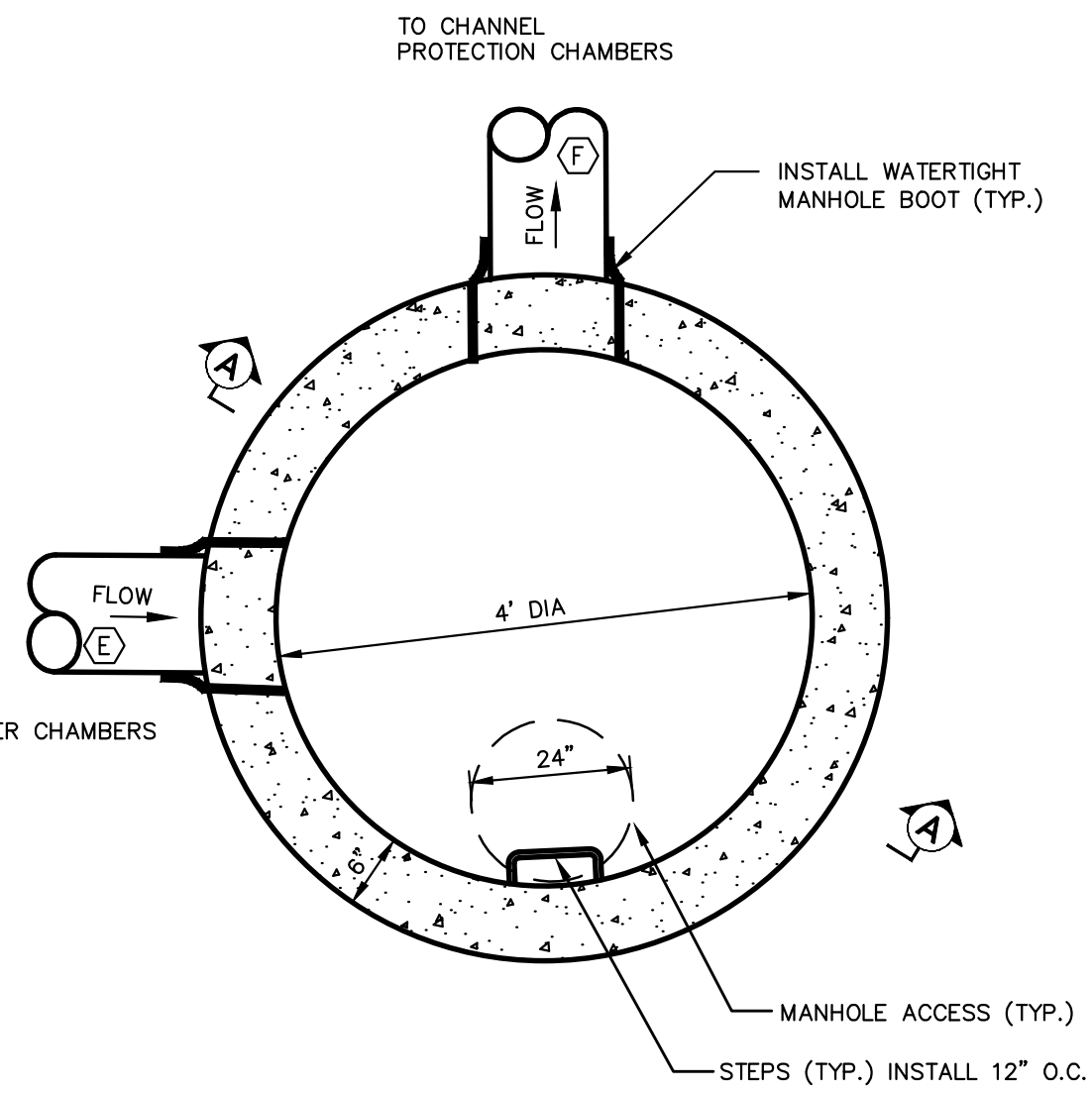
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Project:	1582 Forest Ave Residential Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
T1

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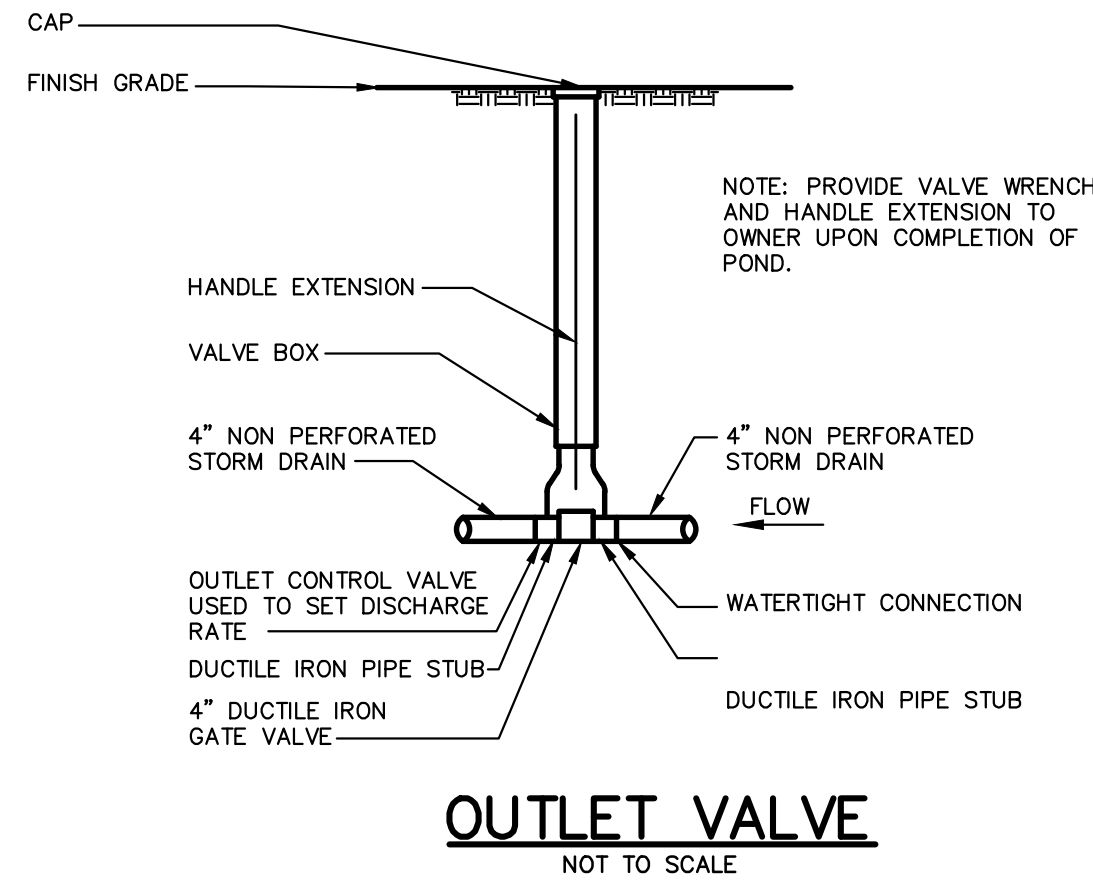


SECTION A-A
OUTLET CONTROL STRUCTURE 1 (OCS1)
NOT TO SCALE

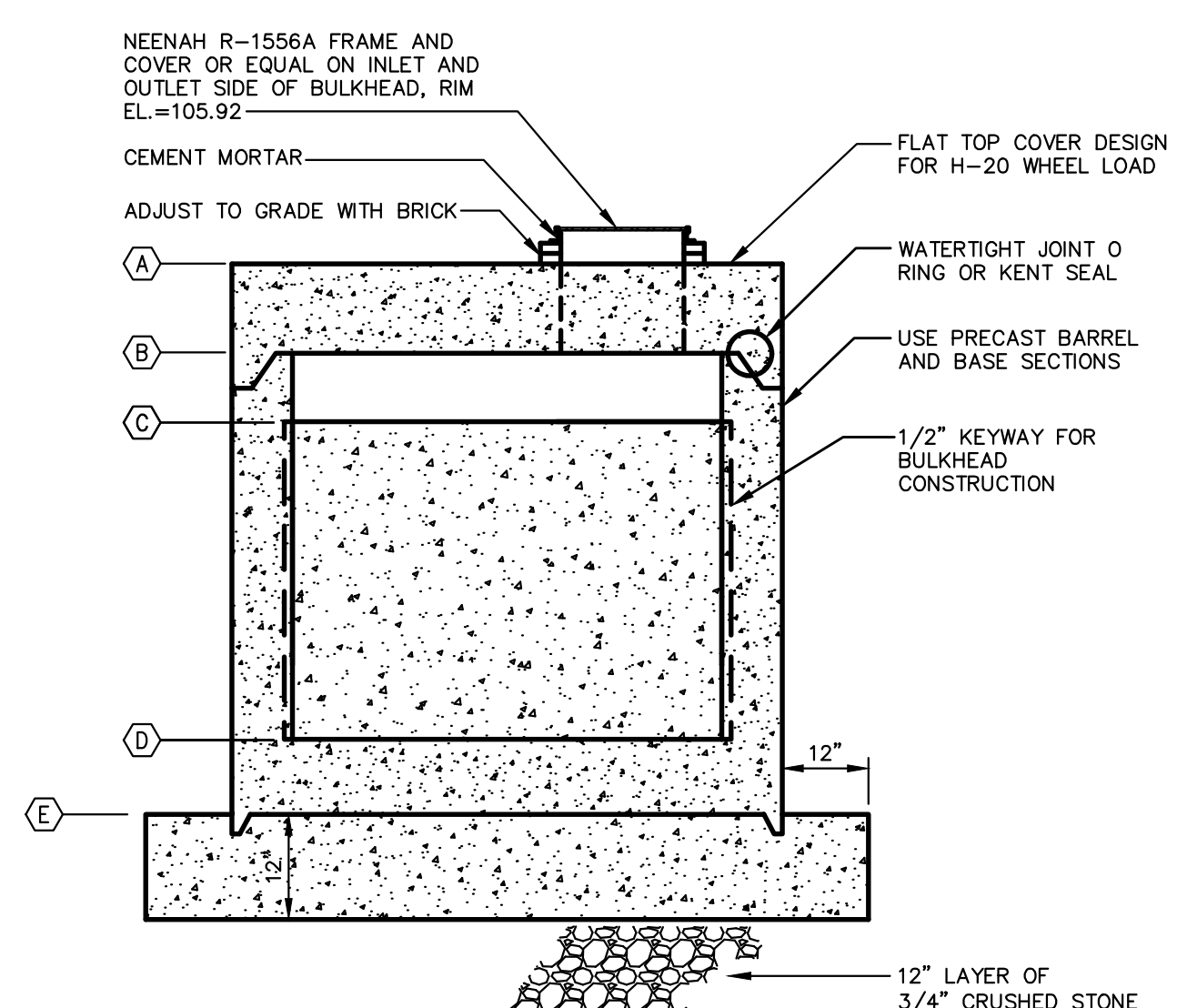


PLAN VIEW
6' OUTLET CONTROL STRUCTURE (OCS1)
NOT TO SCALE

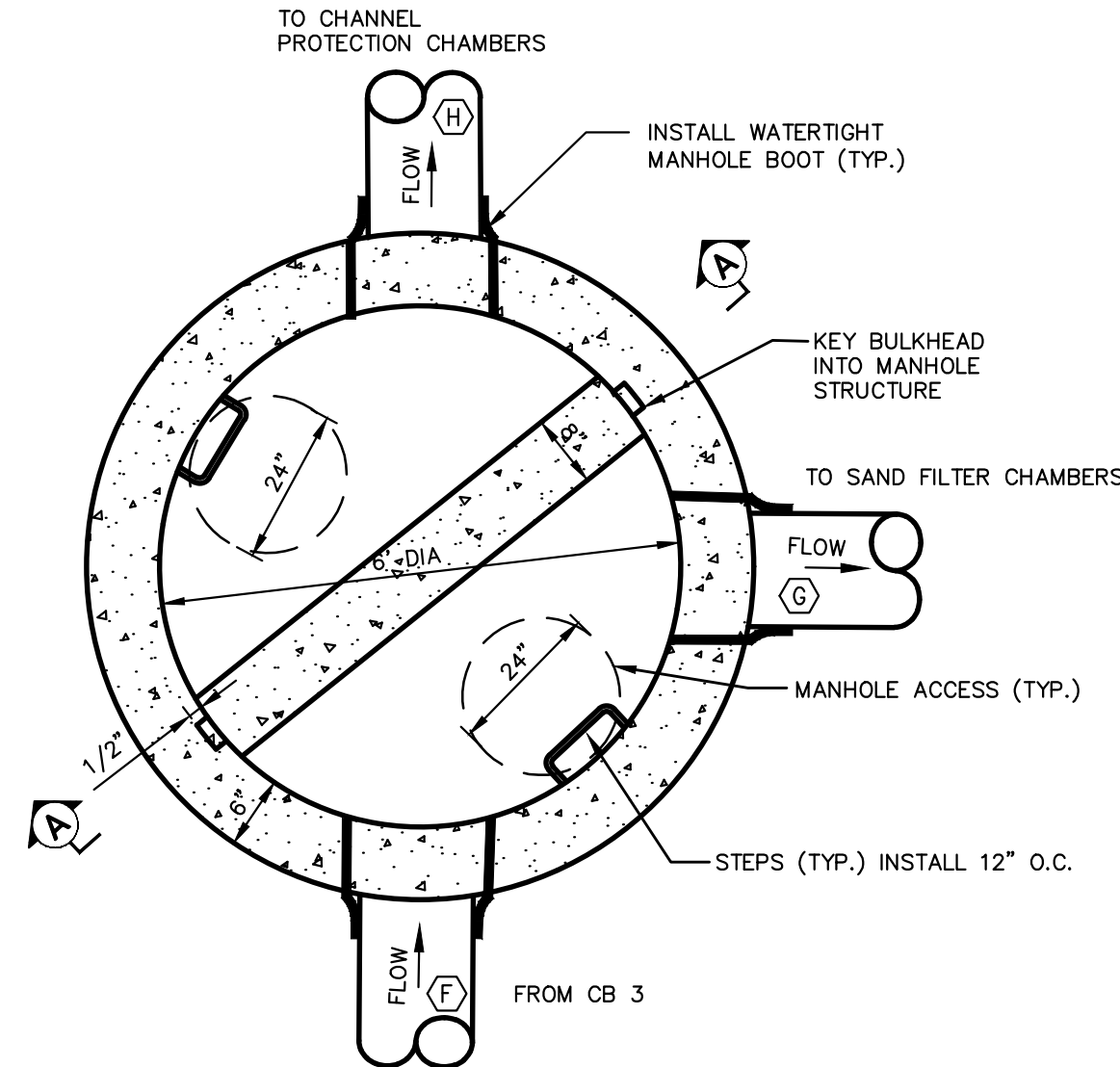
SCHEDULE C		
ITEM DESCRIPTION	ELEVATION	
A TOP OF STRUCTURE	107.00	
B UNDERSIDE TOP SLAB	106.33	
C MANHOLE INVERT	102.17	
D BOTTOM OF STRUCTURE	101.17	
E PIPE DIAMETER	12"	
F INVERT IN	103.17	
G PIPE DIAMETER	12"	
H INVERT OUT	104.07	



OUTLET VALVE
NOT TO SCALE

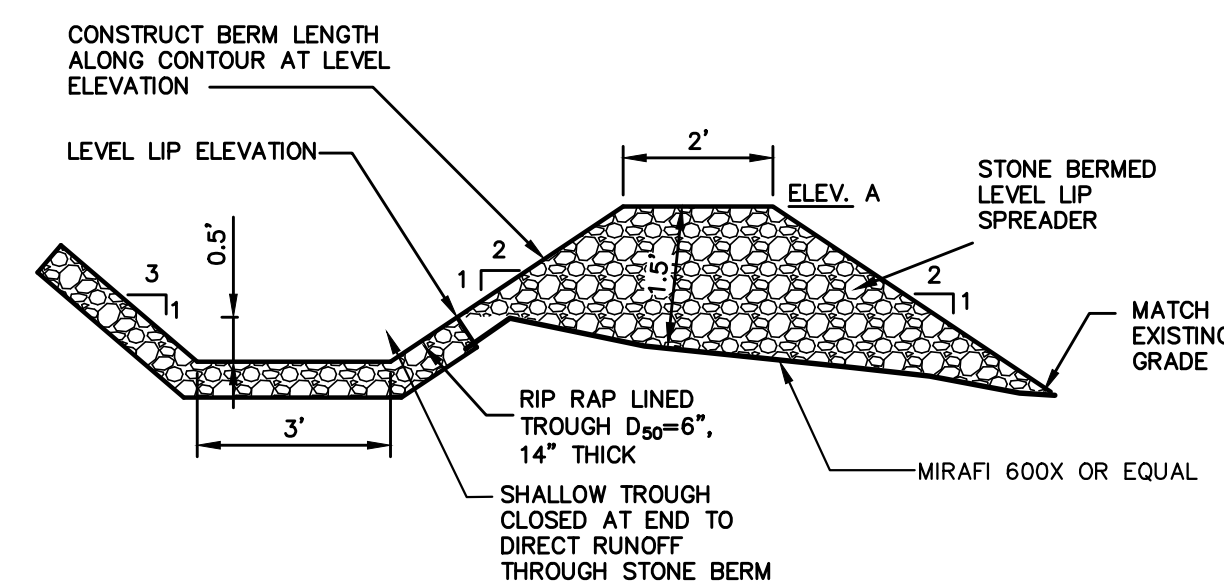


SECTION A-A
OUTLET CONTROL STRUCTURE 2 (OCS2)
NOT TO SCALE



PLAN VIEW
6' OUTLET CONTROL STRUCTURE (OCS2)
NOT TO SCALE

SCHEDULE C		
ITEM DESCRIPTION	ELEVATION	
A TOP OF STRUCTURE	105.42	
B UNDERSIDE TOP SLAB	104.75	
C TOP CONCRETE BULKHEAD	104.07	
D MANHOLE INVERT	100.17	
E BOTTOM OF STRUCTURE	99.50	
F PIPE DIAMETER	12"	
G INVERT IN	103.17	
H PIPE DIAMETER	12"	
I INVERT OUT	103.17	

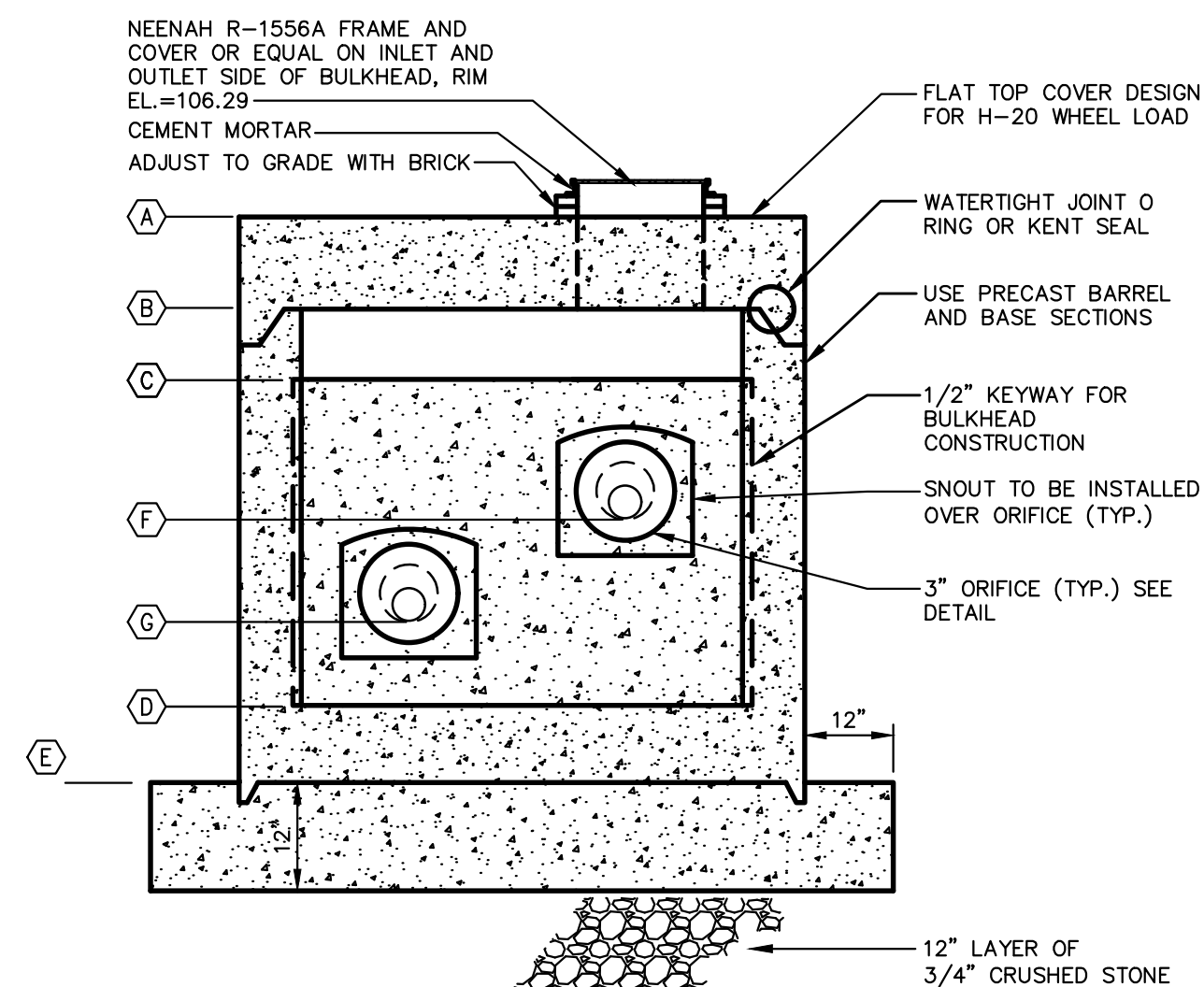


STONE BERM LEVEL LIP SPREADER
NOT TO SCALE

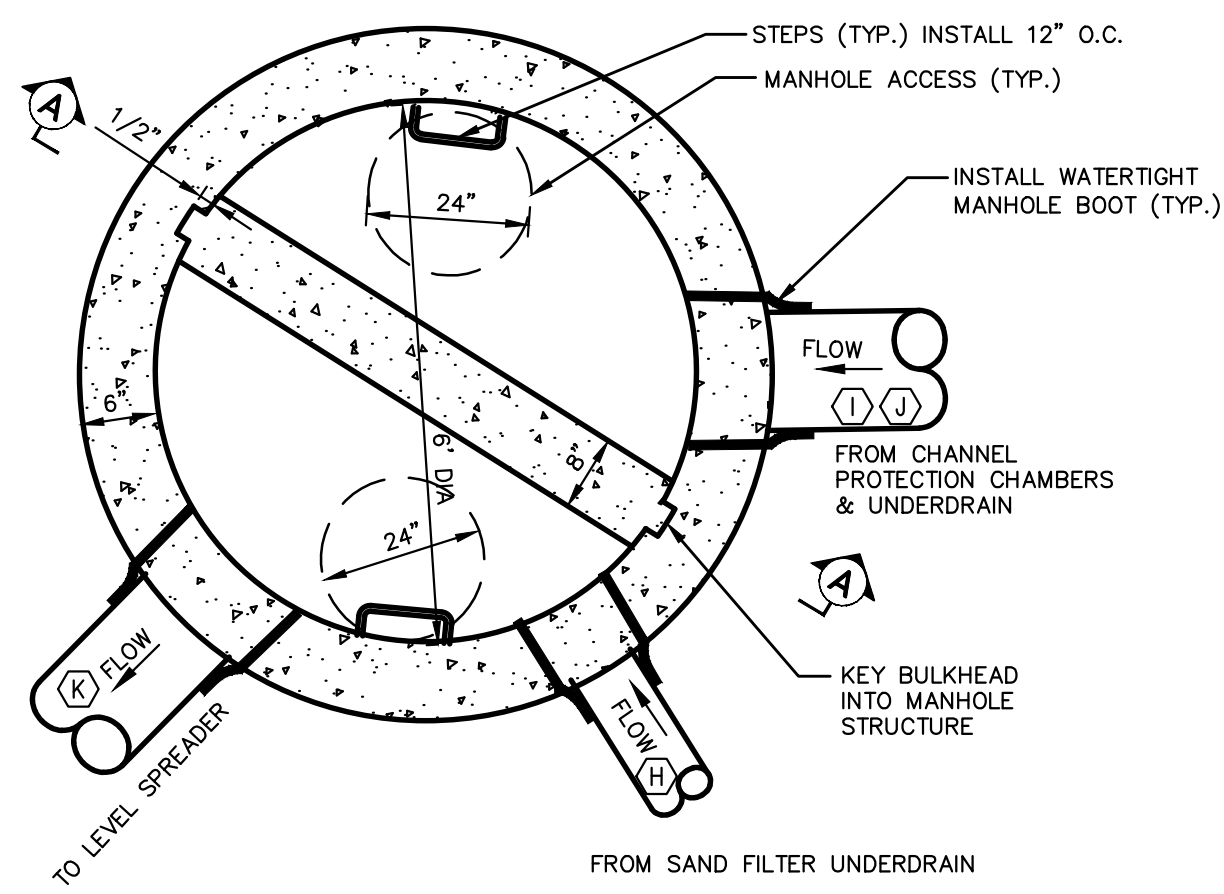
BERM STONE SIZE		
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING	
12 IN	100	
6 IN	84-100	
3 IN	68-83	
1 IN	42-55	
NO. 4	8-12	

LEVEL LIP SPREADER SCHEDULE		
LEVEL LIP	ELEVATION A	LENGTH
1	101.50	15'

NOTE: PRIOR TO CONSTRUCTION OF ANY ONSITE DRAINAGE FEATURES, THE CONTRACTOR SHALL STAKE OUT THE LEVEL LIP SPREADERS FOR REVIEW BY GORRILL-PALMER. THE CONTRACTOR SHALL NOTIFY GORRILL-PALMER WHEN STAKE OUT IS COMPLETE, AND PROVIDE GROUND SURVEYED ELEVATIONS OF THE LEVEL LIP SPREADER LOCATION, GORRILL-PALMER WILL CONDUCT A SITE WALK WITHIN 48 HOURS TO CONFIRM LOCATION AND ORIENTATION TO VERIFY DESIGN INTENT.



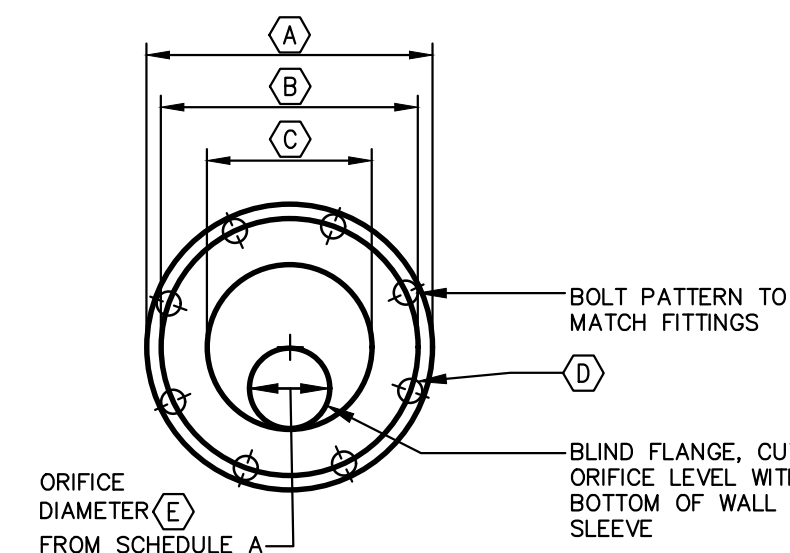
SECTION A-A
OUTLET CONTROL STRUCTURE 3 (OCS3)
NOT TO SCALE



PLAN VIEW
6' OUTLET CONTROL STRUCTURE (OCS3)
NOT TO SCALE

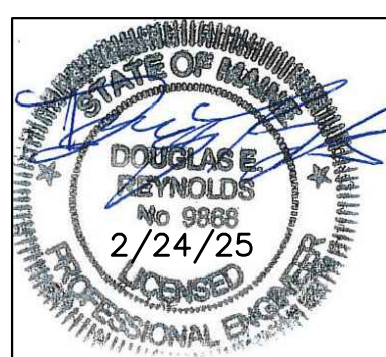
SCHEDULE C		
ITEM DESCRIPTION	ELEVATION	
A TOP OF STRUCTURE	105.70	
B UNDERSIDE TOP SLAB	105.04	
C TOP CONCRETE BULKHEAD	104.30	
D MANHOLE INVERT	99.65	
E BOTTOM OF STRUCTURE	98.98	
F ORIFICE DIAMETER	3"	
G ORIFICE INVERT	102.30	
H ORIFICE DIAMETER	3"	
I ORIFICE INVERT	101.70	
J PIPE DIAMETER	4"	
K INVERT IN	100.15	
L PIPE DIAMETER	12"	
M INVERT IN	103.17	
N PIPE DIAMETER	4"	
O INVERT IN	101.90	
P PIPE DIAMETER	12"	
Q INVERT OUT	100.15	

SCHEDULE B ORIFICE		
ITEM DESCRIPTION	DIMENSION / ELEVATION	
A FLANGE O.D.	13.5"	
B BOLT CIRCLE	11.75"	
C NOMINAL PIPE DIAMETER	8"	
D BOLT HOLE DIAMETER	0.875"	
E ECCENTRIC ORIFICE DIAMETER	3"	



ORIFICE DETAIL
SEE SCHEDULE B
NOT TO SCALE

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



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RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
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Design: AJK	Draft: CJK	Date: NOV 2024
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File Name: 4292-GRADE.dwg		
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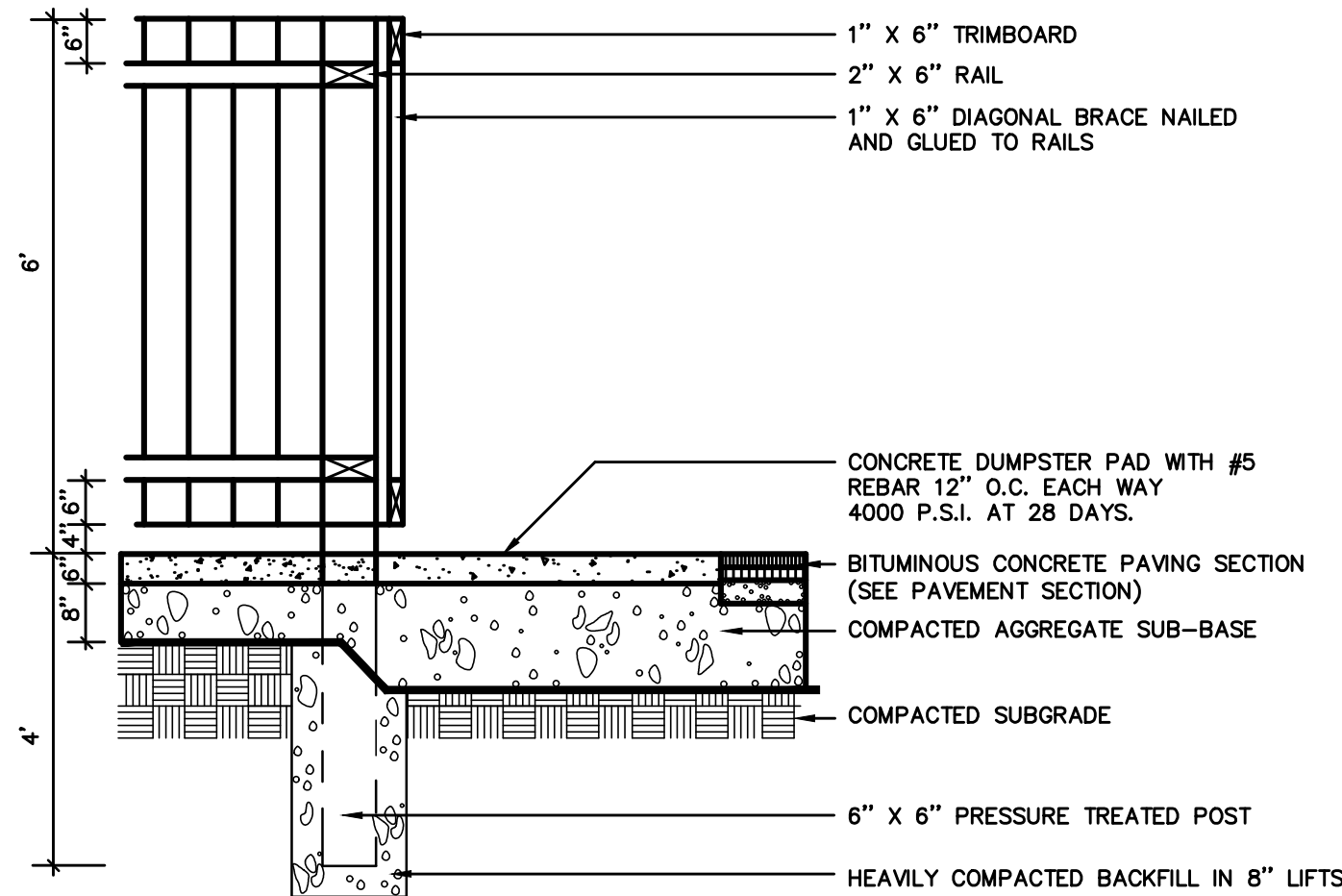


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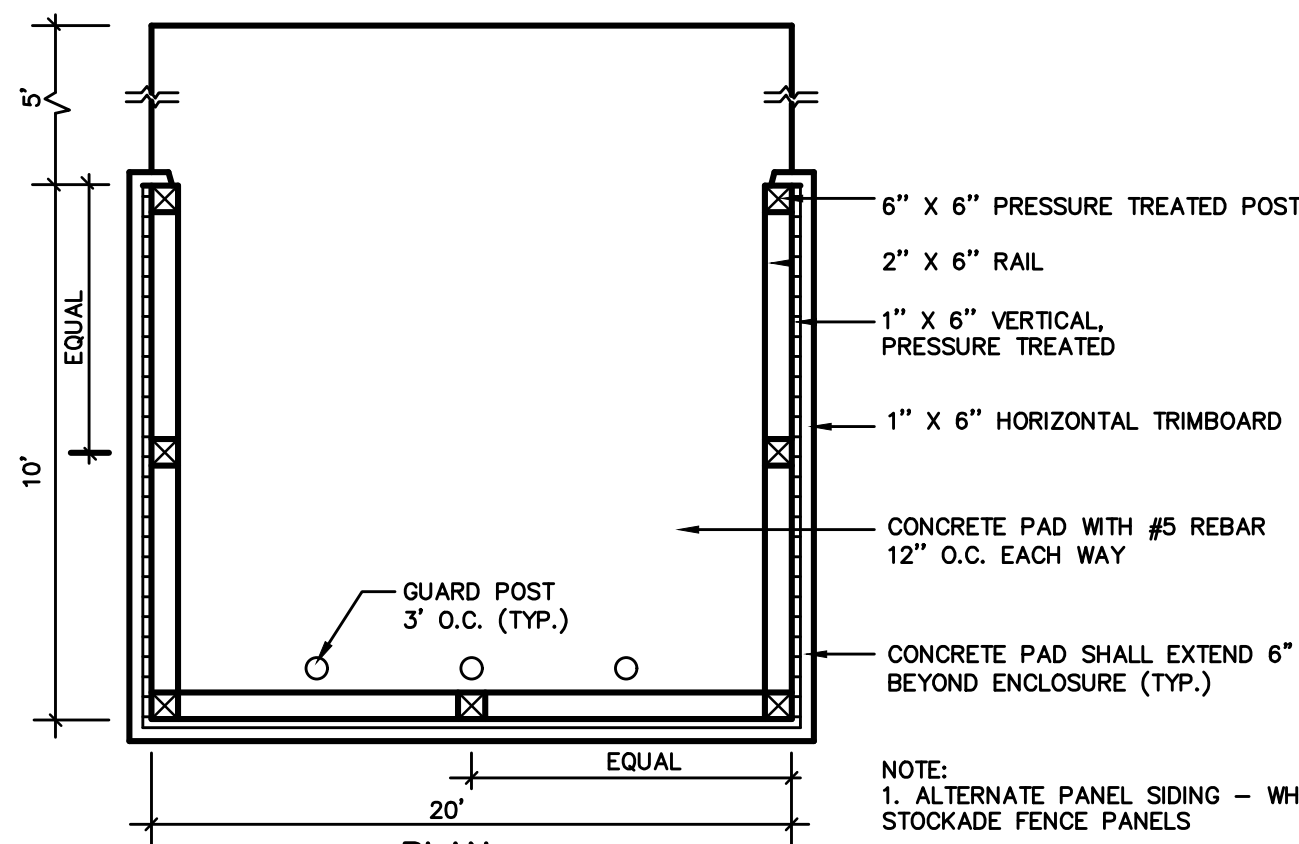
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Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.	C303
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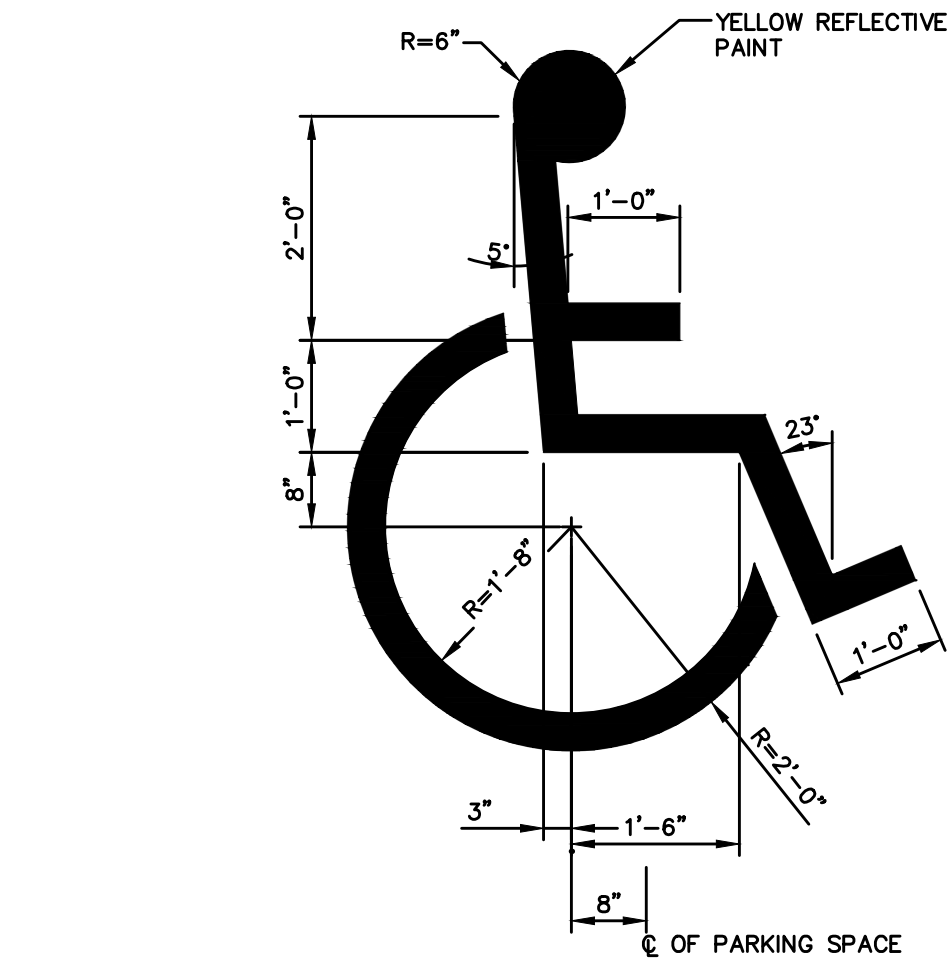
SECTION



DUMPSTER ENCLOSURE

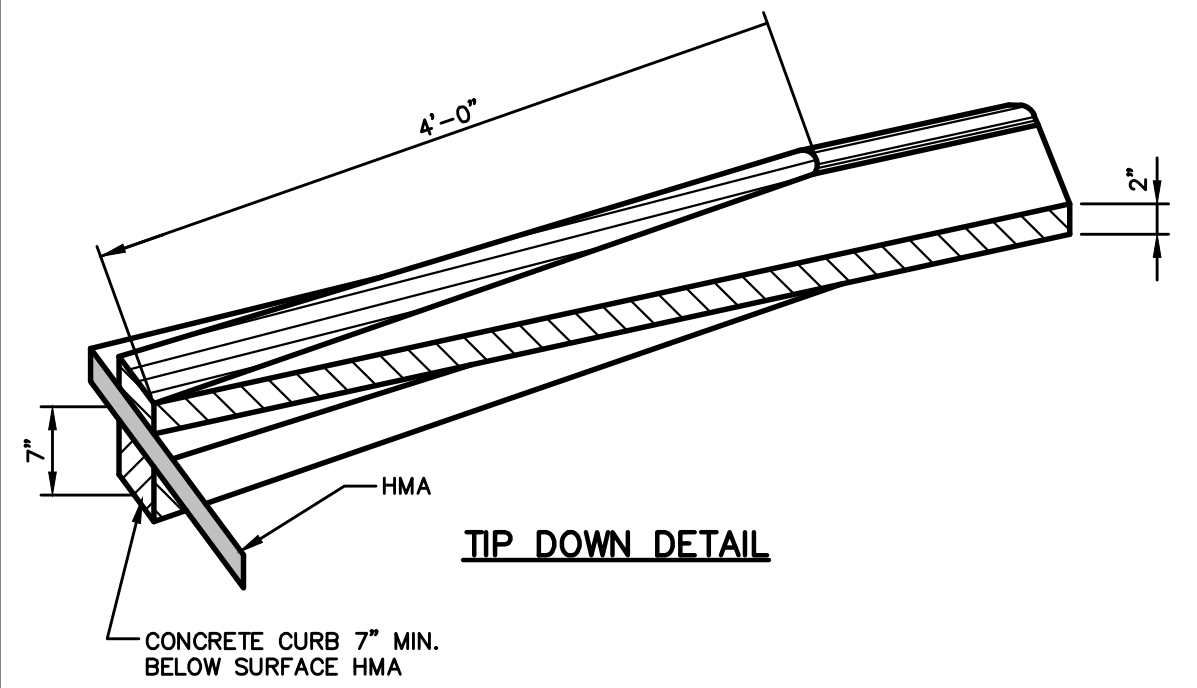
NOT TO SCALE

- NOTE:
1. ALTERNATE PANEL SIDING - WHITE CEDAR STOCKADE FENCE PANELS
 2. 6" REINFORCED CONCRETE MAY BE SUBSTITUTED WITH 7" THICK CLASS A-3 CONCRETE UPON APPROVAL BY ENGINEER.
 3. EXPANSION JOINTS EVERY 10' OF CONCRETE SLAB.

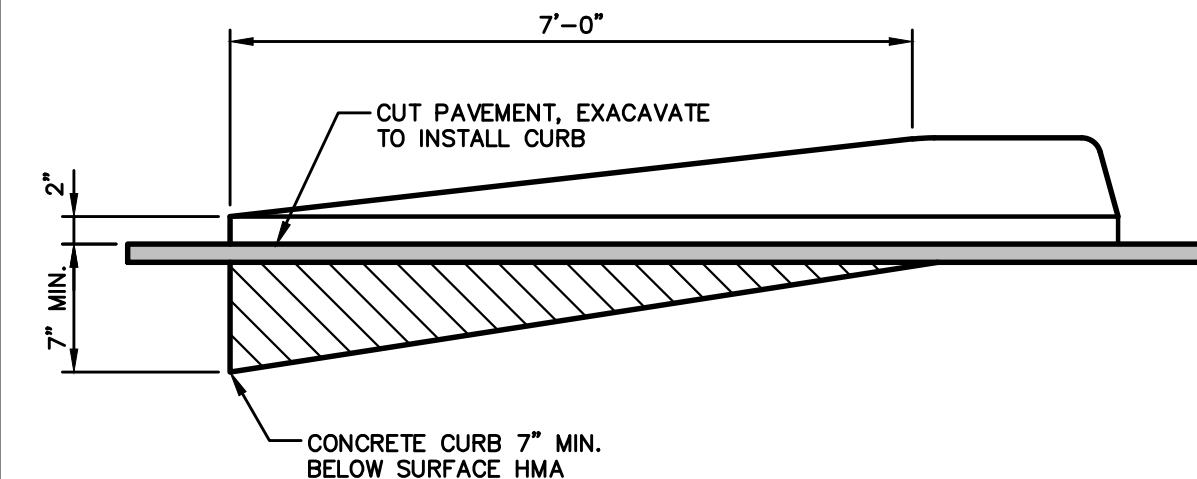


INTERNATIONAL BARRIER FREE SYMBOL

NOT TO SCALE

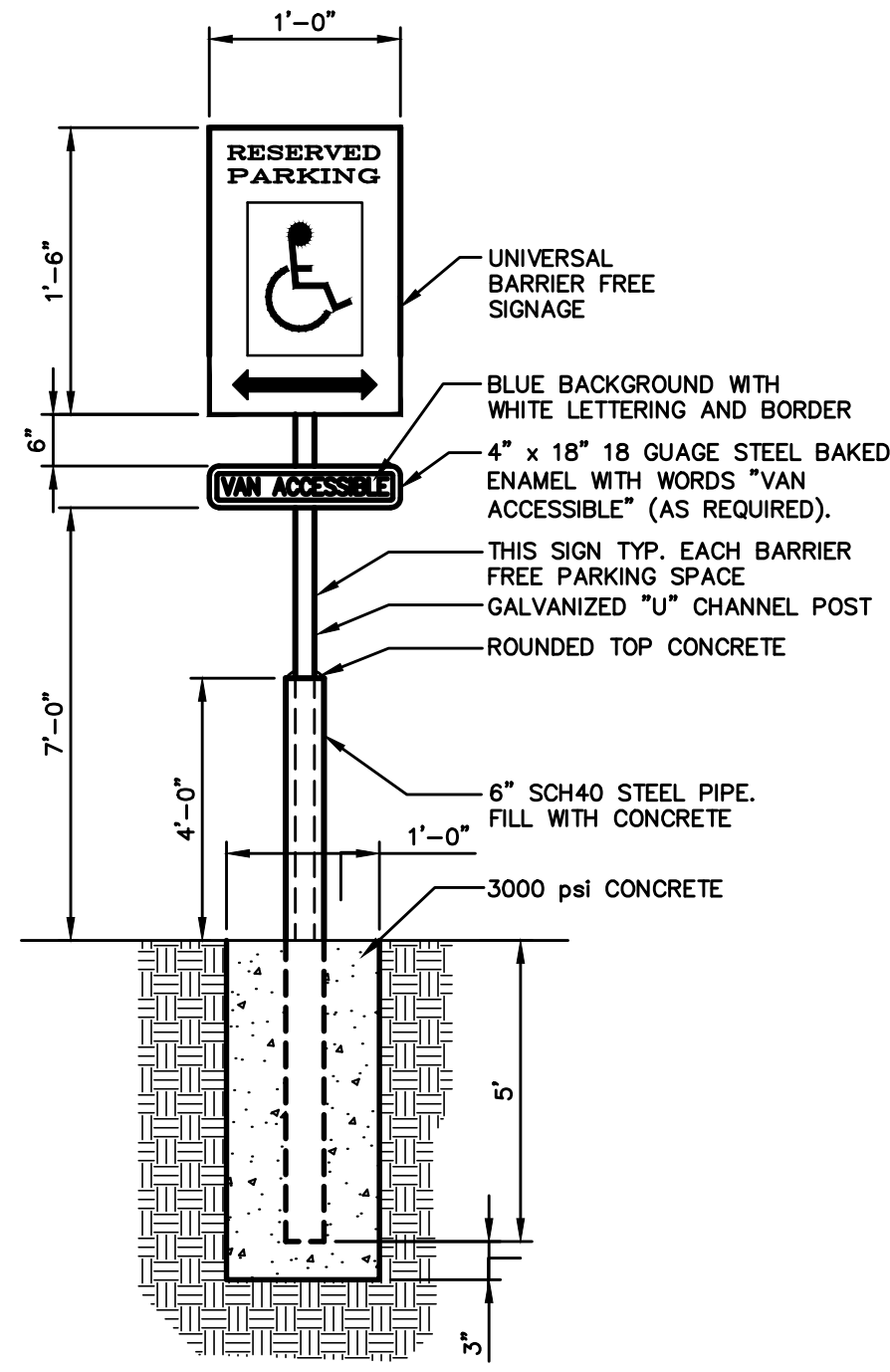


TIP DOWN DETAIL



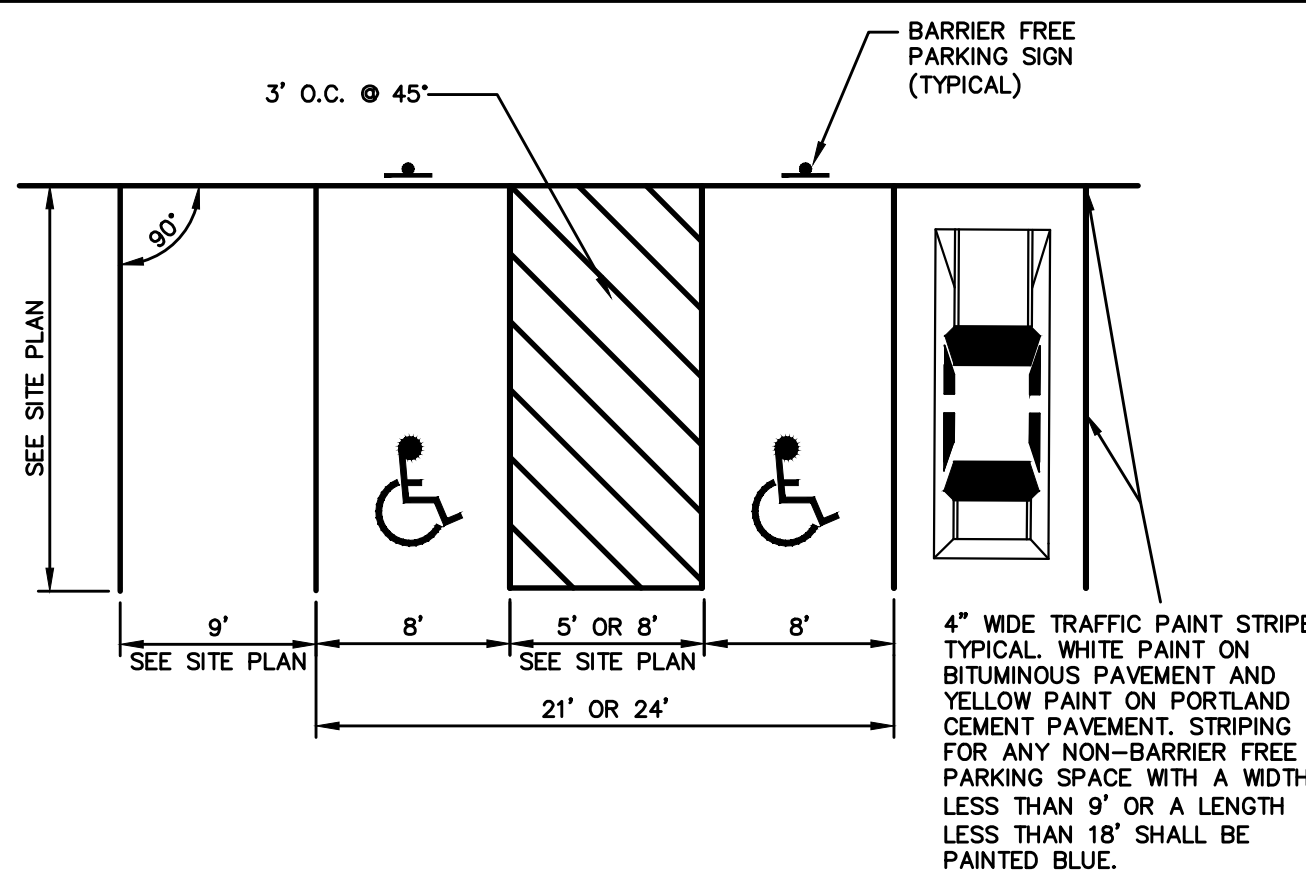
CURB TIPDOWN

NOT TO SCALE



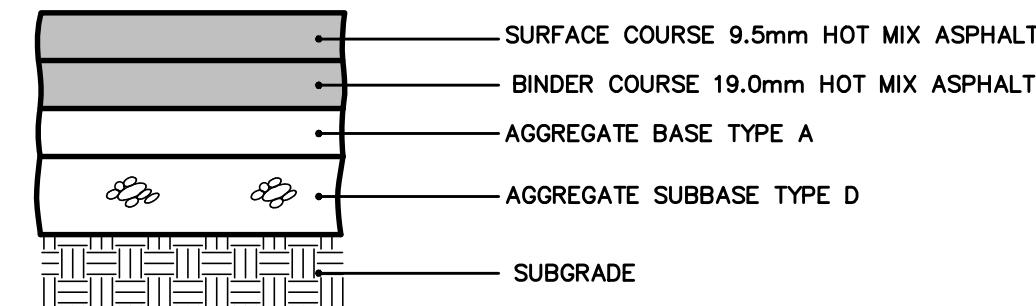
BARRIER FREE PARKING SIGN

NOT TO SCALE



PARKING SPACE DIMENSIONS

NOT TO SCALE

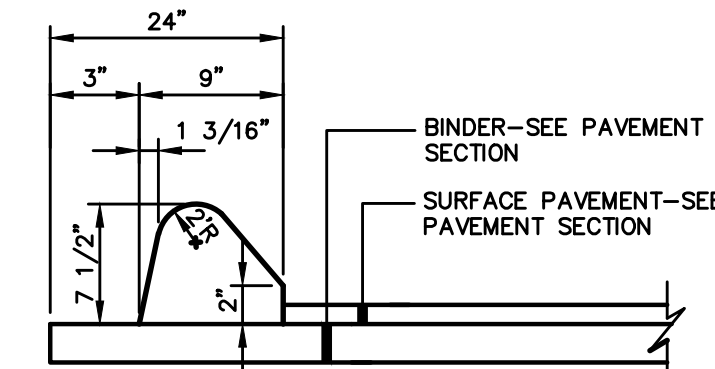


NOTE:
COMPACT SUBBASE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

LAYERS	STANDARD DUTY PAVEMENT
SURFACE COURSE 9.5mm HMA	1.5"
BINDER COURSE 19.0mm HMA	2.5"
AGGREGATE BASE TYPE A	3"
AGGREGATE SUBBASE TYPE D	15"

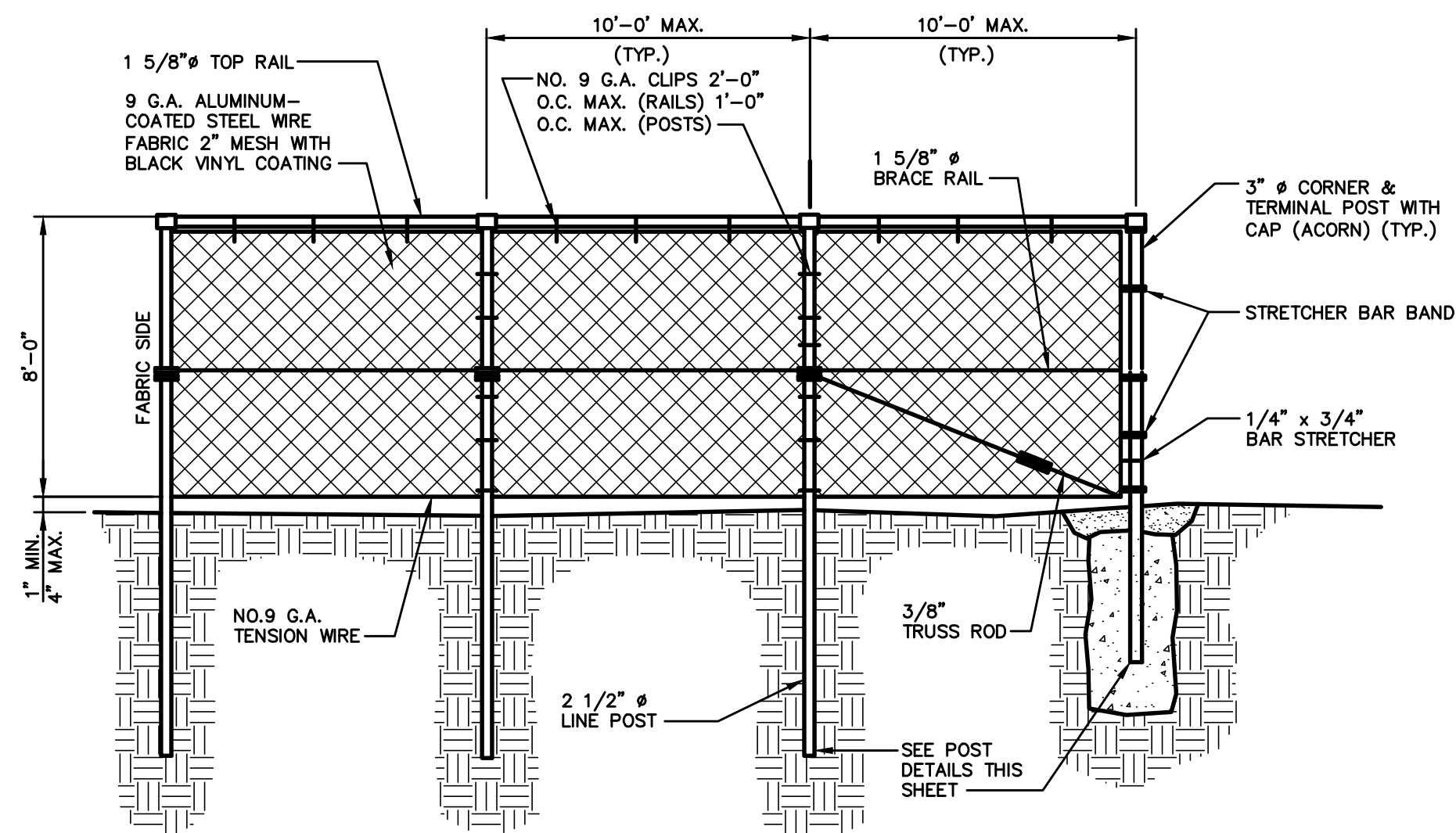
BITUMINOUS PAVEMENT SECTION

NOT TO SCALE



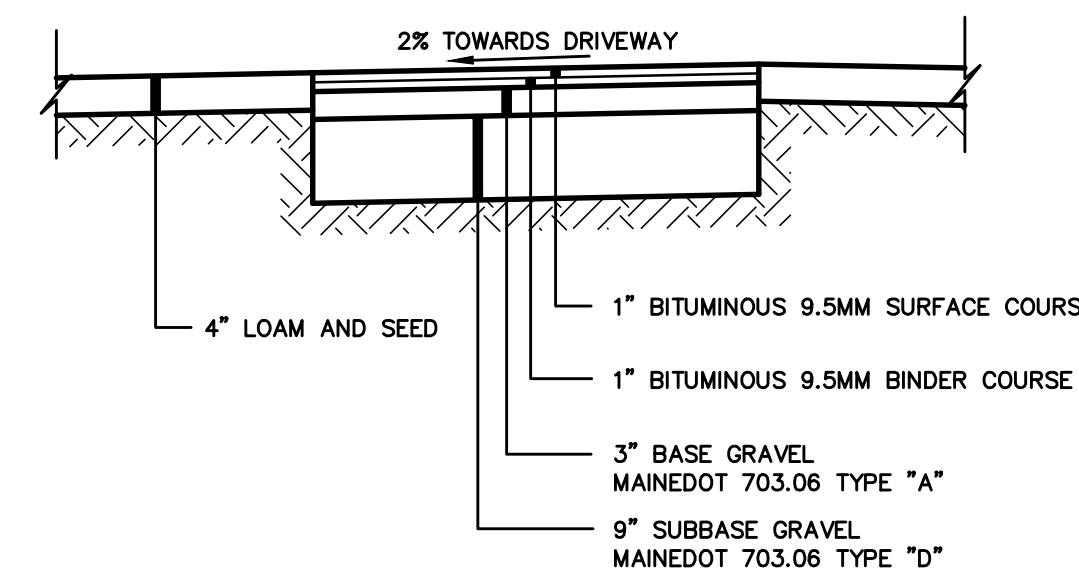
TYPE 3A BITUMINOUS CURB DETAIL

NOT TO SCALE



VINYL COATED CHAIN LINK FENCE

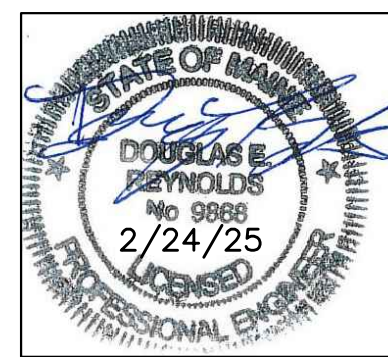
NOT TO SCALE



BITUMINOUS WALKWAY

NOT TO SCALE

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LOCAL SITE PLAN APPLICATION	12/4/24	DER
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Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: NTS	Job No.: 4292
File Name: 4292-DETAILS.dwg		
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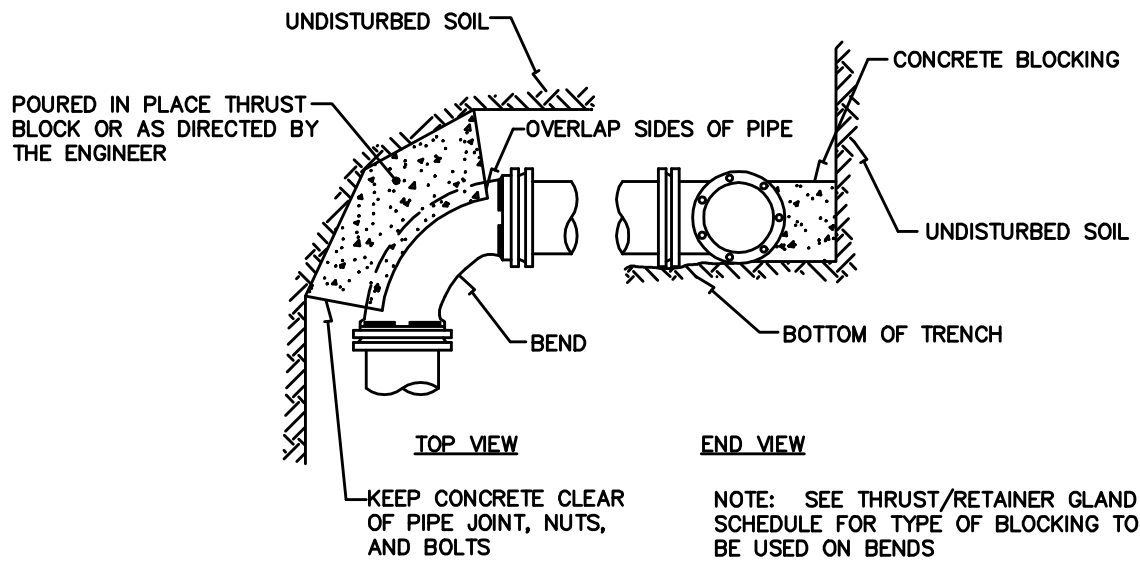


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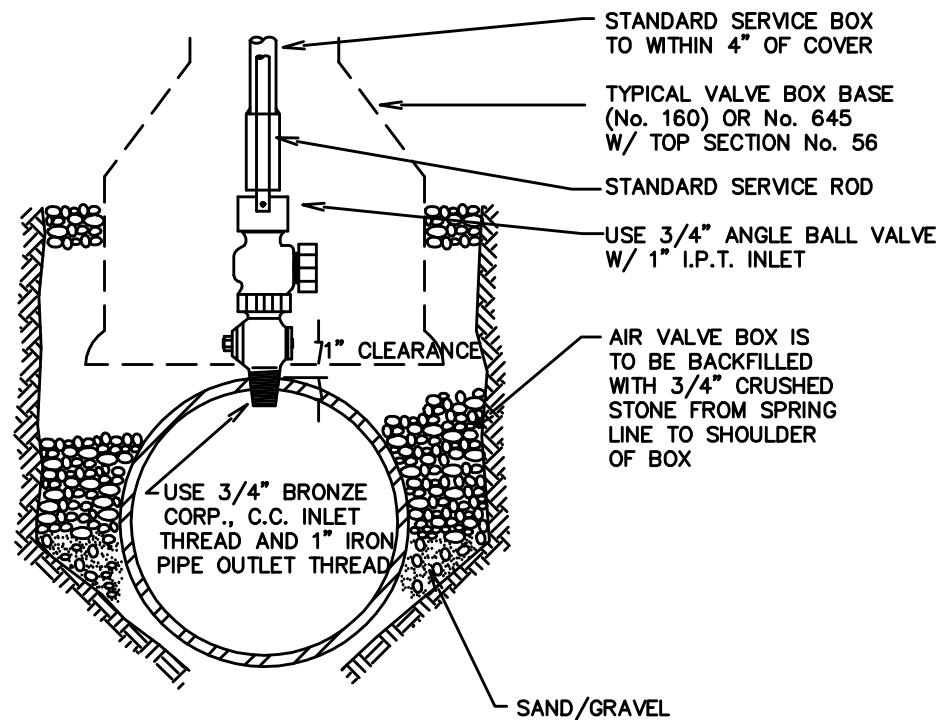
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Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
C401

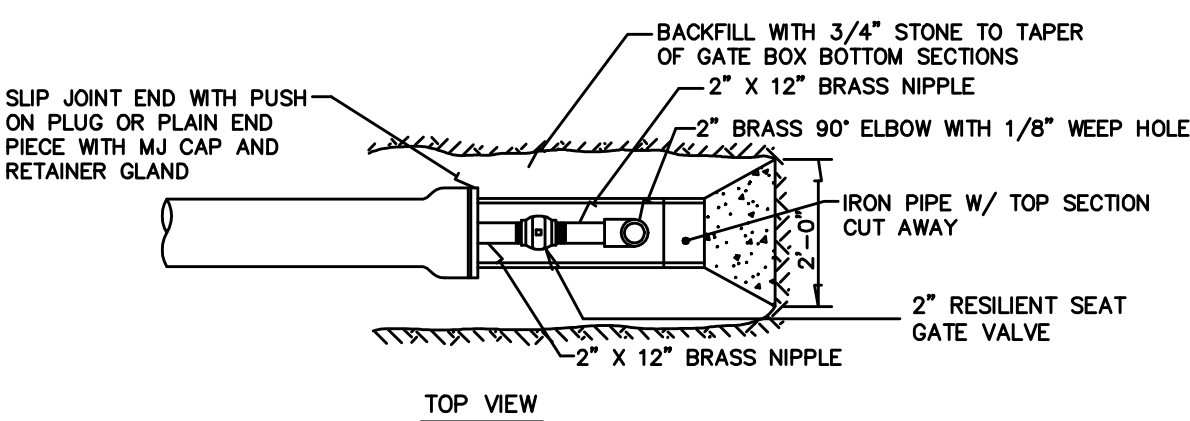
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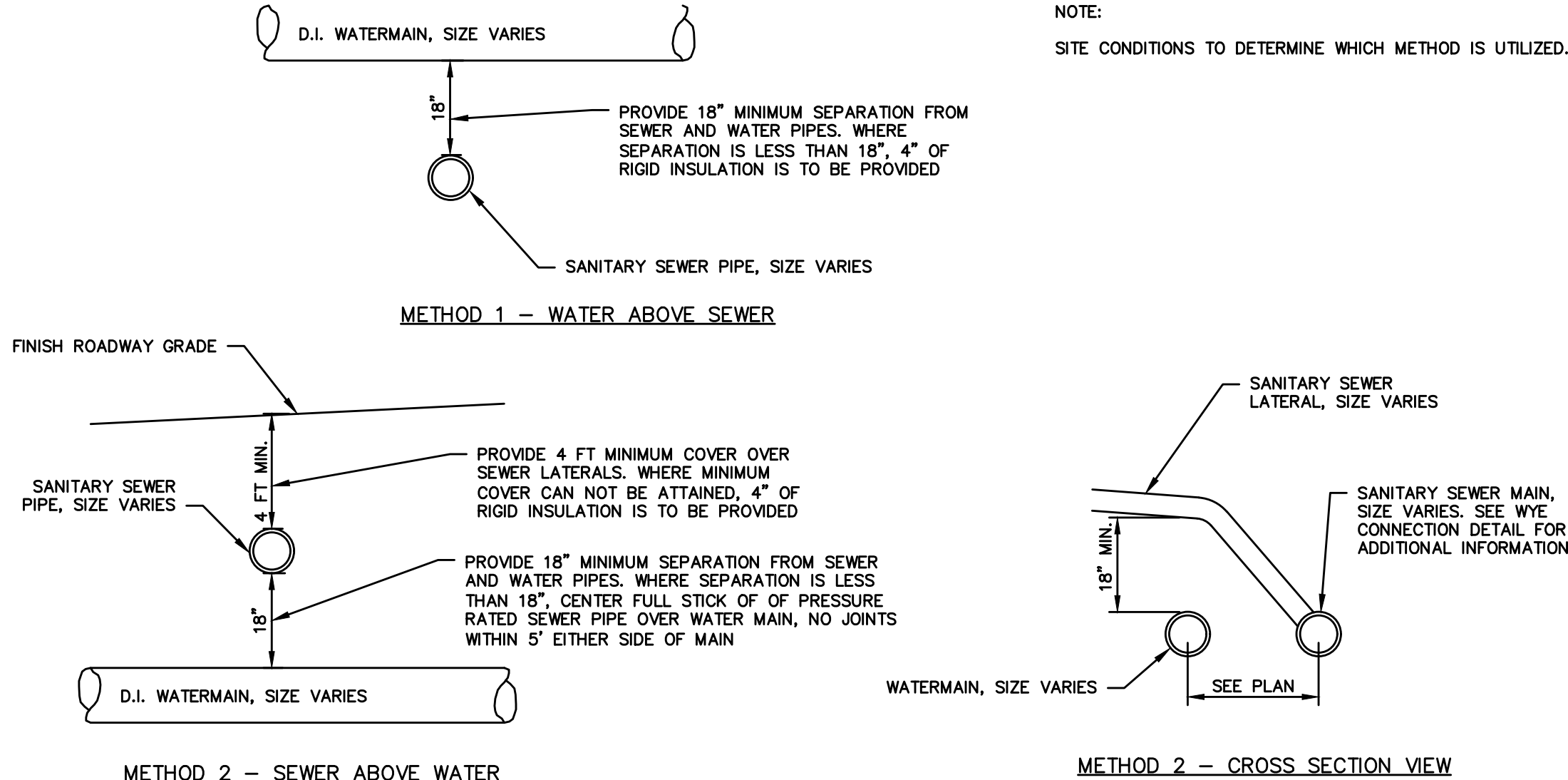
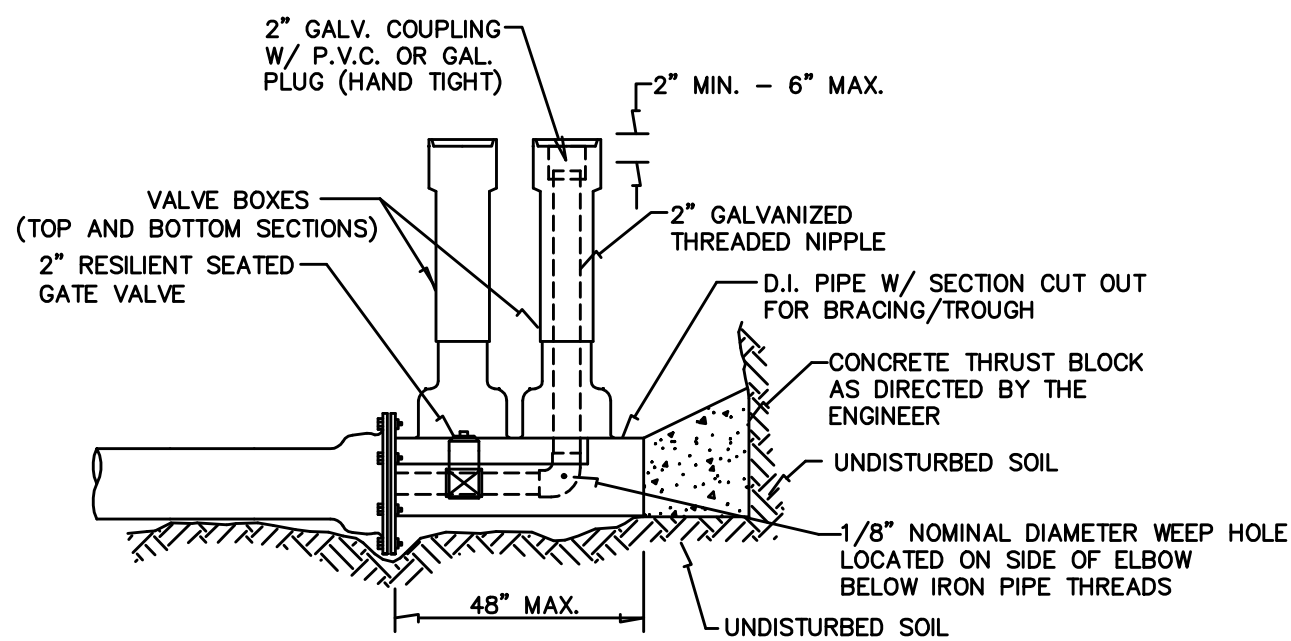
STANDARD BEND BLOCKING



TYPICAL AIR VALVE (1")
NOT TO SCALE

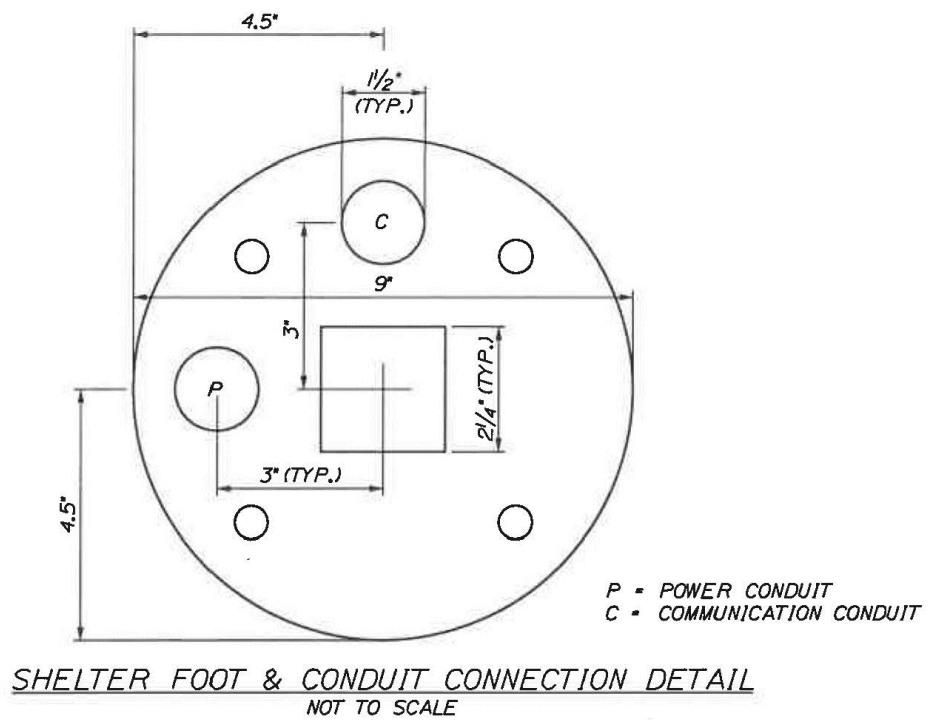


STANDARD 2" BLOW OFF
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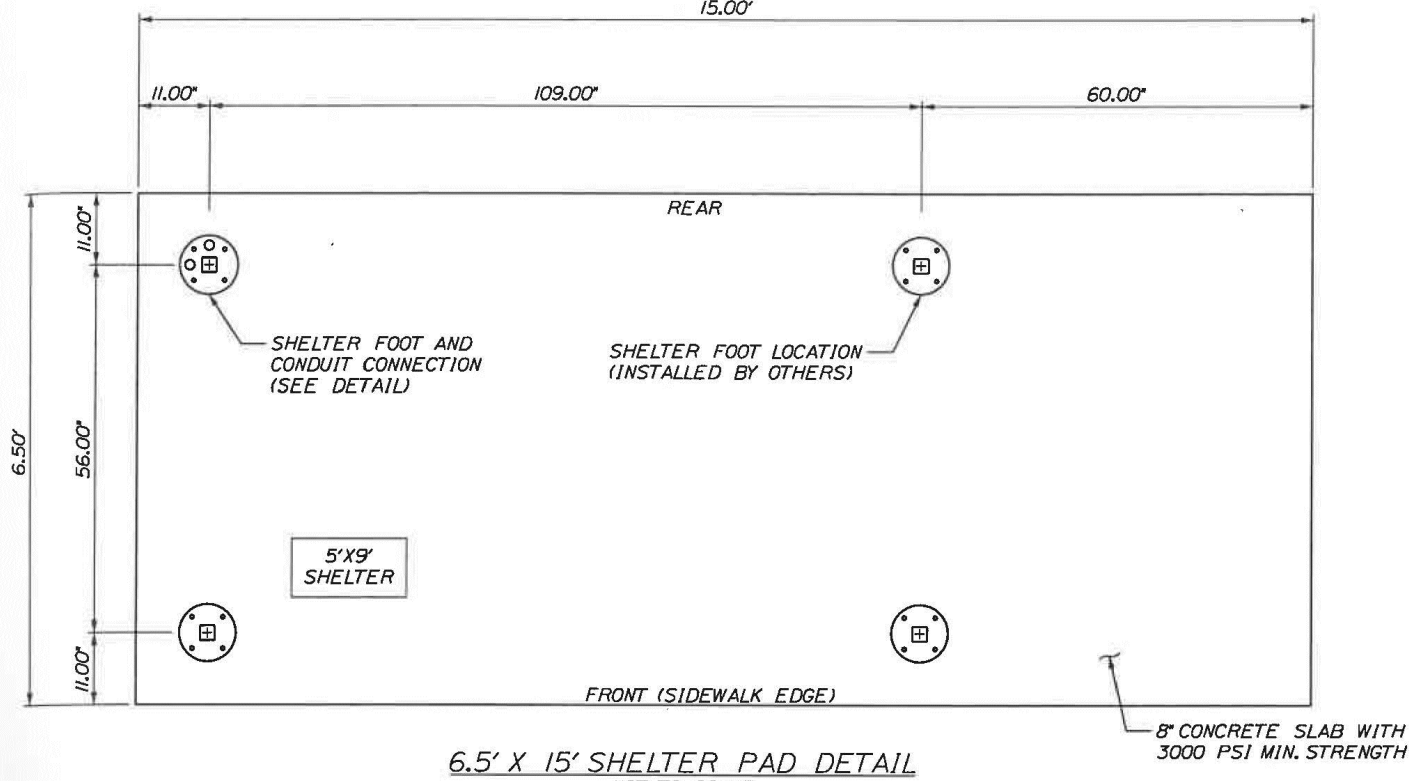


TYPICAL SEWER AND WATERMAIN CROSSING

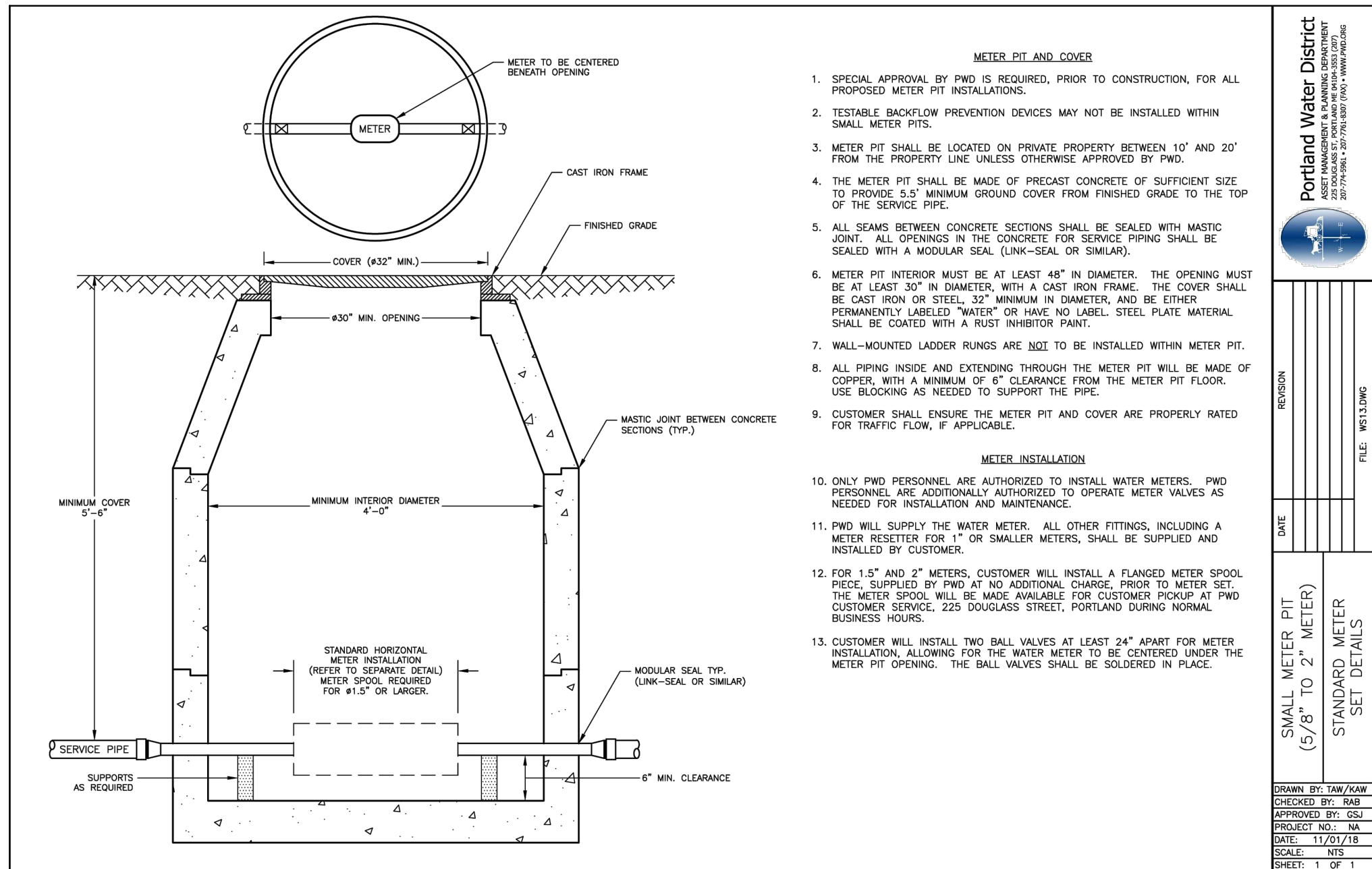
N.T.S.



SHELTER FOOT & CONDUIT CONNECTION DETAIL
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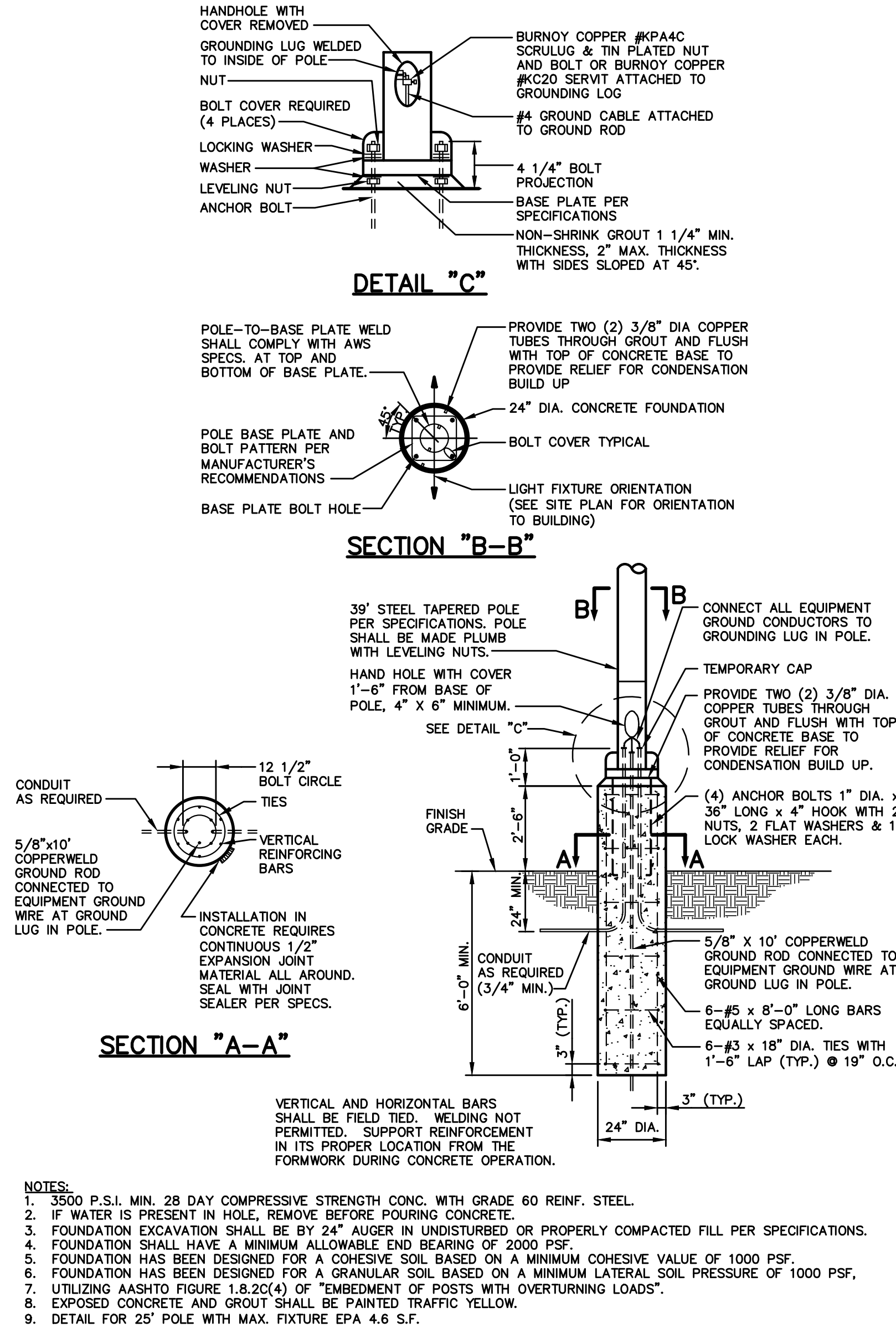


6.5' X 15' SHELTER PAD DETAIL
NOT TO SCALE



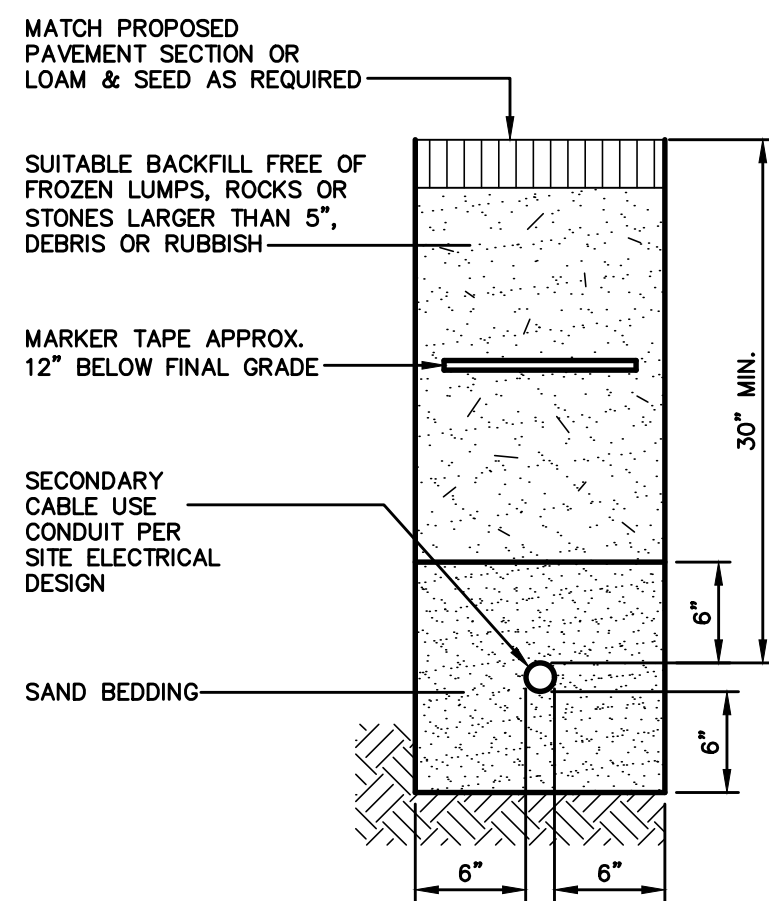
WATER METER DETAIL

NOT TO SCALE



PARKING LOT LIGHTING POLE FOUNDATION

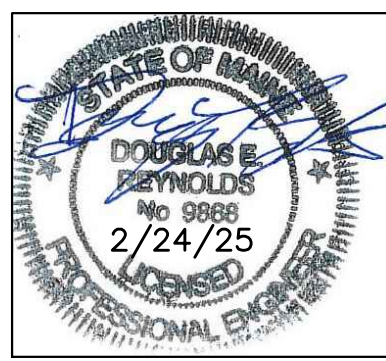
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SECONDARY ELECTRICAL TRENCH

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Drawing Name:	Utility Details
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.

C402

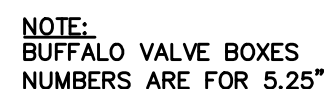


THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

NOTES:

1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. FOR WATER MAIN LAYOUT SEE DRAWING C-5.0
3. FOR WATER MAIN TRENCH DETAILS SEE DRAWING C-7.4
4. REFER TO SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
5. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS & BOLTS TO BE STAINLESS STEEL.
6. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

NOT TO SCALE



NOT TO SCALE



1. THE BEARING SURFACE OF THE THRUST BLOCK SHALL BE THE SURFACE AREA OF THE THRUST BLOCK WHICH IS CAST AGAINST THE TRENCH WALL. THE BEARING SURFACE SHALL NOT EXCEED THE FOLLOWING LOADINGS:

<u>IN-SITU CONDITION</u>	<u>ALLOWABLE</u>
BEDROCK	3,000 psf
SAND OR OUTWASH DEPOSITS	1,500 psf
OTHER SOILS	1,000 psf

THE THRUST SHALL BE COMPUTED ON THE BASIS OF 150 psi x THE CROSS SECTIONAL AREA OF THE PIPE. FOR EXAMPLE, A THRUST BLOCK FOR A 1/4 BEND ON AN 8" WATER MAIN BEARING AGAINST CLAY WOULD REQUIRE A BEARING SURFACE OF 7.5 s.f.

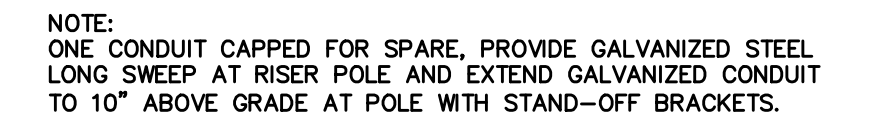
$$\frac{150 \text{ psi} \times 50 \text{ sq. in.}}{1,000 \text{ psf}} = 7.5 \text{ s.f.}$$

2. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.

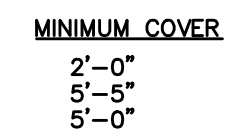
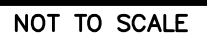
3. ANY WORK RELATED TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE MAINE WATER COMPANY SPECIFICATIONS.



NOT TO SCALE



NOT TO SCALE

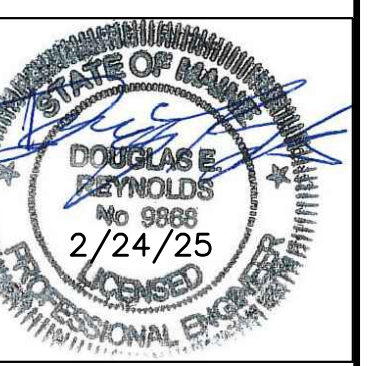


NOTE:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES, 12" BELOW FINISH GRADE.

1) (1) COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" RIGID INSULATION.
COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION.

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



RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
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Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: NTS	Job No.: 4292
File Name: 4292-DETAILS.dwg		

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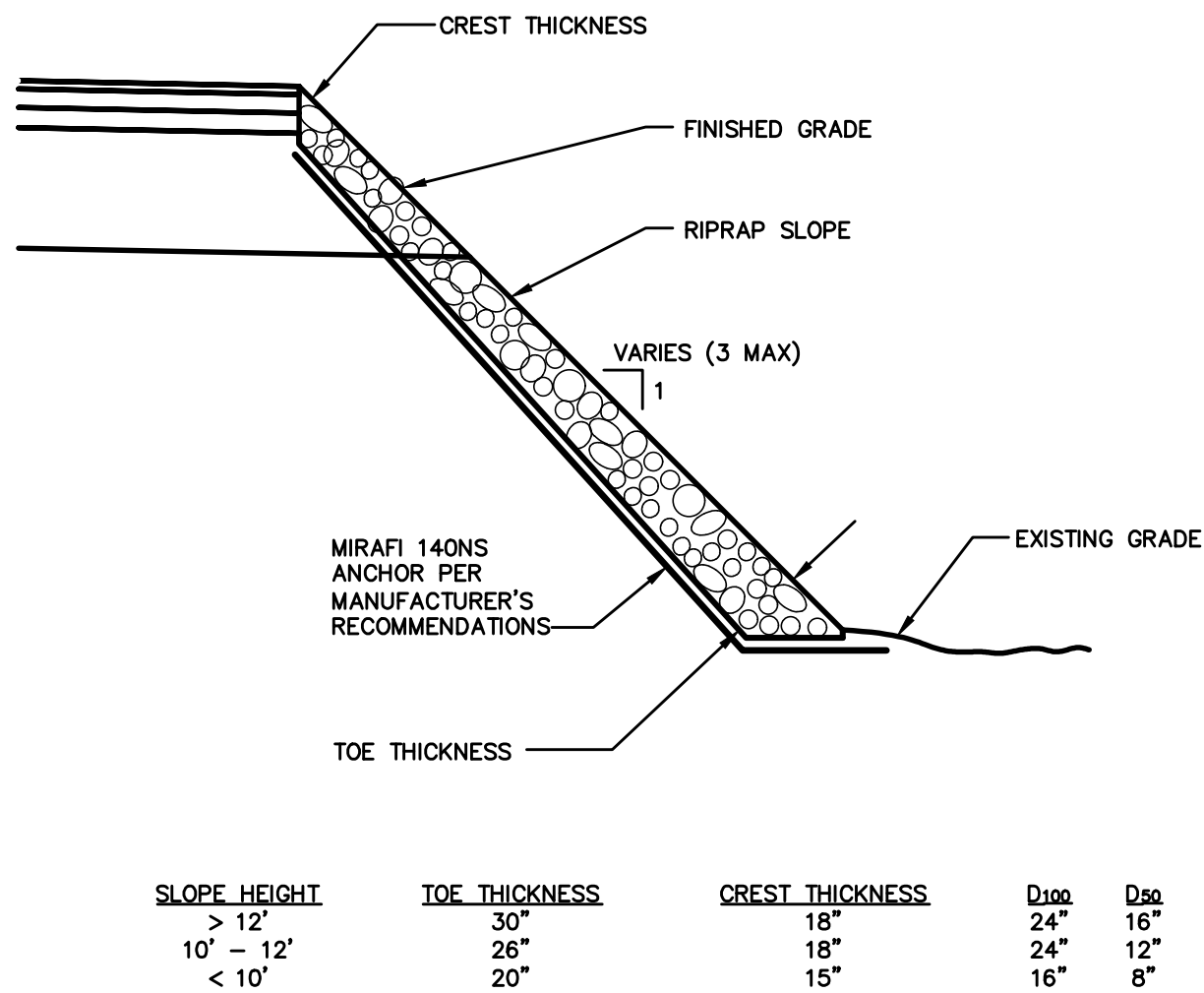
Gorrill Palmer, an LJB Engineering Company
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South Portland, ME 04106

Drawing Name:	Utility Details
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

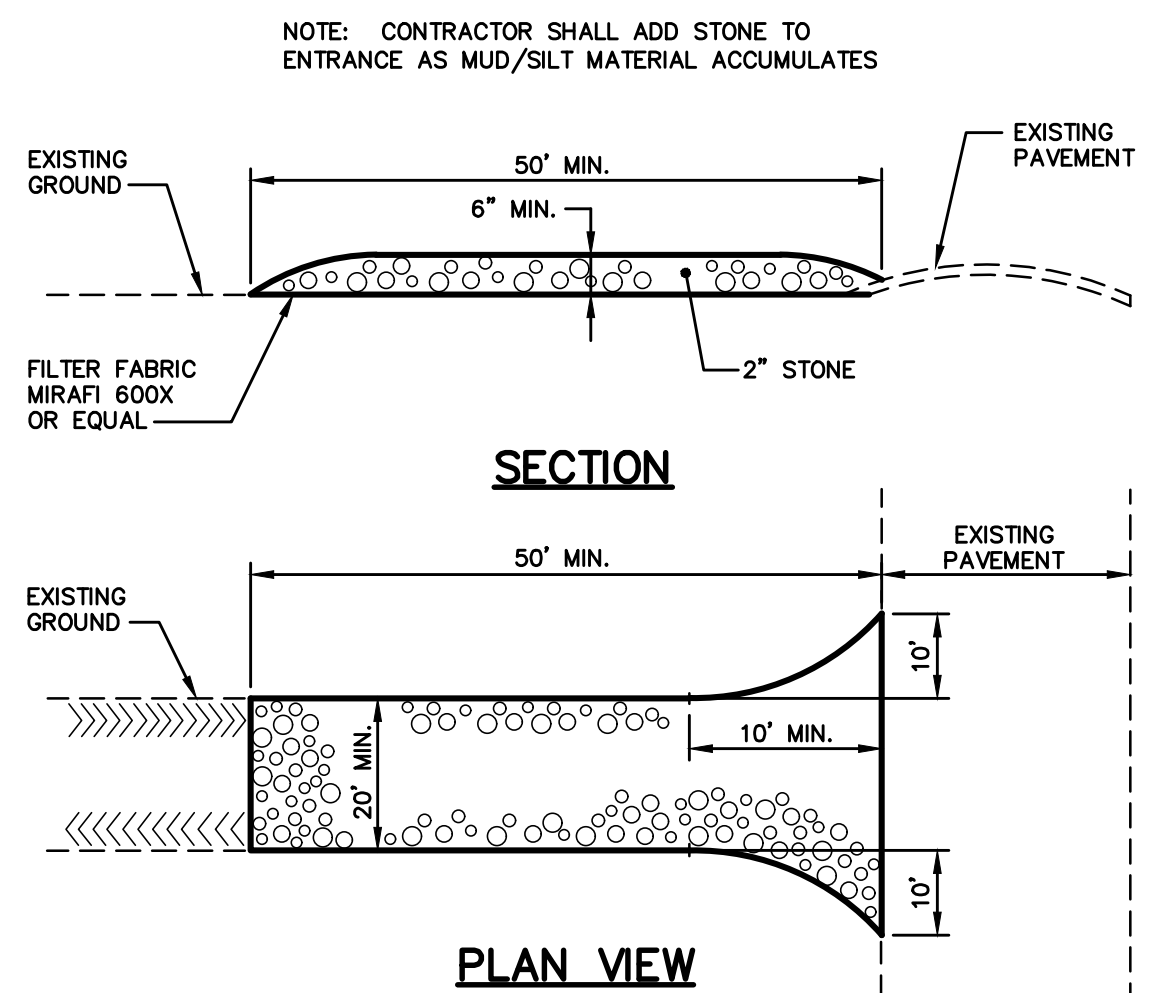
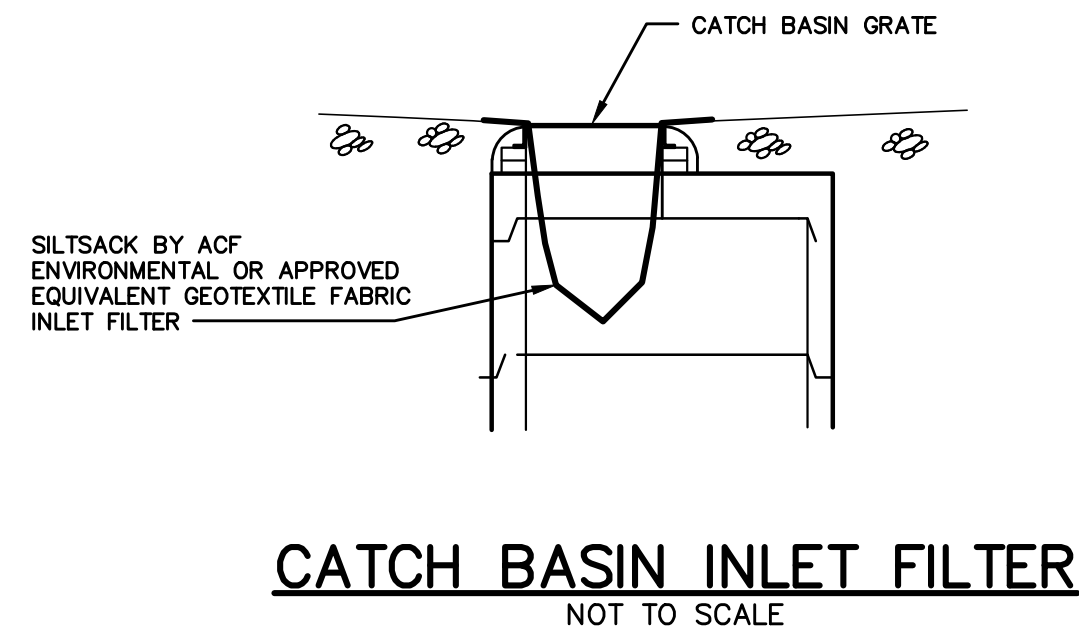
Drawing No.

C403

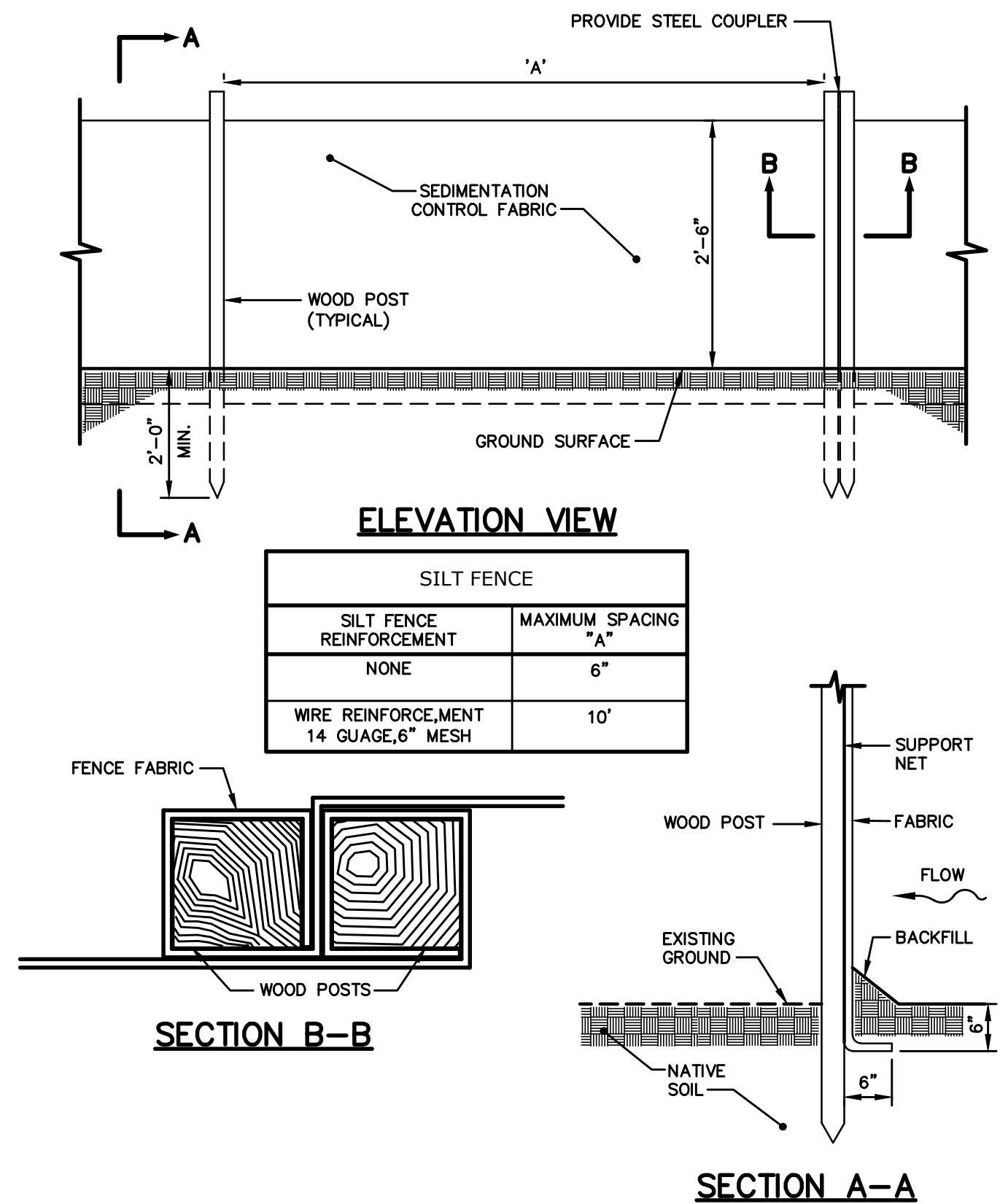
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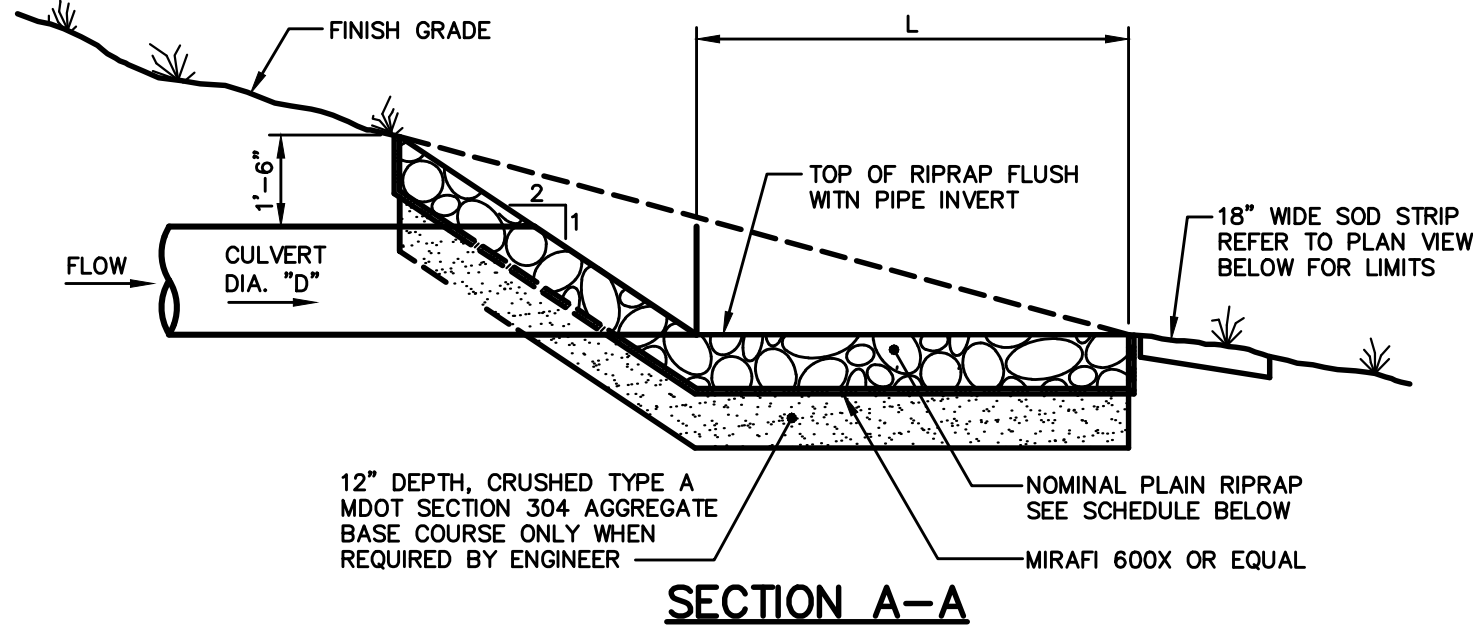
TYPICAL RIPRAP SLOPE
NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

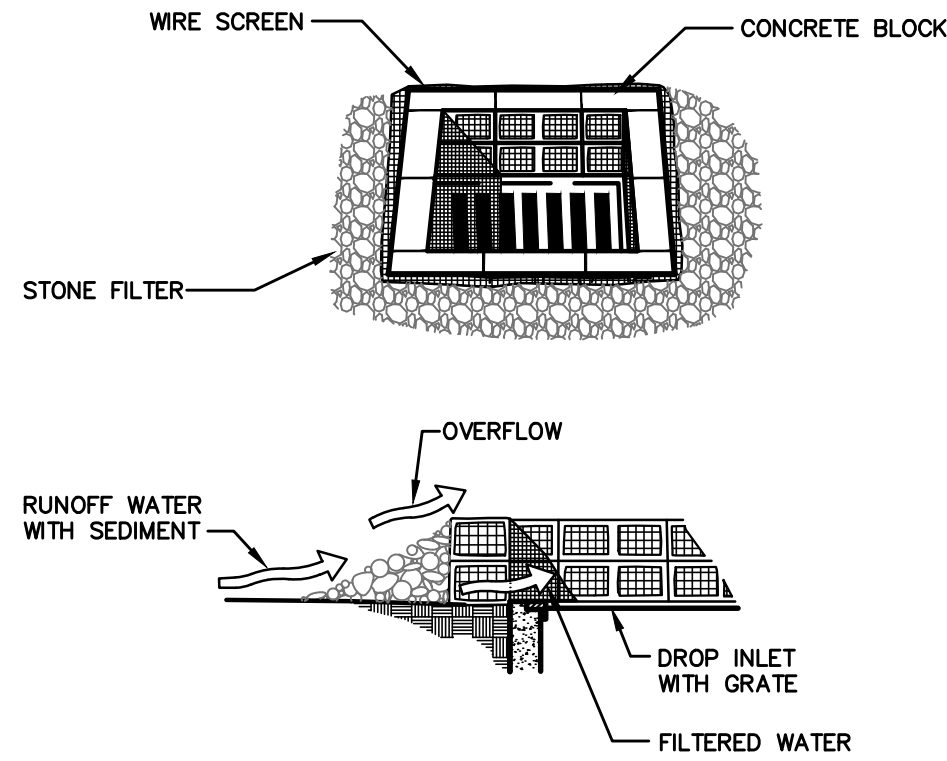


SILTATION FENCE
NOT TO SCALE



SCHEDULE				
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W)	STONE #50	RIPRAP THICKNESS
4"	24"	12"	4"	12"
12"	54"	36"	6"	14"

CULVERT OUTLET APRON
NOT TO SCALE



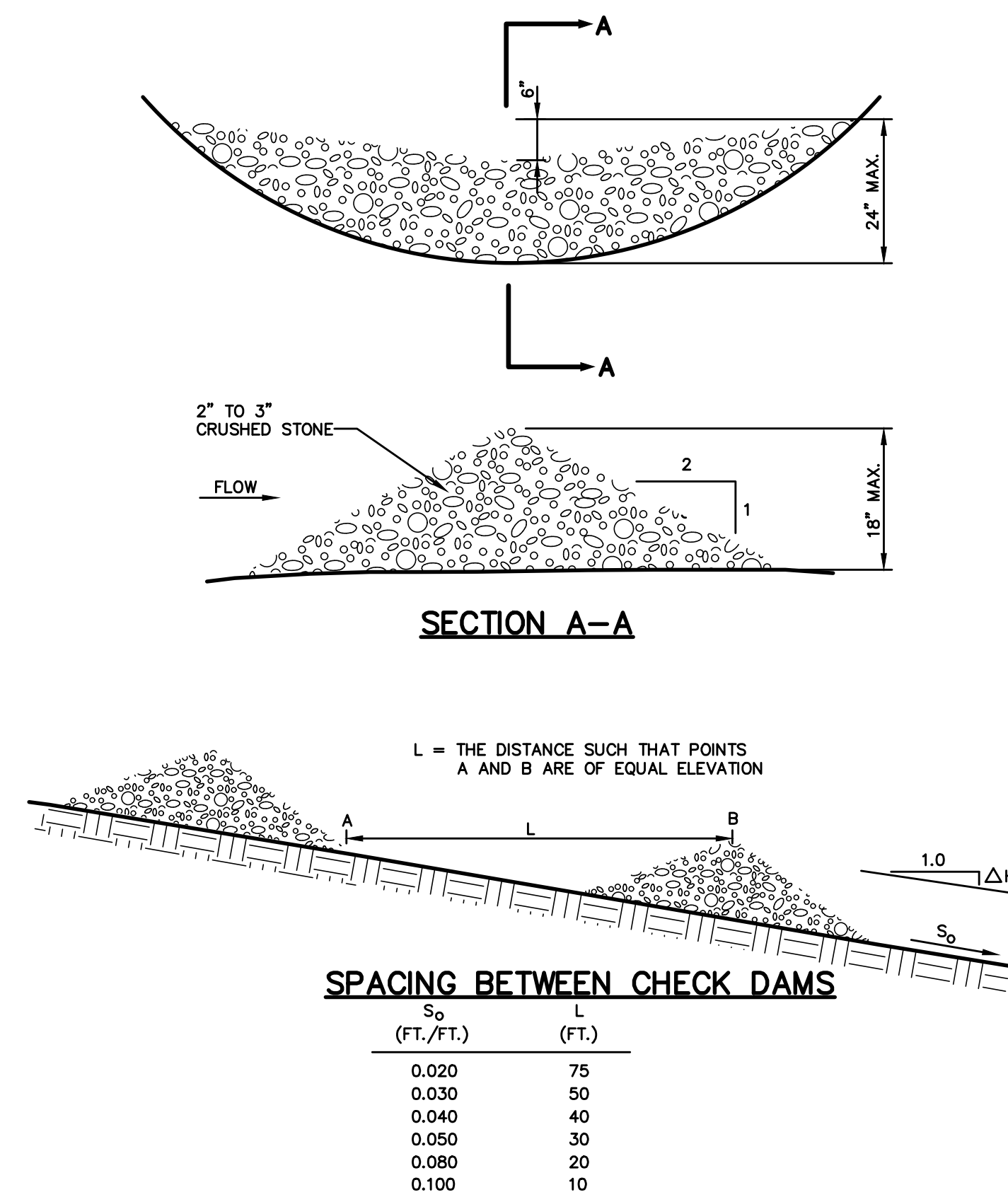
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

NOTES:

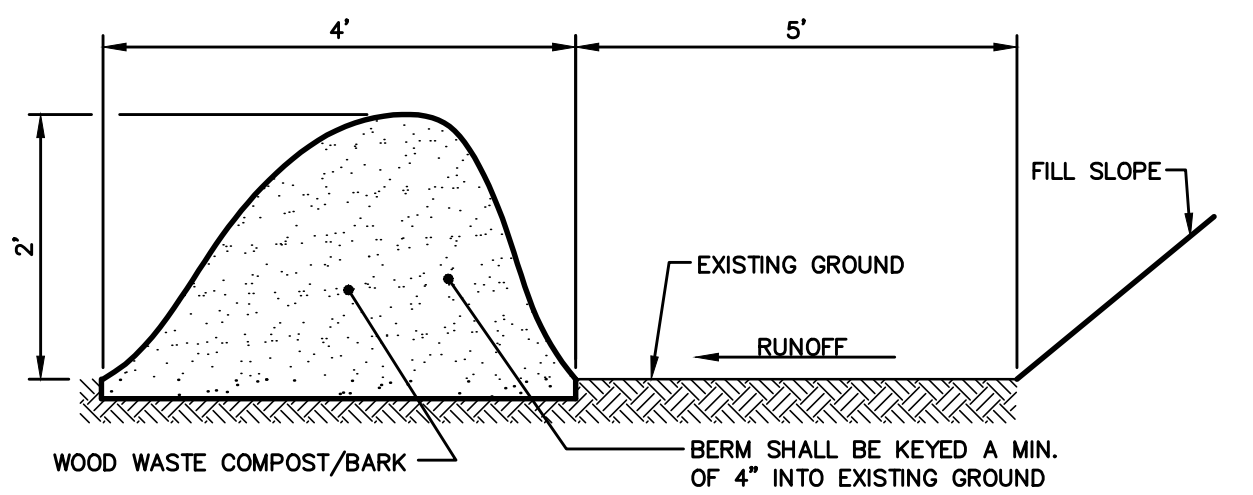
1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4", 8" AND 12" WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH, AND NO GREATER THAN 24" HIGH.
2. WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2" OPENINGS SHALL BE USED.
3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN DETAIL. THE STONE FILTER SHALL BE 3/4" CRUSHED STONE.
4. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT, SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

STONE SEDIMENT BARRIER
NOT TO SCALE



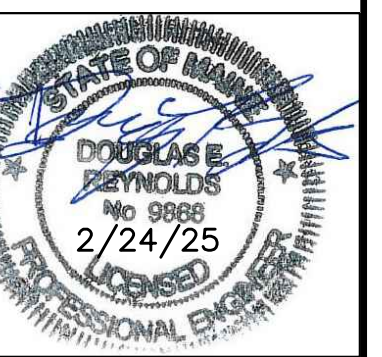
STONE CHECK DAM
NOT TO SCALE

- NOTES:**
1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
A. MOISTURE CONTENT - 30-60%.
B. pH - 5.0 - 8.0.
C. SCREEN SIZE - 100% LESS THAN 3", MAX. 70% LESS THAN 1".
D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION.
E. NO STONES LARGER THAN 2" IN DIAMETER.
F. SILTS, CLAYS OR SUGAR SANDS ARE NOT ACCEPTABLE IN THE MIX.
 2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
 3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
 4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.
 5. WOODWASTE COMPOST BARK FILTER SHALL NOT BE USED IN WETLAND AREAS.



WOOD WASTE COMPOST/BARK FILTER BERM DETAIL
NOT TO SCALE

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



Rev.	Date	Revision

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Drawing Name:	Erosion Control Details
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

Drawing No.
C404

EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN, WHICH WILL BE IMPLEMENTED FOR THIS PROJECT, IS AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/STONE CHECK DAMS/SILT FENCE, ETC.)

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE LATEST EDITION OF THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS.

A.DEWATERING

WATER FROM CONSTRUCTION TRENCH DEWATERING SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAMINANT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAMINANT STRUCTURE BE LOCATED WITHIN 50 FEET OF A PROTECTED NATURAL RESOURCE.

B.INSPECTION AND CONSTRUCTION MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. BEFORE AND WITHIN 24 HOURS AFTER EACH WET WEATHER EVENT THAT PRODUCES MORE THAN 0.5 INCH OF RAINFALL IN A CONSECUTIVE 24-HOUR PERIOD, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE QUALIFIED CONTRACTOR KNOWLEDGEABLE OF DEP STANDARDS SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. ADDITIONALLY, INSPECTIONS SHALL BE PERFORMED AT LEAST ONCE A WEEK. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION.

- 1.INSPECTION AND CORRECTIVE ACTION. AN ENGINEER OR SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER STANDARDS AS DESCRIBED IN THE CONDITIONS OF THE PERMIT SHALL INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES (INCLUDING CATCH BASIN INLET PROTECTION MEASURES, SEDIMENT FILTER MEASURES, AND STABILIZATION OF SLOPES), 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 (WET WEATHER EVENT THAT PRODUCES MORE THAN 0.5 INCH IN A CONSECUTIVE 24-HOUR PERIOD), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES.
- 2.MAINTENANCE. IF EROSION AND SEDIMENTATION CONTROL (ESC) MEASURES 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. THE CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE ASSOCIATED WITH THESE INSPECTIONS. IF ADDITIONAL ESC MEASURES OR SIGNIFICANT REPAIR OF ESC MEASURES ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (WET WEATHER EVENT THAT PRODUCES MORE THAN 0.5 INCH IN A CONSECUTIVE 24-HOUR PERIOD). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION THROUGHOUT PERMANENT STABILIZATION MEASURES.
- 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, DISTURBED AND IMPERVIOUS AREAS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE THE DATE AND TIME OF INSPECTION, THE NAME(S) OF THE PERSON(S) MAKING THE INSPECTIONS, THE LOCATION(S) OF THE INSPECTIONS, AND LOCATION(S) WHERE ADDITIONAL ESC MEASURES ARE NEEDED. FOR EACH ESC MEASURE REQUIRING MAINTENANCE, NEETING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL ESC MEASURES, 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.

C.TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. A CRUSHED STONE--STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE APPROVED ACCESS DRIVE AS DEPICTED ON THE PLANS.
2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF-- BORNE SEDIMENTS UNTIL GRASS AREAS ARE REVEGETATED. PER WOOD WASTE COMPOST BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THIS PACKAGE AND INSPECTED AT LEAST ONCE A WEEK AND BEFORE AND IMMEDIATELY AFTER A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. WOOD WASTE COMPOST BERMS ARE NOT TO BE USED ADJACENT TO WETLAND AREAS THAT ARE NOT TO BE DISTURBED.
3. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND OCTOBER 15TH ON SLOPES OF LESS THAN 15 PERCENT SHALL BE ANCHORED BY APPLYING WATER. MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15 PERCENT SHALL BE ANCHORED BY A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. FABRIC NETTING AND STAPLES SHALL BE USED ON DISTURBED AREAS WITHIN 50' OF LAKES, STREAMS, AND WETLANDS REGARDLESS OF THE UPSTREAM SLOPE. MULCH PLACED BETWEEN OCTOBER 15TH AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES. THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 3:1 AND EQUAL TO OR FLATTER THAN 2:1, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSIOR OR EQUAL. SLOPES STEEPER THAN 2:1 SHALL RECEIVE RIPRAP AS NOTED ON THE PLANS. THE MULCH APPLICATION RATE FOR BOTH TEMPORARY AND PERMANENT SEEDING IS 75 LBS PER 1000 SF AS IDENTIFIED IN ATTACHMENT A OF THIS SECTION.
4. TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:
 - A) TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY WETLANDS WHICH WILL NOT BE DISTURBED AND SHALL BE LOCATED AWAY FROM DRAINAGE SWALES.
 - B) STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS HAY, STRAW, OR EROSION CONTROL MIX.
 - C) STOCKPILES SHALL BE SURROUNDED BY A SEDIMENTATION BARRIER AT THE TIME OF FORMATION.
5. ALL DENUDED AREAS THAT ARE WITHIN 50 FEET OF AN UNDISTURBED WETLAND, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN A BUILDING PAD, PARKING AREA, OR ACCESS DRIVE SUBBASE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. IN OTHER AREAS, THE TIME PERIOD MAY BE EXTENDED TO 7 DAYS.
6. FOR WORK WHICH IS CONDUCTED BETWEEN OCTOBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 2 DAYS FOR ALL AREAS.
7. BELFORT STREET SHALL BE SWEEP TO CONTROL MUD AND DUST AS NECESSARY.
8. DURING GRUBBING OPERATIONS STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION CONTROL PLANS.
9. SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET SHALL BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHALL BE ANCHORED.
10. WOOD WASTE COMPOST/BARK BERMS MAY BE USED IN LIEU OF SILTATION FENCING. BERMS SHALL BE REMOVED AND SPREAD IN A MANNER NOT TO EXCEED 3" THICK UPSTREAM AREAS ARE COMPLETED AND A 90% CATCH OF VEGETATION IS ATTAINED.
11. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS -- SECTION 637 -- DUST CONTROL.
12. LOAM AND SEED IS INTENDED TO SERVE, AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENUDED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. SEEDING SHALL NOT OCCUR OVER SNOW.

D.PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, GRAVEL SUBBASE, ETC.) WILL BE LOAMED, UMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN TEMPORARY EROSION CONTROL MEASURES. PRIOR TO PLACING THE FABRIC NETTING, THE MULCH SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48-HOUR WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
2. ALL STORM DRAIN PIPE OUTLETS SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL FROM SCOUR AND DETERIORATION. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE APRONS SHALL BE INSTALLED AND STABILIZED TO THE EXTENT PRACTICABLE PRIOR TO DIRECTING RUNOFF TO THE TRIBUTARY PIPE OR CULVERT.

IMPLEMENTATION SCHEDULE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO ENSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED: THE NOTE IS ANTICIPATED THAT CONSTRUCTION WILL BEGIN IN SPRING OF 2025, WITH FIRST OCCUPANCY ANTICIPATED BY THE END OF 2025.

- NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE, THIS SHALL BE ACCOMPLISHED BY LIMITING THE DISTURBED AREA. AREA SHALL BE LIMITED TO NO MORE THAN THE CONTRACTOR CAN MULCH IN ONE DAY.
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES AT THE APPROVED LOCATIONS.
 2. INSTALL PERIMETER SILT FENCE AND/OR WOOD WASTE BERMS.
 3. INSTALL DIVERSION DIKES, OR CHECK DAMS (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BMP'S)
 4. CLEAR AND GRUB SITE. INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
 5. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES.
 6. COMMENCE EARTHWORK FOR STORMWATER FACILITIES.
 7. COMMENCE EARTHWORK AND GRADING TO SUBGRADE.
 8. COMMENCE INSTALLATION OF RETAINING WALLS (IF NECESSARY).
 9. COMMENCE INSTALLATION OF WATER AND SEWER LINES.
 10. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
 11. COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO WITHIN 5' OF FUTURE BUILDINGS.
 12. INSTALL LIGHT POLE FOUNDATIONS AND LIGHT POLES.
 13. COMPLETE REMAINING EARTHWORK OPERATIONS.
 14. COMPLETE INSTALLATION OF DRAINAGE APPURTENANCES.
 15. INSTALL SUB-BASE AND BASE GRAVEL WITHIN PARKING AREAS, WALKWAYS, AND ALL DRIVEWAYS.
 16. INSTALL CURBING IN PARKING AREAS AS NEEDED.
 17. INSTALL BASE COURSE PAVING FOR DRIVES AND PARKING AREA AS WELL AS CONCRETE SURFACES.
 18. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
 19. INSTALL SURFACE COURSE PAVING FOR DRIVES AND PARKING AREAS. STRIPE PER PLAN.
 20. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
 21. TOUCH UP LOAM AND SEED.

PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK, WHICH WILL SATISFY THE FOLLOWING CRITERIA:

1. THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY. WORK MUST ALSO BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SPECIFIED BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE DENUDED.
2. THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH SHALL:
 - LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.
 - REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT, OR TEMPORARILY STABILIZED WITHIN 48 HOURS OF AN UNDISTURBED WETLAND AND 7 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 50 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW.
 - INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE. THE DITCHES SHALL BE IMMEDIATELY LINED OR REVEGETATED AS SOON AS THEIR INSTALLATION IS COMPLETED.

EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN

THE EROSION CONTROL INFORMATION IS INCLUDED IN THE PLAN SET.

DETAILS AND SPECIFICATIONS

THE EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR. LIMIT THE EXPOSED AREA TO ONE ACRE OR AN AREA THAT CAN BE COVERED WITHIN 72 HOURS PRIOR TO ANY SNOW EVENT.

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN PARKING AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 SQUARE-Feet (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 2 DAYS FOR ALL AREAS.

THE CONTRACTOR SHALL INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES
 - STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS./1,000 SQUARE-Feet (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE SHALL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 50 FEET FROM ANY NATURAL RESOURCES.
2. NATURAL RESOURCES PROTECTION
 - ANY AREAS WITHIN 75 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 90% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (L.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 75 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.
3. SEDIMENT BARRIERS
 - DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOOD WASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.
4. MULCHING
 - AN AREA SHALL BE CONSIDERED DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 SQUARE-Feet OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1,000 SQUARE FEET (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

5. MULCHING OF SLOPES AND DITCHES
 - SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS./1,000 SQUARE FEET ON ALL SLOPES GREATER THAN 8%.
 - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR AREAS WHERE THE MULCH IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.
6. SEEDING
 - BETWEEN THE DATES OF OCTOBER 15 AND APRIL 15TH, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF LOAM AND FERTILIZER. ANCHORED MULCH STARTS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND FERTILIZER. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 90% 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.
7. WINTER CONSTRUCTION INSPECTION
 - AFTER EACH RAINFALL, SNOWMELT OR PERIOD OF THAWING AND RUNOFF, THE QUALIFIED CONTRACTOR KNOWLEDGEABLE OF DEP STANDARDS SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. INSPECTIONS SHALL BE PERFORMED A MINIMUM OF ONCE PER WEEK AND SHALL BE CONDUCTED IN ACCORDANCE WITH THE EROSION CONTROL MEASURES AND SITE STABILIZATION WITHIN THE EROSION CONTROL REPORT.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH OR CHANNEL FOR LATE FALL AND WINTER.
 - INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.
 - INSTALL A STONE LINING IN THE DITCH -- THE APPLICANT SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. THE DEPARTMENT SHALL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
 - STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT SHALL MONITOR THE GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST 15% OF THE DISTURBED AREA, THE APPLICANT SHALL RESEED THE SLOPE BY NOVEMBER 1, THEN THE APPLICANT SHALL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.

3. STABILIZE THE SLOPE WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY SEPTEMBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT SHALL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
4. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE COMPOST, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT SHALL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
5. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER UNDERNEATH THE RIPRAP.
6. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE APPLICANT SHALL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
 - STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST 15% OF THE DISTURBED AREA, THEN THE APPLICANT SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.
 - STABILIZE THE SOIL WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
 - STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

MAINTENANCE OF FACILITIES

THE STORMWATER FACILITIES WILL BE MAINTAINED BY THE APPLICANT, AFD PROPERTIES, LLC OR THEIR ASSIGNED HEIRS. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON RESPONSIBLE FOR MAINTENANCE OF THE SEDIMENTATION CONTROL FEATURES DURING CONSTRUCTION AS REQUIRED BY THE EROSION CONTROL REPORT. LONG-TERM OPERATION/MAINTENANCE RECOMMENDED FOR THE STORMWATER FACILITIES IS PRESENTED BELOW.

THE RESPONSIBLE PARTY MAY CONTRACT WITH SUCH PROFESSIONALS, AS MAY BE NECESSARY IN ORDER TO COMPLY WITH THIS PROVISION AND MAY RELY ON THE ADVICE OF SUCH PROFESSIONALS IN CARRYING OUT ITS DUTY HEREUNDER. PROVIDED, THAT THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES ARE HEREBY ESTABLISHED AS A MINIMUM FOR COMPLIANCE WITH THIS SECTION. A MAINTENANCE LOG OF THE INSPECTIONS SHALL BE KEPT BY THE RESPONSIBLE PARTY.

INSPECTION AND MAINTENANCE FREQUENCY AND CORRECTIVE MEASURES:

THE FOLLOWING AREAS, FACILITIES, AND MEASURES WILL BE INSPECTED AND THE IDENTIFIED DEFICIENCIES WILL BE CORRECTED. CLEAN-OUT MUST INCLUDE THE REMOVAL AND LEGAL DISPOSAL OF ANY ACCUMULATED SEDIMENTS AND DEBRIS.

CULVERTS: INSPECT CULVERTS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CULVERTS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, REMOVE ACCUMULATED SEDIMENTS AND DEBRIS AT THE INLET, AT THE OUTLET, AND WITHIN THE CONDUIT AND REPAIR ANY EROSION DAMAGE AT THE CULVERT'S INLET AND OUTLET.

VEGETATED AREAS: INSPECT SLOPES AND EMBANKMENTS EARLY IN THE GROWING SEASON TO IDENTIFY ACTIVE OR POTENTIAL EROSION PROBLEMS. REPLANT BARE AREAS OR AREAS WITH SPARSE GROWTH, WHERE RILL EROSION IS EVIDENT. ARMOR THE AREA WITH AN APPROPRIATE LINING OR DIVERT THE EROSION FLOWS TO ON-SITE AREAS ABLE TO WITHSTAND THE CONCENTRATED FLOW. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

ROADWAYS AND PARKING SURFACES: CLEAR ACCUMULATIONS OF WINTER SAND IN PARKING LOTS AND ALONG ROADWAYS AT LEAST ONCE A YEAR, PREFERABLY IN THE SPRING. ACCUMULATIONS ON PAVEMENT MAY BE REMOVED BY PAVEMENT SWEEPING. ACCUMULATIONS OF SAND ALONG ROAD SHOULDERS MAY BE REMOVED BY GRADING EXCESS SAND TO THE PAVEMENT EDGE AND REMOVING IT MANUALLY OR BY A FRONT-END LOADER. REPAIR POTHOLES AND OTHER ROADWAY OBSTRUCTIONS AND HAZARDS. PLOWING AND SANDING HAY PAVED AREAS AS NECESSARY TO MAINTAIN ADEQUATE FLOW CAPACITY. ANY WOODY VEGETATION GROWING THROUGH RIPRAP LININGS MUST ALSO BE REMOVED. REPAIR ANY SLUMPING SIDE SLOPES AS SOON AS PRACTICABLE. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FILTER FABRIC OR

UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLOADED, CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDESLOPES. THE FACILITIES SHALL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES SHALL BE CORRECTED.

RECERTIFICATION

AS PART OF THE STORMWATER PERMIT, THE APPLICANT IS REQUIRED TO MEET THE STANDARDS IN APPENDIX B OF THE CHAPTER 500 RULES. APPENDIX B STATES THAT A PROJECT MUST SUBMIT A CERTIFICATION OF THE FOLLOWING TO THE DEPARTMENT WITHIN THREE MONTHS OF THE EXPIRATION OF EACH FIVE-YEAR INTERVAL FROM THE DATE OF ISSUANCE OF THE PERMIT.

- (a) IDENTIFICATION AND REPAIR OF EROSION PROBLEMS. ALL AREAS OF THE PROJECT SITE HAVE BEEN INSPECTED FOR AREAS OF EROSION, AND APPROPRIATE STEPS HAVE BEEN TAKEN TO PERMANENTLY STABILIZE THESE AREAS.
- (b) INSPECTION AND REPAIR OF STORMWATER CONTROL SYSTEM. ALL ASPECTS OF THE STORMWATER CONTROL SYSTEM HAVE BEEN INSPECTED FOR DAMAGE, WEAR, AND MALFUNCTION, AND APPROPRIATE STEPS HAVE BEEN TAKEN TO REPAIR OR REPLACE THE SYSTEM, OR PORTIONS OF THE SYSTEM.
- (c) MAINTENANCE. THE EROSION AND STORMWATER MAINTENANCE PLAN FOR THE SITE IS BEING IMPLEMENTED AS WRITTEN, OR MODIFICATIONS TO THE PLAN HAVE BEEN SUBMITTED TO AND APPROVED BY THE DEPARTMENT, AND THE MAINTENANCE LOG IS BEING MAINTAINED.

CHAPTER 500: APPENDIX C -- GOOD HOUSEKEEPING

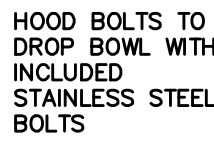
AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE APPROPRIATE USE OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

1. DISCHARGES FROM FIREFIGHTING ACTIVITY;
2. DISCHARGES FROM FIREFIGHTING ACTIVITY;
3. FIRE HYDRANT FLUSHINGS;
4. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
5. DUST CONTROL, RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
6. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
7. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
9. UNCONTAMINATED GROUNDWATER OR SPRING WATER;
10. FOUNDATION OR FOOTER DRAIN--WATER WHERE FLOWS ARE NOT CONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
12. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
13. LANDSCAPE IRRIGATION.

UNAUTHORIZED NON-STORMWATER DISCHARGES. THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C (6). SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

1. WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
2. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
3. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
4. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

SEEDING PLAN		SEEDING PLAN	
PROJECT:	THE BELFORT LANDING	PROJECT:	THE BELFORT LANDING
SITE LOCATION:	BELFORT STREET, PORTLAND, ME	SITE LOCATION:	BELFORT STREET, PORTLAND, ME
TEMPORARY SEEDING		PERMANENT SEEDING	
1. INSTRUCTION ON PREPARATION OF SOIL: PREPARE A GOOD SEED BED FOR PLANTING METHOD USED.		1. INSTRUCTION ON PREPARATION OF SOIL: PREPARE A GOOD SEED BED FOR PLANTING METHOD USED.	
2. APPLY LIME AS FOLLOWS: <u>1/2</u> / ACRES, OR <u>138 #</u> /M SQ. FT.		2. APPLY LIME AS FOLLOWS: <u>1/2</u> / ACRES, OR <u>138 #</u> /M SQ. FT.	
3. FERTILIZE WITH _____ POUNDS OF _____ N-P-K/AC. OR <u>13.8</u> POUNDS OF <u>10-10-10</u> N-P-K/M SQ. FT.		3. FERTILIZE WITH _____ POUNDS OF _____ N-P-K/AC. OR <u>18.4</u> POUNDS OF <u>10-20-20</u> N-P-K/M SQ. FT.	
4. METHOD OF APPLYING LIME AND FERTILIZER: SPREAD AND WORK INTO THE SOIL BEFORE SEEDING.		4. METHOD OF APPLYING LIME AND FERTILIZER: SPREAD AND WORK INTO THE SOIL BEFORE SEEDING.	
5. SEED WITH THE FOLLOWING MIXTURE:		5. SEED WITH THE FOLLOWING MIXTURE:	
50% WINTER RYE		40% CREEPING REE FESCUE	
50% ANNUAL RYE		30% CHARGER II PERENNIAL RYEGRASS	
6. MULCHING INSTRUCTIONS: APPLY AT THE RATE OF _____ PER ACRE, OR <u>75</u> POUNDS PER M. SQ. FT.		20% KENBLUE KENTUCKY BLUEGRASS	
7. TOTAL LIME <u>138 #</u> /1000 SQ. FT.		10% TIFFANY CHEWINGS FESCUE	
8. TOTAL FERTILIZER <u>13.8 #</u> /1000 SQ. FT.		6. MULCHING INSTRUCTIONS: APPLY AT THE RATE OF _____ PER ACRE, OR <u>75</u> POUNDS PER M. SQ. FT.	
9. TOTAL SEED <u>1.03 #</u> /1000 SQ. FT.		UNIT # TONS, ETC.	
10. TOTAL MULCH <u>75 #</u> /1000 SQ. FT.		7. TOTAL LIME <u>138 #</u> /1000 SQ. FT.	
11. TOTAL OTHER MATERIALS, SEEDS, ETC.		8. TOTAL FERTILIZER <u>18.4 #</u> /1000 SQ. FT.	
12. REMARKS		9. TOTAL SEED <u>1.03 #</u> /1000 SQ. FT.	
		10. TOTAL MULCH <u>75 #</u> /1000 SQ. FT.	
		11. TOTAL OTHER MATERIALS, SEEDS, ETC.	
		12. REMARKS	
SPRING SEEDING IS RECOMMENDED; HOWEVER, LATE SUMMER (PRIOR TO SEPTEMBER 1) SEEDING CAN BE MADE.			
PERMANENT SEEDING SHOULD BE MADE PRIOR TO AUGUST 5 OR AS A DORMANT SEEDING AFTER THE FIRST KILLING FROST AND BEFORE THE FIRST SNOWFALL. IF SEEDING CANNOT BE DONE WITHIN THESE SEEDING DATES, TEMPORARY SEEDING AND			



SERIES	DROP PIPE DIAMETER				ANCHOR BOLT QUANTITY & TYPE
	WIDTH "A"	DEPTH "B"	HEIGHT "C"		
A6	6"	12"	11.1"	8.8"	4 - 1" TAMP-IN

1. INSIDE DROP BOWL SHALL BE A RELINER DROP BOWL AS MANUFACTURED BY DURAN, INC.
2. RELINER INSIDE DROP BOWLS ARE FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.
3. USE RELINER STAINLESS STEEL PIPE BRACKETS TO SUPPORT DROP PIPE. EXTERNAL PIPE COUPLER REQUIRED. PROVIDE SWEET AT DROP PIPE OUTLET.

NOT TO SCALE



1) CONTRACTOR TO PROVIDE SHOP DRAWINGS OF SLAB DESIGN INCLUDING GLOBAL STABILITY, AND ANTI FLOTATION DESIGN STAMPED BY A MAINE LICENSED PROFESSIONAL ENGINEER

NOT TO SCALE



1. PIPE SIZE & TYPE AS NOTE ON THE PLANS.

NOT TO SCALE

Professional Engineer Seal for Douglas E. Reynolds, State of Maryland, No. 9886, dated 2/24/25.

Rev.	Date	Revision
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RESPONSE TO LOCAL COMMENTS	2/24/25	DER
LOCAL SITE PLAN APPLICATION	12/4/24	DER
Issued For	Date	By

Design: AJK	Draft: CJG	Date: NOV 2024
Checked: DER	Scale: AS NOTED	Job No.: 4292
File Name: 4292-DETAILS.dwg		

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South Portland, ME 04106

Drawing Name:	Pump Station Plan and Details
Project:	The Belfort Landing 1582 Forest Ave, Portland, Maine
Client:	ACRE Properties 27 Cypress Street, Portland, Maine 04103

C406

Mitchell Thomas <mitchell.t.sacks@gmail.com>

Apr 4, 2025, 3:29:24 PM (3 days ago)



to planningboard@portlandmaine.gov, Eric Freeman

Hello Planning Board,

In addition to my prior comments regarding the proposed 50-unit, two-building residential development of 1584 Forest Ave (Plan Number: PL-003161-2024).

Pursuant to Title 23, Section 704-A < <https://www.mainelegislature.org/legis/statutes/23/title23sec704-A.html> > Acre Properties will likely be required to obtain a Traffic Movement Pattern Permit prior to beginning any construction. In addition, we are hopeful that upon review of the permit application, Maine DOT will agree that the roadways near this development fail to meet our State's transportation safety standards for the volume of traffic this development will create.

I am looking forward to reviewing the results of the traffic study.

Best,
M. Sacks

Nicola Kerley <nicolaakerley@gmail.com>

Apr 5, 2025, 2:23:13 AM (2 days ago)



to planningboard@portlandmaine.gov

Hello,

I own a property on Iffley St with entry through the Belfort and Verril St

I am very concerned about the size, lack of proposed parking, and building time for the proposed development.

I do not wish for this development to negatively effect my tennents and neighbors.

This new proposed residence, even just on paper, does not seem decent for new incoming tennents of the proposed development, as it is proposed to have the absolute minimum parking allotment per unit with only one entrance and exit at the top of Belfort st. Effecting the whole block with a dangerous amount of traffic.

The last time a building proposal was made in the area of this scale, it was turned down due to ground stability.

This new developer has done a private study, that I do not trust, based on living through that early 2000s proposal's denial. But zoning arbitrarily changed change quietly last November without updating any city websites, or locals within the area until January.

I worry about possible flood and collapse of something to that scale down the line.

This proposed development is also directly in front of the Gerald E. Talbot Community School (formerly Riverton Elementary). Which would be fine, if the building time wasn't a proposed 18 months straight. Effecting the learning of every child that attends that elementary school for two school years, in a time where these kids are still getting their test scores up from the pandemic.

As a kid who grew up on Iffley St; in the past, houses construction was only done in the summer. I remember a house taking a couple of years to build on Verril St, because they only did construction outside of the school year.

At that time our test scores as a state were in the top 5 of the country. We're circling the bottom now. So why would we actively, as a city, work to curb the education further by creating a distraction to these kids for more than one full school year?

I am also very concerned that this proposed development is being touted as "lower income housing" (something the state truely does need), but will cost individual units pay more than the two story house I currently own and rent out.

How are people in lower income ever be able to afford 800 sqft units, if the rent is more expensive than the rent of a two story house on the same block?

Why should anyone pay more for a 800 sqft unit than a two story house?

Why should anyone pay more for a 800 sqft unit in Portland, ME than I do in the San Francisco Bay area, CA? (I am not on any lower income housing in California, and the proposed rent for a single unit is more than my apartment rent where the minimum wage is CONSIDERABLY higher)

I say this, as I love my home city and i care for my tenants. I do not see simply being a landlord or property owner as a job to earn from. Their rent goes directly to property tax, stormwater, etc. It is only my responsibility to ensure that my tenants are comfortable and content with their residence, until I personally come back home and retire there. No one that actually lives in the area is happy with the size or proposed construction of the development, let alone my tenants who will be directly effected by the construction and traffic created by said proposed development.

In the attached photos, is example of how clogged the street can already get without this new development

I'm surprised that an "unbiased" traffic study was done in one day for 6 hours, instead of having a thorough data pool over days.

I'm not surprised, a decibel reading from the classrooms of the school to construction sounds of where the development is proposed was and probably will not be done, with how these kids education is being treated.

I personally, would be okay with a 5-10 unit development- less risk for building, construction, and would make it easier to charge less for rent- more possibility to have a least two parking spots per unit and/ or guest parking- good for any possible tenants of a state that snows- and an exit route to ALSO be on to Forest Ave - to relieve traffic from Belfort St-

The developer took these suggestions as a personal affront, instead of any form of compromise.

Stating, "I don't care, the state will pay me."

Overall leaving a horrible impression for my tenants, old & newer current neighbors, and myself. Especially since the properties were mostly bought off of our deceased and/or widowed neighbors to essentially create personal issue for those alive, instead of creating actual support to those who could actually use it.

That's like if I had jacked up the rent of my property, and removed the driveway just because my parents are dead. And said, "I don't care, I'll have more money."
I could. Legally. It would only be unconscionable.

I beg for your and the planning board's consideration on this matter to be for the people that live there.

All the Best,
Nicola

Belfort Landing

0 views

Subscribe **Amy Walsh** <amyotrl7@gmail.com>

Apr 6, 2025, 5:11:22 PM (15 hours ago)

to Eric Freeman, planningboard@portlandmaine.gov

I am writing this to you to voice my concerns about Belfort Landing. Many of my neighbors have addressed the traffic implications both for the potential residents and the current residents. Was the traffic study done when school is in session or during commuting hours where the entrance and exit would be for the potential residents? What about sidewalks? There are no sidewalks on Belfort Street.

The developer has continually broken the law and proudly admitted it by entering and exiting the property where he's not allowed to. How can you be sure that he'll adhere to rules and regulations, along with the contract with the city to build an additional 50 apartment units?

I hope that something can be worked out. I have lived in this neighborhood for over 28 years. I'm not against adding housing that would complement our neighborhood. All houses on Belfort Street are single family homes.

Thank you,
Amy Walsh
138 Belfort Street
Portland, ME. 04103

Debbie Papps <debappas@gmail.com>
to planningboard@portlandmaine.gov, Eric Freeman

Apr 6, 2025, 5:09:42 PM (15 hours ago)



Dear planning board members and Eric Freeman,

I am writing to voice my concerns about the 50 unit Belfort street project. I am very concerned about exiting Belfort street with the additional cars from the apartment complex. It is already difficult to turn left from the top of the street during higher volume traffic times. It is especially difficult to exit Belfort street and turn left during the summer months.

Can there be a traffic study done during the summer months?

I believe we will be trapped in a long line of cars trying to exit. Belfort st is our only exit. It is a very congested intersection with added traffic of people parking on Belfort to access Moran's Market and Marietta's business with their several large vehicles that park on the street at times.

Can there be a traffic light added so that Belfort street can have a safe exit and entry?

Can there be no parking signs put on the top of Belfort street to make that area (entry and exiting) safer and less congested?

If so, will the no parking areas be enforced?

I am also concerned about pedestrian traffic and safety for pedestrians. With added vehicles parking on Belfort st and added vehicles using the road, it will make walking in our neighborhood less enjoyable, more stressful and impact safety of everyone. We have many young children in our neighborhood and I am concerned for their safety as well as the children walking and biking to the school.

Can the project be reduced?

Can sidewalks be added to increase safety?

Can there be a lighted crosswalk at the top of Belfort st to go across the street? Although there is a crosswalk, many cars do not stop and it can be dangerous for pedestrians.

Sincerely

Debbie Papps
138 Belfort street
Portland ME
04103

Belfort Landing Development 0 views

Subscribe 

Geoff Wahome <geoffwahome10@gmail.co...
 Apr 6, 2025, 11:58:07 PM (8 hours ago)
 to planningboard@portlandmaine.gov, Eric Freeman



Dear Members of the Planning Board,

I'm writing as a longtime resident and neighbor in the Belfort/Empire/Verrill/Iffley neighborhood to express my deep concerns regarding the proposed Belfort Landing development. While I appreciate the city's ongoing efforts to address Portland's housing challenges, I urge the Board to carefully consider the outsized impact this particular 50-unit proposal would have on a small, residential neighborhood that was never intended to absorb development of this scale.

As a local healthcare worker and rental property owner, I see firsthand both the need for affordable housing and the importance of thoughtful, appropriately scaled development. It's possible and necessary to do both. This plan, as currently presented, fails to strike that balance.

The proposed project would increase the population density of our immediate neighborhood by roughly 65%. That is a staggering figure for such a compact and established residential area. While housing is needed, it must be developed responsibly aligned with infrastructure capacity and neighborhood character.

Among the most pressing concerns are the impacts this development would have on traffic, safety, and the physical environment of the neighborhood. Our narrow residential streets — which lack sidewalks — were never designed to support the volume of traffic that 50 new units would generate. The project proposes an insufficient number of off-street parking spaces, leading to inevitable spillover, particularly on Belfort Street. This would further congest an already tight road and significantly increase the risk of accidents. The absence of sidewalks makes the situation even more dangerous for pedestrians, including children who regularly walk along Belfort to access a path off Empire Way on their way to school and the community center. The steep incline on Belfort, combined with limited visibility at the top, poses a serious hazard. A neighbor has already been struck by a car while biking up the hill — a troubling warning of the increased risks that would accompany greater traffic. Additionally, the proposed grading and substantial retaining walls required to elevate the buildings could increase runoff and flooding for neighboring homes during heavy rain. The scale and height of the new structures would also disrupt privacy, reduce access to natural light, and dramatically alter existing sightlines — changes that would feel abrupt and out of character with the surrounding neighborhood.

As mentioned above, as someone who manages rental units throughout Portland, I understand the real housing pressures facing our city — especially for younger renters and working families trying to establish themselves here. However, this project does little to address those needs in a meaningful way. Only a small fraction of the 50 proposed units are designated as affordable. The remainder are market-rate and add to an already saturated mid-tier rental market, where supply is outpacing demand and vacancies are on the rise.

What's more troubling is the developer's apparent unwillingness to engage with the community in good faith. At a neighborhood meeting attended by Councilor Kate Sykes, residents voiced legitimate concerns about pedestrian safety, parking limitations, and the overwhelming scale of the project. Rather than address these concerns with respect and openness, the developer responded dismissively — saying, "Life will go on." When one neighbor raised the serious risks posed by increased foot traffic on streets lacking sidewalks, he replied, "I could get hit by a bus tomorrow; foot traffic is dangerous," only further highlighting a troubling disregard for the real, everyday experiences of those who actually live here.

And when asked about scaling back the project to better align with the neighborhood, his response reflected neither collaboration nor compromise. Instead, he suggested he could build something even larger under the city's new zoning allowances — and added that the neighborhood should be "grateful" for what's currently proposed. He went on to admit that he lacks experience with developments of a larger scale and is not fully familiar with the additional permitting requirements such a project would involve. This admission makes it clear that the decision to propose 50 units is not the result of thoughtful consideration for the neighborhood, but rather a limitation of the developer's own experience.

This neighborhood is not opposed to development—but we are asking for development that fits. That respects the realities on the ground. That enhances the community rather than overwhelms it. The current iteration of Belfort Landing does not meet that threshold. I respectfully urge the Planning Board to deny approval for the project as it stands, and instead advocate for a scaled-back, community-aligned plan.

Thank you for your consideration and continued service to the city.

Sincerely,

The Wahomes

Jacquie Delano <jacquiedelano@gmail.com>

Apr 6, 2025, 6:08:50 PM (14 hours ago)



to planning@portlandmaine.gov

I am totally against this project. There's not room for this or the traffic that will occur from this proposal. More importantly, it is next to an elementary school! The infrastructure has been compromised enough! I can not get onto Forest Avenue to take a left easily as it is now at least a five minute wait! What a nightmare this addition will cause. Have any of you taken the time to do a study on this project? Enough is enough! Start behaving responsibly!

Jacqueline Delano
111 Beverly Street

Jeff Heller <jeffheller78@hotmail.com>

Apr 6, 2025, 7:54:48 PM (12 hours ago)



to planningboard@portlandmaine.gov, Eric Freeman

I'm writing to express concerns over the scale of this proposed project.

The physical size of the buildings, the number of units & the lack of sufficient parking are all inappropriate for the well being and safety of this already densely packed neighborhood.

The major increase in population & traffic within this small area will threaten the safety of pedestrians & school children, increase the likelihood of traffic accidents, and make Belfort, Iffley, Verrill & Empire Streets impassable for delivery, emergency, and city vehicles like snow plows & trash/recycling.

Belfort Street has no sidewalks which means our street will become even more dangerous with the increase in traffic and on-street parking due to insufficient parking on-site.

With only 1 way in and 1 way out of Belfort Street, how will we residents come and go during construction, with streets possibly being torn up?

I also have major concerns about the dangers of erosion surrounding the severe grade elevation that will be needed, and question whether there is sufficient stormwater capacity in place.

The developer, Alex Coupe, cannot be trusted to follow the law as he's already demonstrated by continually and illegally accessing the property site via the Talbot School road (See attached photos).

This demonstrated disrespect for the law, which he openly admitted to at a neighborhood meeting at Talbot School in February, undermines any confidence that he will follow any other rules or laws or do things the right way.

The recent traffic study that Coupe had done is full of errors and inaccuracies, and was conducted during a very slow traffic time, so the results are misleading in addition to inaccurate, and therefore should not be accepted, and an accurate one should be done during more typical traffic conditions.

Bottom line is we all want more people to have the opportunity to find decent housing, but it's imperative we do this in a responsible way that respects the rights and well being of all parties involved. A much smaller development I'm sure would be welcomed by all.

Thank You,
Jeff Heller
64 Belfort Street





Kate Sykes <ksykes@portlandmaine.gov>

Apr 6, 2025, 9:30:39 AM (23 hours ago)



to Rachelle Lambert, planningboard@portlandmaine.gov, Alex Coupe

Dear Neighbors,

I want to take a moment to thank and commend you all for the thoughtful, organized advocacy you've brought forward in response to the proposed Belfort Landing development.

Your traffic experiment vividly demonstrated the very real concerns about congestion and pedestrian safety, and it reflects the kind of grassroots engagement that makes our city stronger.

Many of the concerns you've raised about street capacity, lighting, public safety, walkability, and neighborhood character are concerns I share. Your leadership in raising these issues is exactly what early engagement is meant to encourage, and city staff have taken notice.

Higher density residential development in District 5 is essential to address the present housing crisis we face, but it must be done with care and with the community in mind. I believe this area of Riverton has the potential to become a vibrant village center—something that could benefit everyone—but only if projects are designed in a way that is sensitive to the people already living here.

It is important to note that the developer's application includes fewer units and less height/mass than the maximum allowed, more on-site parking than required by code, and several features to mitigate environmental and traffic impacts. While this may not reflect all that neighbors have called for, I believe it signals a willingness to engage with community concerns and work within a framework that meets or exceeds certain city standards. Planning staff have also made several constructive recommendations to improve pedestrian access, lighting, landscape buffers, and more, which I hope will be adopted.

Although City Councilors do not have authority over Planning Board decisions, I have been in communication with staff and the developer to raise the issues you've brought forward and find solutions. I will be attending the Planning Board meeting remotely on Tuesday and continuing to follow this closely.

I'm deeply appreciative of your efforts and the spirit in which you've organized. This work is laying the foundation not just for a more thoughtful development, but for a stronger, more connected Riverton, one where neighbors shape the future together. No matter what comes next, your efforts are already making a lasting impact.

With gratitude,
Kate

Kate Sykes (she/they)
Councilor, Dist. 5
City of Portland
389 Congress Street
Portland, Maine 04101
ksykes@portlandmaine.gov
c: 207.558.5764

Read the [District 5 Insider](#) newsletter and keep up to speed on issues working their way through Council Chambers.

Notice: Under Maine law, documents - including e-mails and text messages - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail/text could be released to the public and/or the media if requested.



Alex Coupe <alex@danandersonrealestate.com> Apr 6, 2025, 11:09:16 AM (21 hours ago)
to Kate Sykes, Rachelle Lambert, planningboard@portlandmaine.gov



Thank you Kate. Per the current zoning...

As is, 66 units are allowed with the base zoning density. The density for additional affordable units increases to 72 units when 10-19% of the total units are low income or workforce units; and 82 units at 20-29% and 85 units at 30-49% and 165 units at 50-100% respectively. This is per table 17-B on page 17-5 of the land use code.

I appreciate your efforts in this project and recognizing that I am considering the neighborhood by scaling down to an appropriate size for the lot and to allow parking on site.

Alex

Lee Doucette <lfdoucet@gmail.com>

Apr 6, 2025, 8:35:53 PM (12 hours ago)



to Eric Freeman, planningboard@portlandmaine.gov

Mr. Freeman and Planning Board members,

After reviewing the site plans and attending the several local discussions of the proposed multi-unit Belfort Landing development, I join with the other residents of Belfort/Empire/Verrill/Iffley streets and neighborhoods surrounding the Talbot school in asking that you consider either denying this development, or at least require a reduction in scope for the number of units to be permitted.

As residents of 33 Belfort Street, my wife and I will experience the most direct and immediate negative impact if this development is approved in whole or in part. While I certainly recognize the need for additional housing in Portland, I also agree with and support the questions, concerns, and frustrations presented so well in previous letters to you and the Planning Board by other neighborhood residents about this project.

Of special concern to me is the additional traffic congestion, street parking issues, and most importantly, pedestrian safety for parents and children walking to and from the Talbot school along Belfort Street. All three issues are well highlighted in the photographs included in Grant Chamberlain's letter to the Planning Board on 2/25/25 showing how narrow Belfort Street becomes if parking occurs on both sides of the street during winter months.

There are a couple more issues I want to address with the aid of photographs.

1) regarding the photograph on page 3 of the posted document for 1584 Forest Avenue Planning Board Workshop|April 8, 2025, labeled as "Figure 3. Street View image of the site at the location of the proposed driveway". The actual location of the property lot to be used for the proposed driveway is in fact thirty feet immediately downhill to the left of the posted picture (only eight feet from my house!!), and can be confirmed by review of Figure 4: Overall Site Plan on page 4 of the document.

My photograph labeled Pic1 Street Entrance View below shows the actual proposed driveway entry point with proximity to my house. The blue post indicates the location of the existing water main supply connection point to the development from Belfort Street, which will be the approximate midpoint of the proposed development driveway. I'm willing to give the developer the benefit of the doubt on this incorrect 'detail', but feel the document needs to be updated with a corrected photograph. Hopefully, this will prove to be the only erroneous or missing 'detail' in such a large plan.

2) concern for traffic flow/vehicular safety at the proposed driveway entrance onto Belfort Street. The current elevation on a downhill slope at the proposed driveway entrance allows a very limited, short-range view of south-bound traffic coming downhill from Forest Avenue. My photograph labeled Pic2 View to Forest Ave below shows the view looking uphill toward Forest Avenue from the proposed development driveway. This situation is inherently dangerous under the best of conditions, but would be significantly worse in the event of a slick roadway due to an ice or snow event. I've personally witnessed many vehicles unable to go 'upgrade' on that short section of street under icy/slick conditions during the 30 years I've lived there. I'm sure residents would face similar challenges when attempting to turn into the entrance under such conditions.

Projects such as this are certainly necessary and worthy of our collective consideration, but so is the wisdom needed to achieve an appropriate balance for the concerns of the residents and citizens most directly affected by such projects. We rely on your good judgement in finding that balance for everyone involved.

Thank you and the Planning Board members for your consideration of our views, and for your service to the citizens of Portland in these important matters.

Leroy F. Doucette
33 Belfort Street, Portland ME

Pic1 Street Entrance View



Pic2 View to Forest Ave



Liz Berg <lbfmgmt@yahoo.com>

Apr 6, 2025, 1:10:23 PM (19 hours ago)



to Eric Freeman, planningboard@portlandmaine.gov

Dear Eric [et.al.](#),

I plan to attend Tuesday's planning board meeting to give comment on this proposed development. Some of my issues include:

- * a 65 - 70% increase in population density in the neighborhood of Belfort/Empire/Verrill/Iffley Streets. An absurdly big increase no matter which angle you look at it from. And all the inevitable change that that brings.
- * Excessive traffic and parking issues on a street that is too small to handle the increase.
- * Pedestrian traffic safety - school children who walk up and down Belfort to/from their school bus. The hilly part of Belfort presents a particular safety concern. Vehicles coming up that small hill do not have good visibility to what is at the top, and there is a LOT going on up there.
- * Life-safety issues especially in winter when Belfort St. becomes only 10 - 11 Ft. wide due to snowbanks. There are many aging-in-place residents who have the rightful expectation of timely access to emergency services. More and more of us plan to age in place, so the need for emergency services will likely increase. In its current iteration, this development will certainly result in a narrowing of the carriageway coming up or down Belfort St. We risk restricted access for emergency services, and it's a risk we must not take. Portland has at times been reactive rather than proactive. The Noyse St. fire and the 6 sad deaths that occurred there prompted the inception of the Housing Safety Office. Let's not create the opportunity for loss of life.
- * Grading/Elevation of proposed structures:
The increase in impermeable surface combined with the excessive height of the retaining walls required to bring the foundations up to the proposed levels may create unintended flooding of the homes just below the development during heavy rain events (increasingly frequent). Transition from existing home levels to new grade would compromise privacy, light, and the traditional height standards of the area. The new building would be way out of character for the neighborhood, and would pose privacy and light degradation for existing homes just below the lot.
- * Loss of wildlife habitat including eagles, terns, salamanders, eastern cotton tail rabbits, foxes, myriad birds, opossums, and more, all of which have been observed within this small parcel of wooded green space.

As a rental property manager, I understand the serious lack of housing for low income and young renters. I see it first hand all day long, for 20 years. This plan doesn't do enough to address that shortfall. Thirteen new units of affordable housing is an excellent idea, but the other thirty-seven are simply not needed. Every day for the past six months [zillow.com](https://www.zillow.com) shows between 240 and 300+ available units in Portland, and the list prices are beginning to come down, indicating there is a softening in demand, particularly in the mid-range unit (\$1,800 - \$3,000 per month).

The developer seems unwilling to discuss a scaling back of the plans to a more appropriately sized structure(s). He has little regard for the neighborhood's concerns. Since his plans fit within the new zoning specifications he feels totally justified. We are relying on the planning board to use common sense and good judgement here. While the plans may fit within the legal parameters of the new zoning code, they do not fit the neighborhood and they should be scaled back to an appropriate size. We welcome a development of an appropriate size. Please do not approve the Belfort Landing

plans in their current configuration. Please, do not allow this. Good judgement requires that this plan be modified or scrapped.

Thank you for your consideration.

Elizabeth C. Berg

[Liz Berg](#)

[Landlord's Best Friend Property Management](#)

[cel. 207.272.2922](#)

www.landlordsbestfriend.com

Riverton for All 0 views

Subscribe 

Strategic Development For Riverton <rivertonforall... Apr 6, 2025, 2:48:03 PM (17 hours ago)
to ksykes@portlandmaine.gov, planningboard@portlandmaine.gov, Eric Freeman



Hello --

In response to Ms. Sykes recent email that has quickly circulated throughout the Riverton community regarding the development at 1582 Forest Ave: <https://portlandme.portal.civicclerk.com/event/7569/files/attachment/25676>

We appreciate that Ms. Sykes believes development must be done with care and with the community in mind - we agree! We also agree that Riverton has the potential to become a vibrant village center—something that could benefit everyone—but only if projects are designed in a way that is sensitive to the people already living here! We share this mindset with our neighbors and it appears the Planning Board does as well having provided many recommendations to Alex for how to better his project for all of Riverton. So thank you Ms. Sykes & the planning board!

Unfortunately, where we disagree is whether Alex Coupe (Acre Properties) recognizes the need for community based collaboration during the development process. Alex has an opportunity to add tremendous value for not only himself, but the Riverton community, and greater Portland. The sooner Alex realizes self-serving development at the expense of the community is not the answer – the more his business will thrive, the more his relationship with City government will strengthen, and the better Portland can become. As we are all aware (*Ms. Sykes, the board, the community*), Alex has consistently and quickly shot down any project recommendations that could greatly improve it's impact on the community - **we please ask that the community is not manipulated into a narrative that indicates otherwise**. As Ms. Sykes is likely already aware, having attended the prior community meeting, Alex's arrogance & philosophy to business has ultimately prevented him from doing anything other than fulfilling a need for self-satisfaction & self-service. For these reasons (*and many other reasons*) this project will ultimately devastate the community, become an everlasting stain on Ms. Sykes resume, and a failure in the eyes of all Riverton Residents. Professional management and visionaries who think long-term are essential for our community as it grows. Despite how Alex will "sell it" come Tuesday's workshop, Alex does not care about "bringing more housing" to Portland but rather how much money can be made - duh, that's capitalism!! We believe that recommendations from the board, community, or Ms. Sykes herself will not be adopted into the development of Belfort Landing and this is what scares us the most. Thus far, we have had absolutely no voice in this development and it appears to us it benefits only the agendas of a select few. The residents of Riverton have the most to gain or lose from this development and as it stands today, we are overwhelmingly on the losing end. On the other hand, Alex can only gain. There is an incredible amount of asymmetry in our outcomes.

"A life [community] saved is a statistic; a person [community] hurt is an anecdote. Statistics are invisible; anecdotes are salient." -- Nicholas Taleb [modified]

We know Ms. Sykes is passionate about bringing more housing to Portland, so are we! We BEG that she doesn't use our neighborhood as a line item on the next update to her resume at our expense. What might look good on paper, isn't always good in practice. We beg her to target her energy towards making ALL of Riverton a better place. **We understand Ms. Sykes motivations. It's much easier to sell "look what I did" versus "look what I avoided".** In this spirit, we hope Ms. Sykes can help our community avoid a decades long disaster while at the same time making it better - development is certainly needed in this area but how it's done matters so much more than the act of development itself.

We agree that the Riverton area can become a vibrant community center like many others in the Portland area – Stevens Ave from Deering High School to Evergreen Cemetery come to mind. Personally, I'd love to have some small family owned café's, coffee shops, markets, or restaurants to walk to - it's not a very vibrant area of Portland today. How can we, the people, create a vision for Riverton!? We are all ears.

Sincerely,
Riverton For All

Tim Hallowell <timothy.hallowell@gmail.com>

Apr 6, 2025, 9:21:11 PM (11 hours ago)



to Eric Freeman, planningboard@portlandmaine.gov, ksykes@portlandmaine.gov

Hello Eric and the Planning Board members,

I'm a resident of the Belfort neighborhood (45 Iffley Street) and wanted to make my concerns about the Belfort Landing project known. There are a wide variety of valid concerns and questions that have been brought up by the community, so I will try to focus on those that affect me most directly.

The parking solution the project proposes seems likely to cause a variety of negative effects on both Belfort Street and the nearby elementary school. There's not enough parking for all the residents, let alone any visitors. The street is not designed for cars to be parked on both sides of the road - there are no sidewalks, and cars can't drive side by side even when there is no snow on the ground. There's no doubt that if the project is approved with the current ratio of parking spots to units, there will be a significant increase in street parking along Belfort. Also, nearby Talbot elementary suffers from a lack of parking and parking enforcement as-is, but it would likely be affected by overflow parking as well.

On a similar note, the neighborhood becomes unsafe for pedestrian traffic at a certain point. The entrance to Belfort is relatively congested already with people exiting Moran's from the side-entrance and business vehicles frequently parked along the other side of the street. With a single entrance planned to open up in the middle of a residential neighborhood, there will be a noticeable increase in traffic entering and exiting the street. This in combination with the lack of sidewalks and increase in street parking are a dangerous mix of variables, and one that seems in direct opposition to the city's "vision zero" plan for pedestrian deaths.

Despite the updated zoning, it should be obvious to anyone that passes through the neighborhood that a 50 unit, multi-family housing unit is not "in scale" with the surrounding residences and businesses. It literally doubles the number of households for the entire Belfort neighborhood. I understand the need for affordable housing and that something needs to be built here, but it needs to be done in a way that doesn't destroy the character of the neighborhood or flood any one area with too many new residents. Plans for a smaller number of units or some additional commercial space seem like a welcome addition to the neighborhood, but the current proposal does not seem manageable.

I hope that we can come to a better agreement on what should be built on Belfort Street, one that benefits that community here and the city as a whole. At the very least, I hope that we can propose a safer way to implement the project in terms of the pending traffic situation for the entire neighborhood.

Thank you,
Tim Hallowell

Kyle Gahm <kyleg@baileysign.com>

10:56 AM (1 hour ago)



to planningboard@portlandmaine.gov, Eric Freeman

Dear Members of the Portland Planning Board,

I'm writing as a resident of Belfort Street to express serious concerns regarding the proposed 50-unit apartment complex, Belfort Landing. My wife, our 9-month-old daughter, and I live directly adjacent to the proposed site, and the impacts of this development raise significant issues for us and many of our neighbors.

One of the most pressing concerns is the proposed elevation change. Raising the grade by 8–10 feet above its current level will drastically alter the landscape. This not only eliminates all privacy for the homes directly behind the complex, but it will also likely cause stormwater runoff into our backyard and those of our neighbors. This introduces potential flooding and drainage issues that must be thoroughly evaluated before any approvals are made.

Equally concerning is the traffic impact. Belfort Street is a narrow residential road with very limited street parking. The proposed complex includes only 50 parking spaces for 50 units, which realistically will not accommodate all residents and visitors. Overflow parking will spill onto Belfort Street, leading to congestion and serious safety concerns—especially in the winter. In fact, a recent neighborhood test where cars were parked on both sides of the street proved that plow trucks could not pass through. Emergency vehicle access—fire trucks, ambulances—would also be severely hindered.

Additionally, the proposed entrance and exit for the apartment complex being placed directly on Belfort Street will further increase traffic on an already overburdened street. This poses a significant danger to pedestrians, particularly the many children who walk to the nearby elementary school. Belfort Street has no sidewalks, and our neighborhood is home to over ten families with infants under a year old—many of whom regularly walk with strollers. The increased traffic volume raises real safety concerns that must be addressed.

Lastly, I'd like to raise a concern about the zoning process. While this area was recently rezoned to accommodate this development, all existing homes on Belfort Street remain under more restrictive zoning, limiting our ability to make reasonable property improvements such as fences, additions, or decks. It's disheartening to see the city allow a project of this scale that clearly does not align with the character of the neighborhood, while the rights of existing residents continue to be restricted.

This proposal appears to prioritize development goals over the well-being of the community. It's crucial that the city not lose sight of the people and families who already live here and have built their lives in this neighborhood. I respectfully urge the Planning Board to reconsider the impact this development will have on the surrounding area and to engage with residents in a meaningful way before moving forward.

Sincerely,

Kyle Gahm

Resident of Belfort Street

Kyle Gahm

Sales Consultant

Bailey Sign Office: (207) 774-2843 ext. 3119

Welch Sign Office: (207) 883-6200



Kyle Gahm <kyleg@baileysign.com>
to planningboard@portlandmaine.gov, Eric Freeman

11:19 AM (10 minutes ago)



Dear Members of the Portland Planning Board,

I'd like to follow up on the email I sent regarding the proposed Belfort Landing development to provide some additional details that I believe are important for your review.

One of our most serious concerns is the combination of the proposed elevation change and the dramatic increase—over 1,000%—in impervious surface area. Raising the grade by more than 8 feet, along with the addition of tens of thousands of square feet of impervious surfaces, will significantly alter the natural landscape and surrounding environment. This change would eliminate all existing privacy for the homes directly behind the development and is highly likely to result in stormwater runoff into our backyard and those of our neighbors.

According to the development plan, our property lies directly in the projected path of stormwater, rainwater, and septic runoff—an undue and unacceptable burden to place on residents. The risk of flooding and long-term drainage issues is considerable and deserves thorough engineering review and environmental evaluation prior to any potential approval.

Additionally, I would like to raise a critical zoning question: why is the developer not utilizing the more than 50 feet of street frontage they currently own on Forest Avenue for vehicular access? If access from Forest Avenue is not feasible, then it must be determined whether the parcel still meets the RN-5 zoning requirement for 50 feet of street frontage. This is a key issue that warrants clarification before any decisions are made regarding the project's compliance and viability.

Thank you again for your time and consideration. I appreciate your attention to the concerns of residents directly affected by this project and trust that the Planning Board will take all of these serious impacts into account during its review.

Sincerely,

Kyle Gahm

Kyle Gahm

Sales Consultant

Melissa Blanchard <joelmissy1968@gmail.com>
to planning@portlandmaine.gov, Melissa Blanchard

Apr 6, 2025, 10:17:11 PM (10 hours ago)



April 6, 2025

Dear Planning Board Members,

My name is Melissa Blanchard, and I reside at 144 Belfort Street. My family has lived in this neighborhood since 1947, and throughout these years, I have felt safe and peaceful living here. In the 1970s, I opposed the construction of trailer parks in our neighborhood. Two neighbors advocated for building a school instead, which resulted in Riverton School—a beautiful compromise that benefited the community. When Riverton School opened, I was in third grade, and it was a wonderful addition to our community. Later, I opposed the construction of Walmart behind Belfort and Iffley Streets due to concerns about wetlands, and safety for Riverton School children. I am also strongly opposed to Alex Coupe building anything on Belfort Street other than single-family homes. This is the only compromise I am comfortable with for many reasons. As a tax-paying citizen of this neighborhood, I urge planning board members to preserve the safety, peace, and tranquility of Belfort Street. This area is not suitable for a 50-unit apartment complex.

I respectfully urge the Planning Board to require Alex Coupe to find a different location for this housing project. The proposed development on Belfort Street negatively impacts the residents who are paying taxes to live in this neighborhood as it is now.

After reviewing the traffic study associated with this project, I believe it was conducted inaccurately. I request that the Planning Board commission an independent agency—unaffiliated with Alex Coupe—to perform a new traffic study during peak hours when children are going to school and residents are commuting to work. The Planning Board members observing Belfort Street during its busiest times will provide valuable insight before making any decisions that could negatively affect our lives.

Additionally, I have concerns regarding parking and occupancy limits per unit. If residents of the proposed complex own multiple vehicles, they may park on Belfort Street or at Talbot Elementary School. This issue must be addressed to ensure it does not happen. Putting up no parking signs is not the answer.

The traffic impact, grading concerns, and stormwater drainage associated with this project are significant concerns and could have devastating effects on Belfort Street and its residents. Homes directly adjacent to the proposed development would lose privacy and may force families to leave the neighborhood—an inconsiderate outcome for current residents paying taxes here. To preserve our neighborhood's character and safety, this project should be scaled down to single-family homes only. A traffic light must be put at the top of Belfort Street to ensure we can get out onto Forest Ave. for work, and Alex Coupe must ensure that fire trucks can enter the facility and ambulances could get to the end of Belfort Street when emergencies arise. With the possibility of multiple cars from

his 50 Units parked on both sides of Belfort Street, Fire trucks may not be able to get to the end of Belfort Street in cases of emergencies in a timely manner.

While I am not opposed to building apartment complexes in general, Belfort Street is not an appropriate location for such development. Please prioritize what is right for our neighborhood by preserving its peace and finding an alternative site for this 50 unit apartment complex.

Sincerely,

Melissa J. Blanchard

Portland Public Schools 30 years

144 Belfort Street

Portland, Maine 04013

Rachelle Lambert <friendsofbelfort@gmail.com>
to Eric Freeman, planningboard@portlandmaine.gov

11:22 AM (20 minutes ago)



Dear Planning Board,

I have concerns about the traffic study that was done. I see that the company Gorrell Palmer is considered a "third party", yet they're also retained for planning and permitting. It seems they have an investment in this project since they are very involved.

Their study is riddled with errors.

They claim there are no high crash areas in the immediate study area, but there have been numerous car accidents and 2 fatalities close by according to the Maine DOT.

There have been 2 car accidents in 2024 (on 3/11/24 and 4/28/24) at the intersection of Belfort St and Forest Ave. One of our neighbors was hit by a car while riding her bike at the top of Belfort St as the sight line over the hill is very limited and my husband was also hit while riding his bike around the corner from Belfort St on Forest Ave.

There was another car accident on 10/6/24 at the entrance to the Talbot School and Forest Ave.

There have been 18 car accidents in the area from Belfort St to Avalon Rd and Belfort St to Riverside St in 2023-2024.

One of the unfortunate fatalities occurred on Riverside Industrial Parkway and Forest Ave and was a head on collision; the other was a pedestrian hit by a car on Riverside St.

These accidents are very scary, especially for a mom with an infant and knowing how many children play and ride their bikes in the street and walk to school.

Adding more cars to our street with no sidewalks and that's a very active community, is literally another accident waiting to happen.

Alex said in our meeting "I could get hit by a bus tomorrow, foot traffic is dangerous".

With that in mind, yes it can be dangerous, but even more so with the addition of more than 100 vehicles and an increase in pedestrian and bicycle traffic with no sidewalks.

We had an incident yesterday, 4/6/25, on the corner of Iffley and Belfort St. A truck came speeding around the corner and hit a Slow Down Kids At Play turtle sign. Three children were playing just minutes earlier. The gentleman stopped and got out of his vehicle and was very defensive and aggressive toward a father who approached him to ask why he was driving so fast. The gentleman got back into his car and sped off. Two of our neighbors have this incident on camera.

Incidents like these are just another reason we are deeply concerned about adding high density housing in such a compact area since there is only one way in and out.

Thank you for your time and attention to this matter.

Regards,

Rachelle Lambert

erin1339@proton.me <erin1339@proton.me>

10:10 AM (2 hours ago)



to planning@portlandmaine.gov, Eric Freeman

To the Members of the Portland Planning Board:

I live on Belfort Street, and I write with three objectives. First, briefly, I want to second the concerns my neighbors have already put on the record regarding the proposed development for 1584 Forest Avenue. While I am in favor of building more housing in Portland, the scale of the development proposal is unsuited to be accessed from our narrow, dead-end street with an uncontrolled intersection to Forest Avenue and no sidewalks, for the significant reasons they've already articulated.

Second, I am concerned that the project does not comply with the RN-5 zoning requirements. A requirement for this proposal is a minimum of 50 feet of street frontage. While the developer technically owns a parcel of land on Forest Avenue that would meet this requirement, he acknowledges that the parcel is "subject to an easement as recorded in the Cumberland County Registry of Deeds under Book 33615, Page 280 [sic] therefore Acre Properties does not have rights to construct a driveway from Forest Avenue." Memorandum re 1584 Forest Avenue, January 22, 2025, p. 10. (Note that the developer got the page wrong; the easement is actually recorded in the Registry at Book 33615, Page 279.) While the developer technically owns the street frontage, his ownership is significantly encumbered and restricted by the recorded easement. Does it satisfy the intent behind the 50-foot street frontage requirement for projects zoned RN-5, if the street frontage does not permit ordinary as well as emergency egress and ingress to the parcel being so densely developed?

Third, I can only express regret at the small amount of time my community has had to review the project materials, which became available late in the afternoon on Friday, April 4th, allowing us half of a business day to submit comments to the record (due Monday, April 7th by noon), and one business day (Monday, April 7th) to review before the date of the workshop (Tuesday, April 8th). Many of the documents that were posted are dated months--if not years--ago. Asking members of the community with no experience in planning, engineering, land use, etc. to make sense of hundreds of pages of complex documents in such a short amount of time is unreasonable, and has diminished the opportunity for the community to effectively and comprehensively respond. I encourage the Board to delay approval of this project to ensure due process for the property owners who will be affected by this unprecedented project.

Thank you for your consideration.

Sincerely,
Erin Kuka

Erica Berry <eberrypr@gmail.com>

11:49 AM (15 minutes ago)



to Eric Freeman, planningboard@portlandmaine.gov

Hi Eric + Planning Board Members,

I've reviewed both the staff memo ([link](#)) and the applicant submittal documents ([link](#)) in advance of tomorrow's 4:30 Workshop and want to express serious concern about multiple inaccuracies and inconsistencies throughout these materials.

Given the memo serves as a key overview for the Planning Board—and for the public—these discrepancies are troubling. If the foundational information being presented is incorrect or unclear, it raises legitimate questions about how decisions can be responsibly made regarding a project of this scale and impact. If I understand correctly, this is the first development proposed in an RN-5 zone (outside of the shelter on Riverside), and I can only hope the city wants to get this right. The outcome here will set a precedent for all future developments in this zoning area and have long-term consequences for the surrounding community.

My key concerns include:

- **Unit count discrepancies:** Page 3 (Section IV) states 45 units, while other references—including Page 7—say 50 units. Which is correct?
- **Traffic study inconsistencies:** Dates and times cited in the memo (Page 6) don't align with the actual report. The memo states the study was conducted 7-9am Tuesday Feb 25 and 2-6pm on Wednesday Feb 26. The report notes the opposite, stating the report was conducted on Tuesday evening and Wednesday Morning. **Notably**, Wednesday 2/26 was an early release day at Talbot. If the study was indeed conducted on Wednesday evening from 2-6pm the study will be skewed and must be redone. Compounding this issue, the same engineering firm conducting the study is also contracted for other parts of the project—a clear conflict of interest. Furthermore, the traffic report assumes completion in 2025, but at the Feb 5 Neighborhood Meeting, Alex Coupe said the project will take at least 18 months—putting completion into 2026 or later.
- **Conservation Easement:** The memo (Pages 2 and 7) notes the applicant (Alex Coupe) is currently crossing a protected easement that he cannot legally have access to, and notes that using this easement incurs financial penalties. Yet, he continues to use it without repercussions. Alex continues to use the easement, as he acknowledged at the Feb 5 Neighborhood Meeting, where he referred to his actions as "piracy". This is a serious concern and calls into question his ability to responsibly manage a project of this scale without further legal or regulatory violations.
- **LID Scoring Worksheet:** Several claimed points (Attachment 7, Page 184) are questionable—e.g., "shared driveway design," "transportation alternative," and parking minimums that don't exist per city standards.
- **Missing attachments:** Several documents referenced in the memo—including the Snow Storage Plan, Ecological Services Report (Attachment F), and LID Assessment (Attachment L)—are not included or accessible. This absence prevents a full review of the project's environmental and logistical impact.
- **Public meeting attendance:** Conflicting numbers are reported—40, 41, 76—and the sign-in process was not adequately managed, meaning attendance was underreported. There is significant opposition to this proposal in our community.
- **Ecological Services Report (Attachment F):** This specific attachment is missing. On page 242 of the submitted docs, it's unclear whether the site was evaluated by a qualified field biologist. The included letter states that the Department of Agriculture cannot confirm the presence or absence of rare or unusual natural features due to a lack of available data. The documents also note that the area is host to several bird species—including bald eagles—as well as an endangered species of bat. Has a proper environmental study been conducted to confirm that no habitats will be harmed?

These discrepancies make it difficult for the public to understand what is accurate or current—and with the Workshop scheduled for tomorrow, this lack of clarity is deeply problematic. What information can the public and Planning Board confidently rely on?

I strongly urge you to correct and clarify the documents in advance of tomorrow's meeting. Additionally, I ask that you consider postponing the Workshop to give the public a fair opportunity to review and respond to accurate information—especially considering the applicant has had months, if not years, to prepare these materials. Doing so is essential to uphold transparency, accountability, and sound decision-making.

I would appreciate a response to these key concerns.

Thank you,

Erica

Erica Berry <eberrypr@gmail.com>

12:01 PM (5 minutes ago)



to planningboard@portlandmaine.gov

Hello,

The Belfort Landing development plan shows my property is directly in the projected path of stormwater, rainwater, and septic runoff. This presents a significant and unacceptable burden on residents. How can you be sure my property won't be impacted down the line due to this development?

Thank you,
Erica

George Rheault <george.rheault@gmail.com>

11:57 AM (10 minutes ago)



to Planning Board, kkraft, Matthew Grooms, jmy

Please see attached survey from January 2011 completed by a prior property owner (Masonic Trustees of Portland) for the project area.

The lack of a clear survey showing existing conditions as well as a comprehensive "post-development" plat makes it very hard to judge the kinds of compromises and give-aways the applicant is being forced into in its negotiations with planning staff and the neighborhood.

As the 2011 survey makes clear, there is slightly over 6 acres in play here involving 2 distinct parcels. The childrens' dyslexia program is giving away PART of its parcel in order to enlarge the direct project area thus requiring a subdivision. Apparently there is an option to purchase that portion that will be subdivided. The OTHER parcel on which most of the project will be constructed must also be subject to some kind of option to purchase arrangement since it is not currently owned by the applicant.

What a "post-development" plat should help the public understand is EXACTLY how all this land is being used. How much is being LOST to outright "open space" i.e., area that will not have anything built on it? How much will be ROADWAY and PARKING AREAS? How much will be PUBLIC TRAIL PARKING? How much will be WALKWAYS and other kinds of COMMON SPACE and how much will actually constitute the actual BUILDING FOOTPRINTS where human beings will live?

This kind of stuff matters. It is deeply absurd that this project must set aside a HUGE PERCENTAGE of its land for "open space" when it sits aside a vast conservation parcel that has been set aside over the course of decades of adjacent developments to benefit the public and nearby residents. The net result is LESS LAND FOR HOUSING and HIGHER COSTS FOR HOUSING. Which is exactly what our housing cops in City Hall want to see.

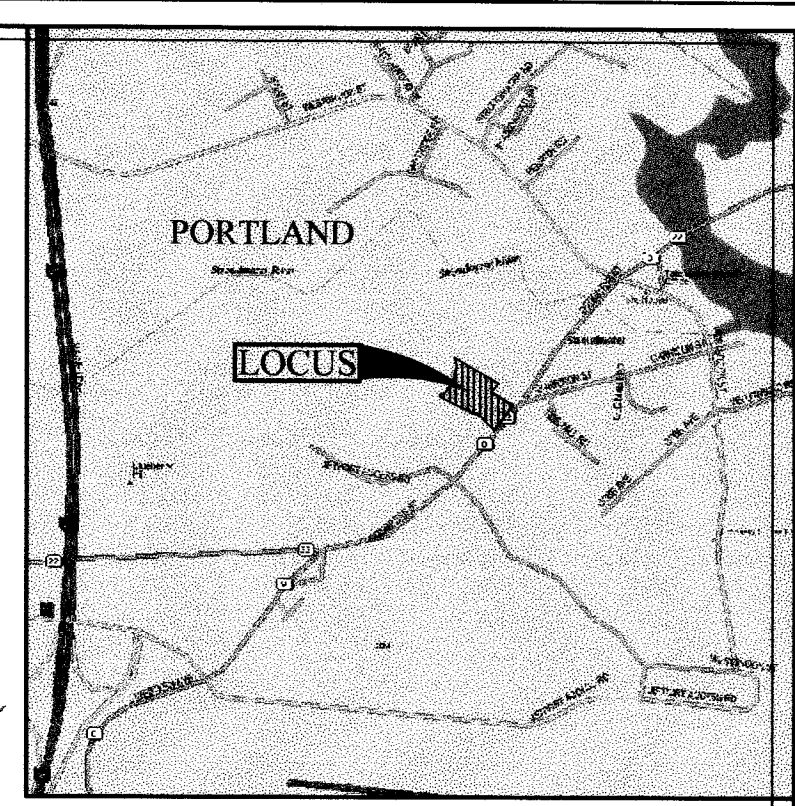
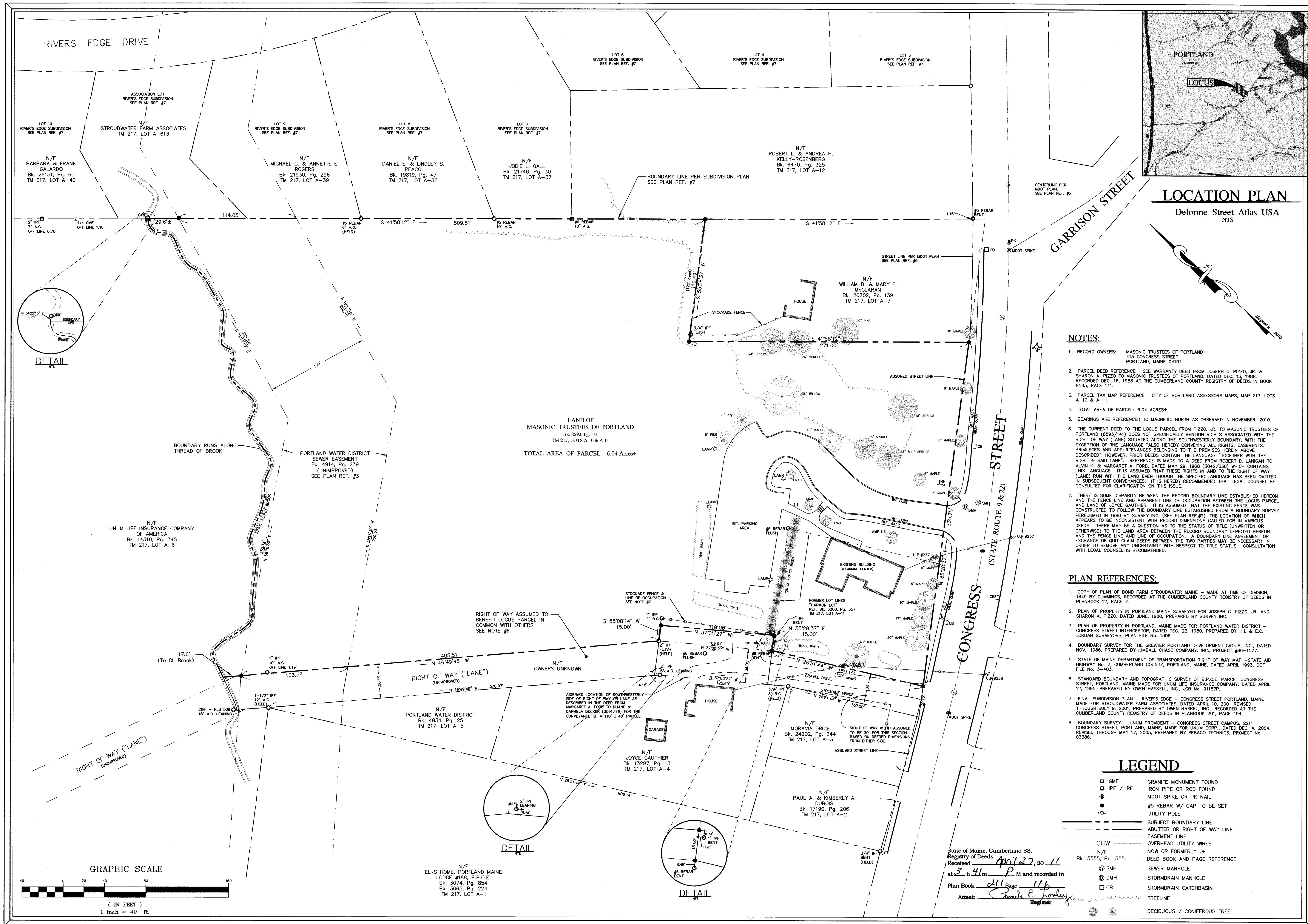
A clear survey will also show that the Right of Way (ROW) that is WEST of the project site is not being utilized at all to ease the vehicle circulation issues the project is confronting via its single Congress Street entrance. It is not clear that William Linnell (the current user of the unpaved ROW) can block the access rights of others who may wish to use the ROW for access including trail and conservation purposes.

All of this should have been explored fully in the very early discussions of this project. Instead of creativity, however, the project was met with obstruction and a "yeah, no" political mentality.

An absolute shame that yet again, City Hall, via its planning department and by extension its lackeys on the Planning Board, are doing just about everything to scuttle a BIG housing opportunity off-peninsula in one of its "pastoral" zones of affluence (where Portland's apartheid land-use habits must be strictly interpreted at all times).

While this developer has been scrambling over the last 12 months or so to create housing here, City Hall has done absolutely nothing to help here.

Instead of giving this developer the same "whatever they need" treatment that is applied to City Hall's buddies like Redfern Properties, NewHeight Group, Port Properties/Reveler and Developers Collaborative (Kevin Bunker), the applicant here has been whipsawed every which way with of course RECODE providing the barest glimmer of hope that a robust project is possible here (but also saddling the project with lots of unfair and unsustainable burdens).



NOTES:

- 1. RECORD OWNERS: MASONIC TRUSTEES OF PORTLAND 415 CONGRESS STREET PORTLAND, MAINE 04101
- 2. PARCEL DEED REFERENCE: SEE WARRANTY DEED FROM JOSEPH C. PIZZO, JR. & SHARON A. PIZZO TO MASONIC TRUSTEES OF PORTLAND, DATED DEC. 13, 1988, RECORDED DEC. 16, 1988 AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 8583, PAGE 141.
- 3. PARCEL TAX MAP REFERENCE: CITY OF PORTLAND ASSESSORS MAPS, MAP 217, LOTS A-10 & A-11.
- 4. TOTAL AREA OF PARCEL: 6.04 ACRES±
- 5. BEARINGS ARE REFERENCED TO MAGNETIC NORTH AS OBSERVED IN NOVEMBER, 2010.
- 6. THE CURRENT DEED TO THE LOCUS PARCEL FROM PIZZO, JR. TO MASONIC TRUSTEES OF PORTLAND (8583/141) DOES NOT SPECIFICALLY MENTION RIGHTS ASSOCIATED WITH THE RIGHT OF WAY (LANE) SITUATED ALONG THE SOUTHWESTERLY BOUNDARY, WITH THE EXCEPTION OF THE LANGUAGE "ALSO HEREBY CONVEYING ALL RIGHTS, EASEMENTS, PRIVILEGES AND APPURTENANCES BELONGING TO THE PREMISES HEREIN ABOVE DESCRIBED". HOWEVER, PRIOR DEEDS CONTAIN THE LANGUAGE "TOGETHER WITH THE RIGHT IN SAID LANE". REFERENCE IS MADE TO A DEED FROM ROBERT D. LANGAN TO ALVIN K. & MARGARET A. FORD, DATED MAY 29, 1968 (3042/338) WHICH CONTAINS THIS LANGUAGE. IT IS ASSUMED THAT THESE RIGHTS IN AND TO THE RIGHT OF WAY (LANE) RUN WITH THE LAND EVEN THOUGH THE SPECIFIC LANGUAGE HAS BEEN OMITTED IN SUBSEQUENT CONVEYANCES. IT IS HEREBY RECOMMENDED THAT LEGAL COUNSEL BE CONSULTED FOR CLARIFICATION ON THIS ISSUE.
- 7. THERE IS SOME DISPARITY BETWEEN THE RECORD BOUNDARY LINE ESTABLISHED HEREON AND THE FENCE LINE AND APPARENT LINE OF OCCUPATION BETWEEN THE LOCUS PARCEL AND LAND OF JOYCE GAUTHIER. IT IS ASSUMED THAT THE EXISTING FENCE WAS CONSTRUCTED TO FOLLOW THE BOUNDARY LINE ESTABLISHED FROM A BOUNDARY SURVEY PERFORMED IN 1980 BY SURVEY INC. (SEE PLAN REF. #2). THE LOCATION OF WHICH APPEARS TO BE INCONSISTENT WITH RECORD DIMENSIONS CALLED FOR IN VARIOUS DEEDS. THERE MAY BE A QUESTION AS TO THE STATUS OF TITLE (UNWRITTEN OR OTHERWISE) TO THE LAND AREA BETWEEN THE RECORD BOUNDARY LINE HEREON AND THE FENCE LINE AND LINE OF OCCUPATION. A BOUNDARY LINE AGREEMENT OR EXCHANGE OF QUIT CLAIM DEEDS BETWEEN THE TWO PARTIES MAY BE NECESSARY IN ORDER TO REMOVE ANY UNCERTAINTY WITH RESPECT TO TITLE STATUS. CONSULTATION WITH LEGAL COUNSEL IS RECOMMENDED.

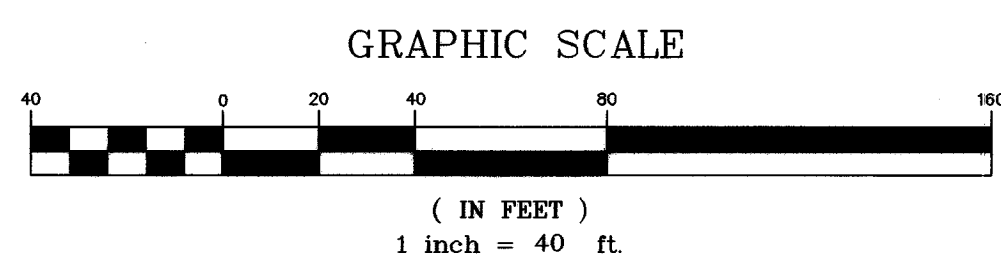
PLAN REFERENCES:

- 1. COPY OF PLAN OF BOND FARM STROUDWATER MAINE - MADE AT TIME OF DIVISION, 1949 BY CUMMINGS, RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLANBOOK 12, PAGE 7.
- 2. PLAN OF PROPERTY IN PORTLAND MAINE SURVEYED FOR JOSEPH C. PIZZO, JR. AND SHARON A. PIZZO, DATED JUNE, 1980, PREPARED BY SURVEY INC.
- 3. PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR PORTLAND WATER DISTRICT - CONGRESS STREET INTERCEPTOR, DATED DEC. 22, 1980, PREPARED BY H.I. & E.C. JORDAN SURVEYORS, PLAN FILE NO. 1306.
- 4. BOUNDARY SURVEY FOR THE GREATER PORTLAND DEVELOPMENT GROUP, INC., DATED NOV., 1986, PREPARED BY KIMBALL CHASE COMPANY, INC., PROJECT #86-1577.
- 5. STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP - STATE AID HIGHWAY No. 7, CUMBERLAND COUNTY, PORTLAND, MAINE, DATED APRIL 1993, DOT FILE No. 3-403.
- 6. STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY OF B.P.O.E. PARCEL CONGRESS STREET, PORTLAND, MAINE MADE FOR UNUM LIFE INSURANCE COMPANY, DATED APRIL 12, 1995, PREPARED BY OWEN HASKELL, INC., JOB No. 91187P.
- 7. FINAL SUBDIVISION PLAN - RIVER'S EDGE - CONGRESS STREET CAMPUS, 2211 CONGRESS STREET, PORTLAND, MAINE, MADE FOR UNUM CORP., DATED DEC. 4, 2004, REVISED THROUGH MAY 17, 2005, PREPARED BY SEBAGO TECHNIQS, PROJECT No. 03386.
- 8. BOUNDARY SURVEY - UNUM PROVIDENT - CONGRESS STREET CAMPUS, 2211 CONGRESS STREET, PORTLAND, MAINE, MADE FOR UNUM CORP., DATED DEC. 4, 2004, REVISED THROUGH MAY 17, 2005, PREPARED BY SEBAGO TECHNIQS, PROJECT No. 03386.

LEGEND

- G.M.F. GRANITE MONUMENT FOUND
- I.P.F. / I.R.F. IRON PIPE OR ROD FOUND
- M.D.T. SPIKE OR P.K. NAIL
- #5 REBAR W/ CAP TO BE SET
- UTILITY POLE
- SUBJECT BOUNDARY LINE
- ABUTTER OR RIGHT OF WAY LINE
- EASEMENT LINE
- OVERHEAD UTILITY WIRES
- NOW OR FORMERLY OF DEED BOOK AND PAGE REFERENCE
- S.M.H. SEWER MANHOLE
- S.D.M.H. STORMDRAIN MANHOLE
- C.B. STORMDRAIN CATCHBASIN
- TREELINE
- DECIDUOUS / CONIFEROUS TREE

State of Maine, Cumberland SS.
Registry of Deeds
Received April 27, 2011
at 3 h 41 m P M and recorded in
Plan Book 211 Page 146
Attest: Paula E. Forley
Register



PREPARED BY:
LAND SERVICES INC.
Land Surveyors & Consultants
1259 Roosevelt Trail, P.O. Box 975
Raymond, Maine 04071
Tel: (207) 655-4945 - Fax: (207) 655-5053

PREPARED FOR:
Masonic Trustees of Portland
415 Congress Street
Portland, Maine 04101

PLAN OF:
Land of
MASONIC TRUSTEES OF PORTLAND
1877 - 1901 CONGRESS STREET
PORTLAND, MAINE

SHEET TITLE:
BOUNDARY SURVEY

SEAL OF THE STATE OF MAINE
PAUL E. FORLEY
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 10100
EXPIRATION DATE 12/31/2011

DATE: November 4, 2010
PROJECT No.: 10-106
DRAWN BY: P. CATER
REVIEWED BY: H. DAVIS
SCALE: 1" = 40'
PLOT DATE: 1/04/11
ISSUE DATE: 1/04/11

To: Chair Brandon Mazer & Members of the Planning Board
From: Eric Freeman
Date: April 2, 2025
Re: 1877 Congress Street
Project ID: PL-003020-2024
CBL: 217 A010
Meeting Date: April 8, 2025

I. INTRODUCTION

GreenMars Real Estate Services has submitted a Major Site Plan and Subdivision application to facilitate the creation of 13 new lots and the construction of thirteen twelve-unit residential buildings, totaling 156 dwelling units, utilizing the conservation residential development standards in Section 7.4.1 of the Land Use Code. The proposal includes approximately 210 on-site parking spaces, with access provided via a new private way located at 1877 Congress Street in the Residential Neighborhood-1 (RN-1) zone.

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 13.6 and Subdivision Standards, Section 14.2. Additionally, this application is required to meet the City of Portland's inclusionary zoning requirements outlined in Section 17.2 of the City's Land Use Code.

The Planning and Urban Development Department mailed 81 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the March 28 and 29, 2025 editions of the Portland Press Herald.

Applicant: GreenMars Development

Applicant Representatives: GreenMars Development

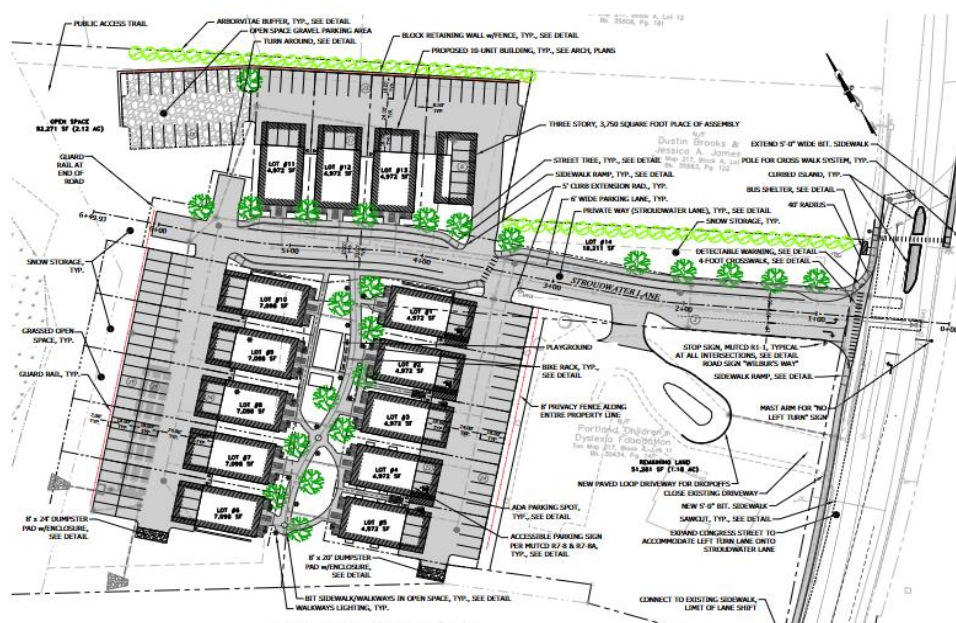


Figure 1: Overall Site Plan

Figure 1: Overall Site Plan

Review	Applicable Standards
Site Plan	Section 13.6
Subdivision	Section 14.2
Inclusionary Zoning	Section 17.2
Multifamily Design Review Standards	Section 9.1 City of Portland Design Manual (I)

II. REQUIRED REVIEWS

Project Data	
Existing Zoning	RN-1
Property Size	175,982 SF
Existing Use	Undeveloped vegetated area
Proposed Use	Conservation residential development consisting of 13 lots and 156 residential units accessed via a new private way. Approximately 210 on-site parking spaces and shared amenity space.

III. PROJECT BACKGROUND

A Major Site Plan and Subdivision application for the subject property was submitted in July 2024, proposing a 10-lot subdivision, with each lot containing a 10-unit residential building and a new public street. During the City's preliminary review, staff identified several concerns regarding key aspects of the development, including:

- Zoning Compliance: Staff raised concerns regarding compliance with R-2 zoning requirements, particularly in relation to off-street parking, which the applicant initially proposed to be on separate lots.
- Site Design and Layout: The subdivision layout closely resembled a Planned Residential Unit Development (PRUD), which is neither a permitted use within the R-2 Residential zone nor use under ReCode. Staff also recommended repositioning buildings closer to the proposed public street to foster a stronger relationship with the street and create a more neighborhood-like environment.
- Development Footprint and Unit Count: While the proposed density aligns with zoning allowances, staff encouraged the applicant to explore reducing the overall development footprint and unit count to preserve critical natural resources and mitigate traffic impacts and off-street parking demands. Historically, the R-2 zone was predominantly designated for single-family development, with its purpose statement emphasizing low-density residential neighborhoods due to these neighborhoods being located further from services, public transit, and on more sensitive vegetated land. However, in December 2023, the City implemented LD-2003, a state law mandating that all residentially zoned properties within designated priority growth areas permit up to four units by right, with potential density bonuses for affordable housing. These changes significantly increased the number of allowable units on this site, which—prior to LD-2003—would have been limited to a

maximum of 17 single-family homes under the previous 10,000 square foot minimum lot size requirement.

- **Off-Street Parking:** The original submission proposed a parking ratio exceeding one space per residential unit, with surface parking dispersed throughout the subdivision. To minimize the project's environmental impact, staff encouraged the applicant to explore transportation demand management strategies to further reduce parking.

Following the adoption of ReCode in December 2024, the City met with the applicant to discuss potential modifications based on new zoning standards. Under ReCode, the R-2 zone was reclassified as RN-1, the city's lowest density residential zone but with more flexible dimensional standards, including reduced minimum lot sizes, setbacks, and street frontage requirements than the prior R-2 zoning designation. Additionally, alternative residential development models, such as cottage courts and conservation residential developments, were introduced to encourage smaller-scale, cohesive neighborhoods and natural resource conservation while accommodating appropriate density.

Timeline of Submission

As a result of these discussions, the applicant resubmitted the proposal as a conservation residential development, which significantly altered the project's layout and scope. The revised materials were partially submitted in late February 2025, prompting the City to tentatively schedule a Planning Board workshop for April 8th, contingent on receiving all required materials by Friday, March 14th, to allow for a comprehensive peer review. However, most updated materials were not received until Wednesday, March 26th, with building elevations and floor plans arriving as late as Thursday, April 3rd. The lateness of this submission prevented City staff from being able to substantively review application materials prior to the April 8th workshop.

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The subject property is located on outer Congress Street in the Stroudwater neighborhood. The site is directly behind the Children's Dyslexia Center. The site is approximately four acres in size and is bounded to the north by single-family homes on River's Edge Drive and to the south by the Portland Elk's Lodge. The site is currently undeveloped and consists almost entirely of dense undergrowth and mature trees. The rear portion of the site features a notable drop in elevation and includes significant areas of wetland as you approach the Stroudwater River.



Figure 2: The existing site and surrounding neighborhood

V. PROPOSED DEVELOPMENT

The proposed development involves the construction of a new conservation residential development consisting of 13 lots. Each lot would contain a three-story, 12-unit residential building with a mixture of one, two and three-bedroom units. In total, the site would feature 130 condominium units and 26 accessory dwelling units (ADUs). Each lot would include on-site surface parking dedicated for that particular building, with a shared access easement to permit the movement of vehicles across each of the proposed lots. A shared amenity building is proposed and would include a gymnasium, shared office space and other amenities for residents.

Lots 1 through 10 would front a shared common area with pedestrian walkways, green space and a playground area. Lots 11 through 13 would front the private road and would have access to the shared common area via a crosswalk. All lots would have direct pedestrian access to the amenity building and Congress Street.

The site would be accessed via a 32-foot-wide private roadway extending into the site from an unsignalized intersection with Congress Street. This private way would include two 10-foot vehicle travel lanes and on-street parking on both sides. The roadway would include a five-foot-wide sidewalk on both sides of the private street, with one sidewalk extending to a new transit shelter and crosswalk on Congress Street. Approximately 210 parking spaces are proposed to be provided on-site. Parking areas would be located at the rear of each building and feature a mixture of surface and covered parking stalls. On-street parking would also be provided on both sides of the proposed private road.

The site would be served by water and sewer lines connecting to existing services that run along Congress Street. Stormwater treatment would be provided on-site using a Contech StormFilter unit. Electrical utilities would be extended from Congress Street via an underground conduit.

VI. RIGHT, TITLE, & INTEREST

GreenMars Real Estate Services signed an option to purchase agreement for the subject property on June 17, 2024. Staff have requested the applicant provide additional documentation indicating that they have full Right, Title & Interest to the subject property. Right, Title and Interest documentation as submitted by the applicant is included as attachment J.

VII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a letter from Norway Savings Bank indicating that the applicant has an ongoing financial relationship with the applicant. Staff have requested that the applicant provide additional documentation indicating that they have financial standing to complete this project as presented. Financial capacity documentation as submitted by the applicant is included as attachment H.

The applicant team has an on-staff engineer. Architectural Plans are provided by Invivid Architecture, an experienced design firm.

The staff has identified several concerns regarding the quality of the applicant's submission at this time. The submitted materials contain multiple errors, including inconsistencies in the plans and supporting documents. Additionally, many of the written narratives lack clarity, often appearing vague and not tailored to the specifics of the proposed site. In some instances, the narratives reference unrelated projects or incorrect locations, suggesting that sections may have been copied from other applications without adequate revision. These deficiencies have hindered the City's ability to conduct a thorough and efficient review of the proposal. To ensure a more effective review process, the City expects the applicant to submit revised materials that are accurate, site-specific, and internally consistent, with clear and well-organized narratives that directly address project details and respond to prior staff comments.

VIII. ZONING ANALYSIS

The site is located within the Residential Neighborhood 1 (RN-1) zone. Relevant sections of the RN-1 purpose statement include:

- RN-1: "To provide for a residential neighborhood environment predominantly characterized by dwellings on lots of at least 6,500 square feet. Conversion of existing nonresidential structures to multi-family dwellings is permitted within the RN-1 zone, subject to standards encouraging compatibility and context sensitivity to ensure the stability of established residential neighborhoods"

A zoning analysis of the proposed project is provided in the table below:

IX. CONSERVATION RESIDENTIAL DEVELOPMENT

This application proposes to utilize the Conservation Residential Development (CRD) typology outlined in section 7.4.1 of the Land Use Code. A conservation residential development permits a reduction in certain

dimensional standards, as detailed in the table below, in exchange for the provision of common open space and the preservation of Portland's natural resources. CRD development is permitted in the RN-1 zone.

A CRD shall be designed to prioritize the preservation of natural features to the greatest extent practical. The site should be designed to preserve interconnect streams, wetlands, mature trees and critical wildlife habitat and incorporate natural site features into the developments overall design. A minimum of 30% of the total site area of a CRD is required to be conserved as common open space as defined within Section 7.4.1.E.2.

The CRD typology emphasizes the preservation of significant natural features including wetlands, streams, mature trees and critical wildlife habitat. The CRD typology also emphasizes that these features should be interconnected and that buildings, walkways and parking areas should be designed to minimize impacts to natural features to the greatest extent practical.

Approximately half of the site (2.12 acres) at the rear of the site will be undisturbed. This area features significant wetland areas and mature tree growth beyond a steep grade change as the site approaches the Stroudwater River. Within the disturbed portion of the site, the applicant has not provided detail as to which natural features will be preserved. A tree inventory and tree removal plan has not been provided. Staff have also noted that a significant amount of grading is proposed at the rear of the site as well as impervious areas to support expansive surface parking.

Dimensional Standards

	Base RN-1	Conservation Residential Development	Proposed
Maximum Height (ft)	35 ft.	35 ft.	~35 ft.
Minimum Lot Area	6,500 SF	3,250	4,972 – 7,098 SF
Front Setback	25 ft.	10 ft.	10 ft.
Rear Setback	25 ft.	10 ft.	10 ft.
Side Setback	15 ft.	5 ft.	5 ft.
Open Space	30%	30% for lots over 5,000 SF	
		N/A for lots under 5,000 SF	
Lot Coverage	60%	60% for lots over 5,00 SF	
		N/A for lots under 5,00 SF	

Discussion

The City has reviewed the applicant's residential conservation development proposal under the provisions of the land use code, which allows for dimensional relief in exchange for the conservation of critical natural resources. While this zoning provision has enabled the applicant to reduce the overall development footprint and increase residential density, the submitted materials do not clearly demonstrate that the site layout has been thoughtfully designed to minimize impacts on natural features within the developed area of the site. The intent of this provision is not only to facilitate a more compact development pattern and more residential units but also to ensure that important environmental resources are preserved and integrated into the site design in a meaningful and holistically thoughtful manner.

A key requirement of this zoning provision is that natural features such as wetlands, streams, mature trees, and critical wildlife habitat be interconnected, creating a cohesive conservation strategy rather than fragmented or isolated preservation areas. Additionally, the design of buildings, walkways, and parking areas should prioritize minimizing environmental impacts to the greatest extent possible. For the City to determine whether this proposal meets the necessary zoning criteria, additional information on how natural features are being integrated into the design will be required. Specifically, the applicant must provide a detailed tree inventory, verification that no critical wildlife habitat is located within the development area, and other supporting documentation demonstrating that the site has been designed in accordance with the conservation objectives of this provision. This information is essential for ensuring that the project aligns with the City's land use goals while also providing the applicant with a clear path forward for regulatory compliance.

Inclusionary Zoning

As outlined in Section 17.2.3 of the City of Portland's Land Use Code, this application is subject to Inclusionary Zoning standards and is required to provide at least 25% (33) of the units as workforce housing. The applicant has indicated that they intend for 50% of the proposed units (78) to be affordable. The City is requesting that the applicant provide additional information related to the proposed affordable units, including the designation of specific units within the development as the required workforce units. Additionally, the applicant will be required to enter into an affordable housing agreement (AHA) with the City to ensure that designated workforce units are maintained as units affordable to households earning no more than 80% of the area median income (AMI) for a period of at least 30 years.

Density Bonus

The applicant intends to utilize density bonuses outlined in Table 17-A of the City of Portland's Land Use Code. As presented, the applicant intends for 50% of the proposed units (78 units) to be deed-restricted affordable housing. The applicant is thus able to apply a 2.5X base density bonus to each lot of the subdivision.

X. SITE PLAN STANDARDS (Section 13.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 13.6. Staff comments are below.

1. Transportation Standards (Section 13.6.1)

A. Impact on surrounding street systems

The site would be accessed via a 32-foot-wide private road extending into the site from an unsignalized intersection with Congress Street. Congress Street would be modified with a left-turn lane providing access to the site from the south. A pedestrian crossing with a raised center island would be installed at the north side of the intersection. This pedestrian crossing would feature user-activated flashing beacons. The applicant proposes to reconstruct approximately 300 feet of bituminous sidewalk on the western side of Congress Street along the frontage of the Dyslexia Center.

The applicant has provided a traffic report detailing anticipated impacts to Congress Street. However, since the completion of this report, the unit count of the proposed development has increased from 100 units to 156 units. Planning Staff are requesting that the applicant update their traffic study to reflect the larger scope of the proposed development in order to understand

whether additional traffic mitigation may be required.

B. Access and circulation

The proposed private road would feature continuous sidewalks connecting each lot to the shared amenity space and Congress Street. The applicant also intends to develop shared trail facilities at the rear of the site, which would connect to the existing Portland trail network. Proposed trails have not been detailed as part of the applicant's submission. The applicant is not proposing a sidewalk on the south side of the private road, which would be required to connect to the existing sidewalk network along Congress Street.

C. Public transit access

This site is served by METRO's Route 5. The applicant is proposing to install a transit shelter pad on Congress Street with a direct pedestrian connection to the site.

D. Parking

This application would provide approximately 210 off-street surface parking spaces. Each lot would have a mix of surface and covered parking. Parking would be located at the rear of each lot, accessible via three separate shared driveways that would connect into the private road. An access easement would be placed across all parking areas to allow residents to cross property boundaries within the subdivision.

As proposed, the application does not include any electric vehicle charging infrastructure or secure bicycle parking. The applicant is responsible for providing one secure bike storage space for every two residential units.

Additionally, the City requires that 20% of newly proposed parking spaces be equipped with a Level II electric vehicle (EV) charger, with an additional 50% of such spaces needing to be made EV-ready, as defined in Section 1 of the City's Technical Manual.

The applicant is proposing a 20-space publicly accessible gravel parking area on the north side of the development. This parking area would be intended for use as public parking for a proposed trailhead. Staff are not supportive of the inclusion of this parking area given the absence of a definitive plan for trail connectivity and the associated grading and site work that would be required to accommodate this parking. Furthermore, providing 20 spaces to support the trailhead would be excessive. Staff recommends that the proposed on-street parking spaces remain open for public use, rather than creating additional surface parking, which creates further conflicts with the intent of the conservation residential development. In addition, per Technical Manual Section 1.10.1 parking lots, except for temporary lots to be used for less than one year, shall be constructed of a permanent and durable hard surface that is not subject to ponding or erosion, both onsite and within the right-of-way, and shall meet accessibility standards.

E. Transportation demand management (TDM)

Not applicable. This application does not require a TDM Plan

2. Environmental Quality Standards (Section 13.6.2)

A. Preservation of significant natural features

Approximately half of the site (2.12 acres) at the rear of the site will be undisturbed according to the applicant's proposal. This area features significant wetland areas and mature tree growth.

The applicant has provided a Low-Impact Development (LID) assessment. Planning Staff and peer-reviewers will provide comments on the applicant's LID assessment in advance of a future meeting, including clarification on aspects of scoring including the applicant's reference to utilizing structured parking, which does not appear to be proposed. The LID assessment is included as attachment G

B. Landscape preservation

As noted above, The Conservation Residential Development typology emphasizes the preservation of significant natural features to the greatest extent practical. The applicant has not provided a full landscaping plan or tree removal plan and how existing vegetation is incorporated into the site design.

C. Site landscaping and buffers

The site will feature a mixture of new trees, bushes and low-profile plantings. New trees will be planted along the private road and within the shared common area. The shared open space area will also feature perennial plantings and bushes. Along the perimeter of the site, the applicant is proposing a mixture of vegetated buffers and privacy fencing. The design of the parking area as proposed does not meet multiple City standards related to the City's parking lot landscaping requirements and would need to be broken up further with landscaped islands as required by the City's site plan ordinance and further detailed in Section 4 of the City of Portland Technical Manual.

D. Water quality/storm water management/erosion control

The project results in the creation of more than 1,000 square feet of new impervious surface and is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The applicant has submitted a full stormwater management plan demonstrating compliance with both Section 5 of the Technical manual and Maine DEP chapter 500 standards. This application will result in the creation of approximately 37,177 square feet of new impervious area.

Stormwater Treatment will be accomplished using a ConTech subsurface filter to provide for stormwater management on the site. Per the stormwater management report, these systems have been sized to provide the required level of treatment on the site.



Figure 3: Site Grading Plan

3. Public Infrastructure and Community Safety Standards (Section 13.6.3)

A. Consistency with City Master Plans

Not applicable. There are no City Master Plans that apply to this application.

B. Availability and capacity of public utilities

The site will be served by water and sewer lines extending into the site from an existing stub on Congress Street. Electrical utilities will be extended from Congress Street via an underground conduit. The applicant has requested ability to serve letters from Central Maine Power and Portland Water district.

4. Site Design Standards (Section 13.6.4)

A. Massing, ventilation, and wind impact

There are no anticipated massing or wind impacts anticipated with this application.

B. Shadows

The proposed buildings will be approximately three stories in height, but are set back sufficiently to avoid shadow impacts to surrounding properties.

C. Snow and ice loading

The applicant is proposing snow storage at the rear of the site in an area labeled as a 1:1 steep reinforced grass slope on the grading plan, which is also shown on the site plan as having a

guardrail along its entire length. As such, it is unclear how snow storage operations would be carried out in this location. The applicant has also identified an open area along the private roadway for snow storage; however, the logistics of these operations remain unclear, as they appear to require a plow to make a 90-degree turn and push snow over the only sidewalk currently shown to connect the site to the existing sidewalk network along Congress Street. Additional clarity regarding snow storage operations is needed.

D. View corridors

Not applicable. This application is not within a protected view corridor.

E. Historic resources

Not applicable. This application is not within a historic district.

F. Exterior lighting

The site will feature full cutoff / dark sky compliant light fixtures to minimize light spillover. buildings will feature wall-mounted lighting to provide lighting for parking areas and walkways. Common open space areas will have illuminated in-ground bollards. Staff are requesting the applicant provide a full photometric plan and additional lighting detail.

G. Noise and vibration

Given the location of the proposed buildings, the placement of HVAC generators and other equipment is not anticipated to interfere with abutting residential properties.

H. Signage and wayfinding

No wayfinding signage is proposed as part of this application.

I. Zoning-related design standards

The applicant provided revised building elevations and floorplans on Thursday, April 3. Staff will review resubmitted elevations against the multifamily design standards in advance of a future meeting.

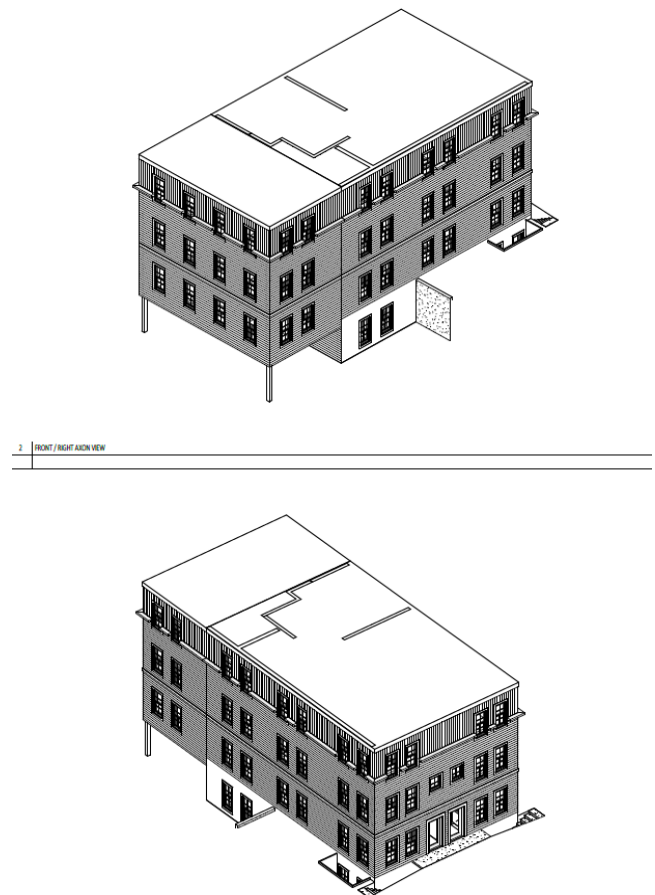


Figure 4: Building Perspective Renderings

XI. SUBDIVISION REVIEW

Section 14.4.1 of the City's Land Use Code establishes standards under which Subdivision applications must be reviewed. Per this section, Subdivisions shall adhere to the following requirements:

A. Water or Air Pollution

Refer to site plan assessment of stormwater management and erosion control.

B. Sufficient Water Supply

An ability to serve letter from the Portland Water District has not been provided. Staff are reviewing the availability and capacity of public utilities for this application.

C. Impacts to Existing Water Supply

Refer to site plan assessment of public utilities.

D. Soil Erosion & Stormwater Detention

Staff are still reviewing the stormwater impacts of this application. Refer to site plan assessment of water quality, stormwater management, and erosion control standards.

E. Impacts to Highways & Public Roads

Refer to site plan assessment of transportation standards.

F. Adequate Sewer & Stormwater Disposal

A wastewater capacity authorization has not been provided. Staff are still reviewing this availability and capacity of public utilities for this application.

G. Impacts to City Solid Waste & Sewage

This application will be required to utilize a private hauler for solid waste removal.

H. Adverse Impacts on Visual, Historic & Natural Resources

Refer to the site plan assessment of preservation of natural resources.

I. Compliance with Comprehensive Plan

Not applicable. The project is required to comply with the underlying zoning requirements.

J. Financial and Technical Capacity

Refer to Section VII of this report.

K. Shoreland Zone Impacts

Not applicable. The project is not located within the shoreland zone.

L. Groundwater Quality & Quantity

Refer to site plan assessment of water quality, stormwater management, and erosion control

M. Flood Risk

Not Applicable. The site is not located in a flood zone.

N. Stormwater Management

Refer to the site plan assessment of the site plan assessment of stormwater management

O. Depth-to-Shore Frontage Ratio

Not Applicable

XII. NEIGHBORHOOD MEETING AND PUBLIC COMMENT

The applicant held an initial neighborhood meeting on June 26, 2024 at 6pm. The in-person meeting was held at the Elks Lodge located at 1945 Congress Street. 15 members of the public were in attendance. Public comment centered on:

- Traffic impacts on Outer Congress Street
- Green space and buffers to surrounding properties.
- Noise and light pollution

The applicant Initially did not provide minutes from the neighborhood meeting which is a requirement of the site plan ordinance. A written summary of the meeting was provided at the request of staff. A full sign-in sheet and meeting minutes from the June meeting are included as attachment K.

An additional informal neighborhood meeting was held by the applicant with the Stroudwater Neighborhood Association on April 2, 2025. As this meeting was not formally required, a sign-in sheet and meeting minutes were not provided by the applicant to city staff.

XIII. NEXT STEPS

Staff is seeking Planning Board input on the proposed project, with particular attention to site layout, operations, and design—specifically whether the extensive surface parking aligns with the intent of the Conservation Residential Development alternative. Staff is also requesting feedback on the proposed parking configuration, site access, and internal circulation. Following this workshop, the applicant will be required to revise and resubmit the application to address both Board and staff comments, including correcting any references to unrelated or incorrect projects. Once a revised submission is received, staff will schedule a second Planning Board workshop.

XIV. ATTACHMENTS**Report Attachments**

S1. Department of Public Works Comments 4.4.2025

Applicants Submittal

- A. Site Plan Narrative
- B. Design Narrative
- C. Site Plan Standards
- D. Soil Management and Protection Plan

- E. Solid Waste Narrative
- F. Subdivision Standards
- G. LID Assessment
- H. Financial Capacity letter
- I. Technical Capacity
- J. Option to Purchase Agreement
- K. Neighborhood Meeting Materials

Plans

- 1. Cover
- 2. Subdivision Plan
- 3. Site Plan
- 4. Grading Plan
- 5. Road Profile
- 6. Utility Plan
- 7. Erosion Control Plan
- 8. Erosion Control Notes and Details
- 9. Site Details 1
- 10. Site Details 2
- 11. Site Details 3
- 12. Site Details 4.
- 13. Site Details 5
- 14. Site Details 6
- 15. Site Details 7
- 16. Community Building Plans
- 17. Building Elevations and Floorplans



Eric Freeman <efreeman@portlandmaine.gov>

PL-003020-2024 1877 Congress Street DPW Comments

Kristoffer DeVolder <kdevolder@portlandmaine.gov>

Fri, Apr 4, 2025 at 8:25 AM

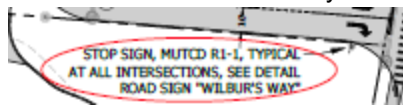
To: Eric Freeman <efreeman@portlandmaine.gov>

Cc: Keith Gray <kgray@portlandmaine.gov>, "thomas.errico@tylin.com" <Thomas.Errico@tylin.com>, Benjamin Pearson <bnp@portlandmaine.gov>, Justin Pellerin <jrp@portlandmaine.gov>, Lauren Swett <lszett@woodardcurran.com>, Jodie Keene <JKEENE@portlandmaine.gov>

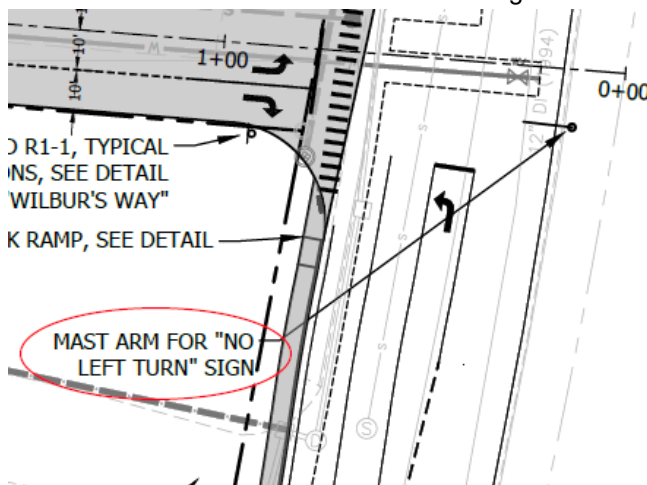
Hello Eric,

Below are DPW's comments for PL-003020-2024 1877 Congress Street. Let me know if you have any questions.

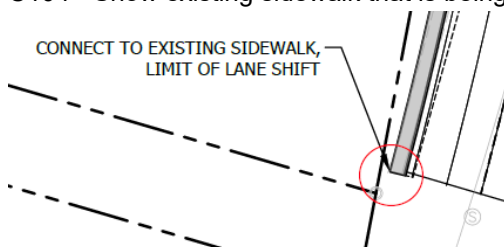
- **PL-003020-2024 1877 Congress Street** Major Site Plan & Subdivision
 - Comments for Review
 - DPW Transportation
 - Sheets C101, C103 are missing from the plan set
 - Proposed street name of Stroudwater Lane will likely cause issues with E911, alternative unique names should be considered. Applicant should contact the City's addressing officer, Charles Wordell, 207-874-8803 to coordinate property addressing.
 - Provide an Existing Conditions/Demo Plan sheet. This is particularly necessary for the changes occurring within Congress Street.
 - A separate plan sheet should be provided for the changes being made within the public ROW on Congress Street.
 - C104 - Label Congress Street
 - C104 - What is Wilbur's Way a reference to?



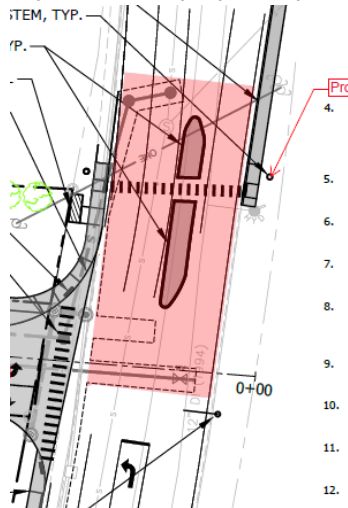
- C104 - Remove Mast Arm for no Left turn sign. As a left turn lane into the site is provided.



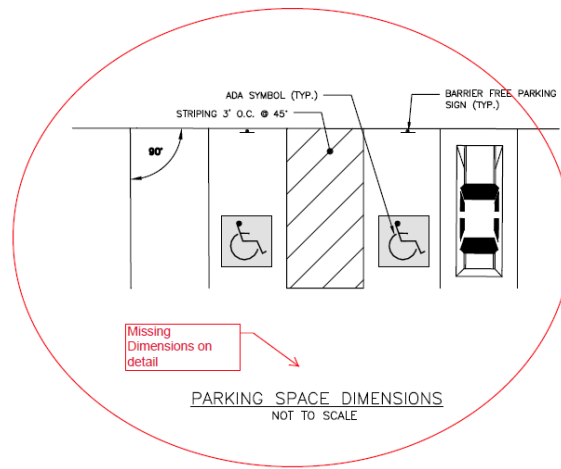
- C104 - Show existing sidewalk that is being connected into.



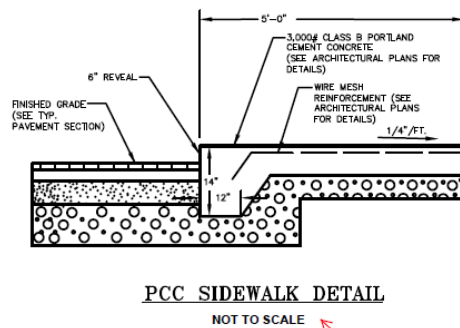
- C104 - How does the public access trail connect to the existing trail system? There is no public access trail shown on the plan sheet. Will it meet ADA?
- C104 - Is the gravel parking lot proposed to be temporary or permanent? Per Technical Manual Section 1.10.1 Parking lots, except for temporary lots to be used for less than one year, shall be constructed of a permanent and durable hard surface that is not subject to ponding or erosion, both onsite and within the right-of-way, and shall meet accessibility standards.
- The City's Technical Manual has been recently updated and approved. The applicant shall update all proposed details (Site, Sewer, Stormwater, Landscape, details) to meet the requirements of the recently approved technical manual update or add a note to each to the proposed details that states the City standard detail (figure # and name)shall be followed.
- C104 - Per previous discussions Left turn out of the development onto congress will not be permitted
- Provide Details for curbed island, detectable warning panel, bus shelter, hybrid beacon system,
- C104 - Extend proposed curbed Island to prevent Left Turn movement out onto Congress Street.
- C104 - Proposed improvements and existing conditions in the City ROW shall be dimensions on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.
- Square off the proposed pavement repair in congress street



- Provide Cross Section details for the widened congress street
- C102 - It appears this sheet is attempting to fulfill the recording plat requirement (Tech Manual sec.14.1.3.C). Some comments and questions pertaining to this sheet:
 - Existing property monuments and existing parent property lines should be fully labeled.
 - All easements and right of ways (both existing and proposed) need to be dimensioned and properly tied to the rest of the boundaries as well as labeled who is to receive the right of way or easement.
 - Owner(s) of open space areas should be denoted.
 - The plan labels road as private, but sheet notes mention public still. Additionally, the last couple sheet notes are not fully legible.
 - The plan should address the proposed use/acquisition of the rear portion of the front parcel #217-A-11.
 - Left of proposed road station 3+00 is a small triangle lot that should have a lot number & area.
 - In general, it is suggested that the applicant and the project team surveyor review the criteria in the Tech Manual sec.14.1.3.C along with sec.14.2. The final version of the recording plat will need to be stamped by a licensed surveyor (sec.14.1.3.C1).
- C102 - Fix Overlapping labels in General Notes. Remove note regarding public street dedication.
- C105 - Spot grades and slopes shall be added to plans for proposed improvements within the ROW at grade breaks for proposed driveways, pedestrian ramps, accessible crossings, sidewalks and at the end of the limits of the proposed improvements for the property.
- C106 - Scale says Noted, but no scale is provided on this sheet.
- C502 - Missing dimensions on Detail



-
- C502 - Where is the PCC sidewalk detail proposed to be used?



Where is this detail proposed

-
- C506 - Label the Typical Road Cross Section as Private.
- Provide updated turning template for Emergency Vehicles/Solid Waste Removal within the site.
- DPW Water Resources
 - The City requires a 100' undisturbed buffer strip on either side of the perennial stream. Please see Technical Manual Section 8 (prior version, adopted 7/19/10). The plans do not show this buffer strip and it appears that work is proposed within that setback. Please delineate the 100' undisturbed buffer strip and ensure that no work - no temporary or permanent disturbance - is proposed within that setback.
 - We are concerned with the long term embankment stability of the proposed 1:1 and 2:1 vegetated slope. We would suggest that the applicant have this design reviewed by a geotechnical engineer.
 - The proposed stormwater outfall should be designed to dissipate flow velocity prior to discharging into the existing stream embankment. We are significantly concerned that this design will lead to downstream erosion of the embankment resulting in eroded material flowing to the stream. This condition could also contribute to stability issues with the 1:1 vegetated embankment.
 - The applicant should provide an updated stormwater report as the site design has significantly changed since the previous submission.
 - We are concerned that surface runoff from the northerly paved and gravel driveway areas will flow directly onto the proposed 2:1 grassed slope and cause erosion of the embankment.
 - The applicant should note on the utility plans that all sewer and storm drain infrastructure in Stroudwater Lane and the surrounding lots will be owned and managed by homeowners in the private development.

Thank you,
Kris

--

Kris DeVolder, PE
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City of Portland Department of Public Works
[212 Canco Rd, City of Portland, ME 04103](#)
kdevolder@portlandmaine.gov
Phone: (207) 874-8817





GreenMars Real Estate Services
30 Exchange Street, Suite 203
Portland, ME 04101

Master Plan Narrative Stroudwater Commons 1877 Congress Street, Portland, Maine

Project Summary:

The proposed development at 1877 Congress Street includes affordable residential units and associated site improvements located within a key corridor of Portland. This location offers an opportunity to contribute meaningfully to the city's long-term planning goals outlined in *Portland's Plan 2030*.

1. Alignment with Portland's Vision: "One Portland"

- The development supports the **"Complete Neighborhoods"** principle by offering **housing within proximity to services, transit, open space, and employment areas**.
- It enhances **connectivity** by creating opportunities for **trail access and pedestrian/bicycle linkages** that align with the "Connect the Chain" initiative described in the plan.
- The project provides **walkable access** to the **Fore River Trail system** and could be designed to include formal **trail linkages or easements** to integrate with Portland Trails or future greenway extensions.

2. "Connect the Chain": Open Space & Trail Integration

The site at 1877 Congress Street is **adjacent to or near existing trail systems and natural assets**. According to the Recreation & Open Space section of *Portland's Plan 2030*:

"The City will prioritize open space acquisition and programming toward creating linkages where there are gaps in the network, particularly... the Western Waterfront and the Fore River."

- The development team is exploring ways to **facilitate a trail connection** through or alongside the property to enhance neighborhood access to **trails, the waterfront, and active transportation options**.
- As recommended in the plan, the project can incorporate **green buffers, interpretive signage, and multi-use paths** to further the **vision of an integrated trail network**.

3. Transportation & Accessibility

Portland's Plan 2030 emphasizes **multi-modal accessibility** and improved transit integration.

The development:

- Is sited along a **key transportation corridor (Congress Street)**, supporting public transit use and reducing vehicle dependency.
- Can include **bicycle storage, sidewalk upgrades, and pedestrian-friendly street design** in alignment with the City's **Complete Streets** policies.
- Advances the plan's recommendation to **coordinate land use with transit investments**, providing residential density in a well-served corridor.



4. Environmental Stewardship & Green Infrastructure

From the Environment section of the plan:

“The City encourages Low Impact Development (LID) strategies... such as rain gardens, green buffers, and soil-based stormwater filtration.”

- The project at 1877 Congress Street proposes **an underground storage system and filter-based stormwater treatment**, helping to meet **stormwater goals** while enhancing site aesthetics.
- **Tree preservation and native plantings** can contribute to the urban tree canopy goal (+15%) and help meet Portland’s **climate resiliency and carbon reduction targets**.

5. Affordable and Equitable Housing Goals

While not the focus of this particular narrative, if the project includes **a variety of income-restricted and market rate units**, it will directly support Portland’s housing policies:

“All who work in Portland should have the option of living in Portland.”

The development should be evaluated in terms of:

- Providing **housing diversity**,
- Promoting **aging-in-place**, and
- Ensuring **ADA-accessible units and site features**, as encouraged in *Portland’s Plan 2030*.

6. Summary of Policy Alignment

Plan Goal	Project Contribution
Connect the Chain	Trail access, open space buffers, potential trail easement
Complete Neighborhoods	Housing near services, transit, and recreational opportunities
Climate Resiliency	Low Impact Development, stormwater filtering
Multi-modal Transportation	Pedestrian improvements, access to transit & bike amenities
Recreation & Public Health	Proximity to open space and active lifestyle infrastructure

Conclusion

The development at **1877 Congress Street** is well-positioned to support the long-term objectives of *Portland’s Plan 2030*. Through thoughtful site design and collaboration with city and community partners (e.g., **Portland Trails, Planning Department**), the project can play a meaningful role in **advancing trail connectivity, increasing housing supply, and enhancing livability** in this strategic location.



GreenMars Real Estate Services
30 Exchange Street, Suite 203
Portland, ME 04101

Design Narrative

Stroudwater Commons

1877 Congress Street, Portland, Maine

1. Introduction

Stroudwater Commons is a thoughtfully designed residential community located in Portland, Maine. The project aligns with the City of Portland's Design Manual and reflects a commitment to high-quality urban planning, sustainability, and neighborhood integration. The development emphasizes efficient land use, infrastructure resilience, and environmental stewardship while creating a safe, welcoming environment for residents.

This narrative outlines how Stroudwater Commons meets or exceeds the City's Design Manual requirements, incorporating a public roadway, underground stormwater management, trail connectivity, a clubhouse amenity building, off-street parking, rear-building parking placement, and significant integration of open space and pedestrian-oriented features.

2. Compliance with the City of Portland Design Manual

Stroudwater Commons's design reflects compliance with all applicable sections of the City of Portland Design Manual, supporting safety, accessibility, and sustainability throughout the development.

A. Site Design & Layout

✓ Private Road Infrastructure

- Stroudwater Commons introduces a new private roadway built to city standards for width, materials, stormwater drainage, and emergency access.
- The road network ensures smooth circulation for vehicles, pedestrians, and bicycles while preserving the surrounding environment.
- The design includes space for public utilities, street trees, and pedestrian-scale lighting.

✓ Off-Street Parking & Rear-Located Parking

- All residential parking is off-street and located behind buildings to maintain a clean and inviting streetscape.
- Landscaped buffers and lighting are incorporated into parking areas to enhance aesthetics, security, and user comfort.



- The parking configuration meets zoning standards and maximizes efficient land use.

✓ **Pedestrian-Friendly Design & Connectivity**

- Sidewalks and walkways are integrated throughout the neighborhood, offering safe pedestrian access to homes, the clubhouse, and open spaces.
- The site design includes direct connections to adjacent and regional trail networks, encouraging recreation and non-motorized transportation.
- Pedestrian crossings, bike racks, and pathway lighting support active living and community connectivity.

✓ **Clubhouse Amenity Building**

- A centrally located clubhouse will serve as a shared amenity for residents, providing indoor community space for events, meetings, and gatherings. The space will also include a gym and office space for the residents of the development.
- The clubhouse will be accessible via sidewalks and adjacent parking, reinforcing the development's walkability and neighborhood cohesion.

B. Stormwater Management & Environmental Considerations

✓ **Underground Stormwater Detention & Treatment System Using Contech StormFilter**

- Stroudwater Commons includes a subsurface stormwater management system that meets Portland's Stormwater Management Manual and state environmental requirements.
- Stormwater is detained in underground pipe storage systems and treated using a Contech StormFilter unit, which removes pollutants such as total suspended solids (TSS), nutrients, hydrocarbons, and metals.
- This low-impact system maximizes usable open space and is designed for long-term reliability and low maintenance.

✓ **Erosion & Sediment Control**

- A robust erosion and sediment control plan ensures minimal soil disruption and protection of nearby natural resources during construction.
- Best practices such as silt fencing, phased grading, and sediment basins will be implemented to maintain environmental compliance.

✓ **Green Infrastructure & Sustainable Development**

- The development incorporates low-impact strategies including permeable pavements, native vegetation, and mature tree preservation.



- Landscaping emphasizes drought-tolerant species and natural stormwater filtration to reduce irrigation and promote ecological resilience.

C. Open Space & Community Integration

✓ Strategic Open Space Planning

- Stroudwater Commons features open space throughout the site, including a pocket park, walking trails, and green buffers.
- The project connects directly to local and regional trail systems, providing recreational access and promoting an active lifestyle.

✓ Habitat Conservation & Landscaping

- Landscaping includes native and adapted plantings that support pollinators, biodiversity, and seasonal beauty.
- Tree-lined streets, vegetated buffers, and open lawn areas contribute to community aesthetics and environmental performance.

D. Architectural & Structural Design Compliance

✓ Building Orientation & Streetscape Design

- Homes are oriented to maximize solar access and natural light while maintaining a cohesive, attractive streetscape.
- Building design incorporates architectural elements consistent with Portland's character and residential design guidelines.

✓ Energy Efficiency & Sustainability Features

- Structures meet energy efficiency standards through use of:
 - High-performance building envelopes
 - Energy-efficient HVAC systems and LED lighting
 - Low-flow plumbing fixtures and rainwater collection measures

✓ Outdoor Lighting & Safety Considerations

- Exterior lighting will be dark-sky compliant, minimizing light pollution and preserving nighttime visibility.
- Pedestrian-scale lighting along walkways, roads, and the clubhouse enhances safety and accessibility while maintaining energy efficiency.

3. Conclusion

Stroudwater Commons is a forward-thinking, environmentally responsible residential development that aligns with Portland's vision for sustainable and connected neighborhoods. Highlights of the project include:

- A private road network that meets safety and accessibility standards



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Portland, ME 04101

- An underground stormwater management system with advanced treatment
- Integration of pedestrian pathways, public trails, and bike-friendly features
- A community clubhouse providing social and recreational amenities
- Energy-efficient homes and resilient infrastructure
- Well-planned open spaces and native landscaping that enrich quality of life

Stroudwater Commons offers high-quality housing while preserving and enhancing the surrounding environment. This development strengthens Portland's urban fabric, expands access to outdoor spaces, and reflects a commitment to long-term community resilience.



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Site Plan Standards Deering Village 410 Auburn Street, Portland, Maine

Site Plan Compliance Report for Deering Village

1. Introduction

Deering Village is a proposed residential development located at 410-418 Auburn Street in Portland, Maine. The project encompasses 110 condominiums and 22 accessory dwelling units (ADUs) across a 4.2-acre site. This report outlines how Deering Village complies with the City of Portland's site plan standards as specified in the Design Manual and relevant city codes.

2. Compliance with Site Plan Standards

a. Site Layout and Design

- **Building Placement and Orientation:** The thirteen buildings are strategically positioned to promote community interaction and optimize natural light, aligning with Portland's urban design principles.
- **Accessory Dwelling Units (ADUs):** Incorporating 26 ADUs enhances housing diversity and affordability, supporting the city's housing objectives.

b. Transportation and Access

- **Vehicular Access:** The development features a privately maintained roadway designed to meet city standards, ensuring safe and efficient traffic flow within the community.
- **Parking:** Off-street parking is provided at the rear of each building, minimizing visual impact and enhancing the pedestrian experience.
- **Pedestrian Connectivity:** Sidewalks and pathways are integrated throughout the site, promoting walkability and connecting residents to nearby amenities.

c. Stormwater Management

- **Underground Treatment System:** An underground stormwater detention and treatment system utilizing pipe storage and filters is implemented to filter runoff, complying with Portland's Stormwater Management Manual.
- The detention volume provided is **over 1.5 times the required storage volume** providing protection against downstream disturbance due to extreme flows.

d. Landscaping and Open Space



- **Landscaping:** The use of native plant species in landscaping supports local biodiversity and reduces maintenance needs.

e. Environmental Considerations

- **Erosion and Sediment Control:** Erosion control measures, such as silt fences and sediment basins, are planned to protect adjacent properties and natural resources during construction.

f. Utilities and Services

- **Solid Waste Management:** Designated dumpster areas at the end of each parking lot will facilitate waste collection by a private hauler, ensuring compliance with city waste management standards.

g. Lighting and Safety

- **Lighting:** Outdoor lighting is designed to enhance safety while minimizing light pollution, adhering to Portland's dark sky ordinances.

h. Sustainability Features

- **Energy Efficiency:** Buildings are designed with energy-efficient materials and systems, contributing to reduced environmental impact and aligning with the city's sustainability goals.

3. Conclusion

Deering Village is committed to meeting and exceeding the City of Portland's site plan standards. Through thoughtful design and planning, the development aims to provide a sustainable, safe, and vibrant community for its residents.



Soil Management and Protection Plan Stroudwater Commons 1877-1897 Congress Street, Maine

1. Introduction This Soil Management and Protection Plan outlines the strategies and best management practices (BMPs) to ensure soil conservation and minimize environmental impact during the construction and post-construction phases of the proposed residential development. The plan aims to prevent soil erosion, maintain soil quality, and ensure compliance with local, state, and federal regulations.

2. Project Overview

- **Project Name:** Stroudwater Commons
- **Location:** 1877 Congress Street, Portland Maine
- **Developer:** GreenMars Real Estate
- **Project Description:** New affordable residential development including 14 new buildings and a total of 156 units.

3. Soil Assessment A comprehensive soil assessment was conducted to determine soil composition, structure, and stability. The key findings include:

- **Soil Type(s):** (see attached soil survey)
- **Drainage Characteristics:** Hydrologic Soil Group (D)
- **Erosion Risk:** 0-15+% slope, low erosion risk
- **Compaction Risk:** Two drainage ponds are proposed, compaction in those areas could affect overall stormwater effectiveness on site.

4. Soil Erosion and Sediment Control Measures To mitigate soil erosion and prevent sediment transport, the following BMPs will be implemented:

- **Silt Fencing and Erosion Control Barriers:** Installed around the perimeter of disturbed areas.
- **Vegetative Buffer Strips:** Maintained along waterways and sensitive areas.
- **Mulching and Temporary Seeding:** Applied to stabilize exposed soil surfaces.
- **Check Dams and Sediment Basins:** Used in drainage areas to capture sediment runoff.
- **Construction Entrance Stabilization:** Gravel pads installed at site entrances to reduce off-site sediment tracking.

5. Topsoil Management

- **Topsoil Stripping and Stockpiling:** Stripped topsoil will be stored in designated areas and stabilized with vegetation or erosion control blankets.



- **Topsoil Reuse:** Stockpiled topsoil will be redistributed across landscaped and green areas to maintain soil fertility.

6. Compaction Prevention and Soil Restoration To minimize soil compaction and maintain infiltration capacity:

- **Restricted Equipment Movement:** Designated paths for heavy machinery will be established.
- **Subsoiling and Aeration:** Compacted areas will be loosened post-construction to restore permeability.
- **Organic Amendments:** Compost and other organic materials will be incorporated to improve soil structure.

7. Post-Construction Soil Management

- **Permanent Vegetation and Landscaping:** Native plants and grasses will be established to enhance soil stability and filtration.
- **Long-Term Maintenance:** Regular monitoring and maintenance of landscaped areas to prevent soil degradation.
- **Stormwater Management Integration:** Implementation of rain gardens, infiltration basins, and permeable surfaces to enhance water infiltration and soil conservation.

8. Compliance and Monitoring

- **Regulatory Compliance:** All soil management practices will adhere to applicable environmental and land use regulations.
- **Inspection Schedule:** Routine site inspections will be conducted to ensure BMPs remain effective.
- **Corrective Actions:** Any identified deficiencies will be promptly addressed to prevent soil-related issues.

9. Conclusion This Soil Management and Protection Plan is designed to protect and enhance soil resources while supporting sustainable development practices. By implementing these measures, the proposed residential development will minimize environmental impacts and promote long-term soil health.

Prepared by: Travis Letellier **Date:** March 10, 2025



**Solid Waste Management Plan
Stroudwater Commons
1877 Congress Street, Portland, Maine**

1. Introduction

This Solid Waste Management Plan outlines the strategies and practices for handling solid waste at Stroudwater Commons ensuring compliance with the City of Portland, Maine's standards and regulations. Our goal is to maintain a clean, safe, and environmentally responsible community by implementing effective waste collection, recycling, and disposal methods.

2. Waste Collection System

a. Dumpster Placement

To facilitate efficient waste disposal, dumpsters will be strategically located at the end of each parking lot within the development. These locations are chosen to provide convenient access for residents while minimizing visual impact and ensuring safety.

b. Private Hauler Services

We will engage a licensed private waste hauler to manage the regular collection of solid waste from the dumpsters. The hauler will adhere to all applicable city regulations and collection schedules to ensure timely and efficient service.

3. Recycling Program

In alignment with Portland's commitment to sustainability, a comprehensive recycling program will be implemented:

- **Recycling Containers:** Designated recycling bins will be provided alongside each dumpster to encourage proper sorting of recyclable materials.
- **Educational Materials:** Residents will receive information on acceptable recyclable items and proper sorting techniques to maximize participation and effectiveness.

4. Compliance with City Regulations

Our waste management practices will comply with the City of Portland's solid waste and recycling ordinances, including:

- **Solid Waste Storage:** Ensuring all waste is stored in durable, covered containers to prevent littering and access by pests.
- **Collection Frequency:** Scheduling waste pickups at intervals that prevent overflow and maintain sanitary conditions.
- **Recycling Requirements:** Adhering to the city's mandatory recycling policies to reduce landfill use and promote environmental stewardship.



5. Resident Engagement

To foster community involvement and ensure the success of our waste management plan:

- **Orientation Sessions:** New residents will be briefed on waste disposal procedures and the importance of recycling.
- **Ongoing Communication:** Regular updates and reminders will be provided to keep residents informed about any changes or important information regarding waste services.

6. Monitoring and Improvement

We are committed to continuous improvement of our waste management practices:

- **Regular Assessments:** Periodic evaluations will be conducted to identify areas for enhancement in waste collection and recycling efforts.
- **Resident Feedback:** We will encourage and consider resident suggestions to improve the efficiency and effectiveness of our waste management system.

7. Conclusion

By implementing this Solid Waste Management Plan, Stroudwater Commons aims to provide a clean, sustainable, and compliant living environment. Through strategic planning, resident participation, and adherence to city regulations, we strive to contribute positively to Portland's environmental goals.



**Subdivision Standards
Stroudwater Commons
1877 Congress Street, Portland, Maine**

Stroudwater Commons – Subdivision Compliance & Affordable Housing Report

1. Introduction

- **Project Overview:** Stroudwater Commons is a proposed residential community at 1877-1897 Congress Street in Portland, Maine. The development includes **130 condominiums and 26 accessory dwelling units (ADUs)** on a **4.0-acre site**.
- **Subdivision & Affordable Housing Compliance:** The project is designed to meet all **City of Portland subdivision standards** while leveraging the **2.5 times density bonus** for affordable housing under **LD 2003**.
- **Commitment to Smart Growth:** Stroudwater Commons balances increased housing density with **sustainable infrastructure, pedestrian-friendly design, stormwater management, and open space preservation**.

2. Compliance with City of Portland Subdivision Standards

A. Lot Configuration and Density

- **Optimized Land Use:** The subdivision layout clusters buildings to **preserve open space, enhance community interaction, and optimize infrastructure efficiency**.
- **Density Compliance:** The development adheres to **Portland's RN-1 Residential zoning standards under the Conservation Residential Development section** while utilizing the **affordable housing density bonus** to increase the number of permitted units.

B. Street Design and Access

- **New Road:** A **private roadway** is designed to meet city standards for **width, emergency access, and pedestrian safety**.
- **Connectivity:** The road layout promotes **seamless connectivity within the development and to adjacent areas**, aligning with **Portland's urban planning goals**.

C. Utilities and Services

- **Water & Sewer:** The project connects to **Portland's public water and sewer systems**, ensuring **reliable, high-quality utility services**.



- **Solid Waste Management:** Dumpster areas are placed at the **end of each parking lot**, with **private hauler collection**, in compliance with **Portland's waste management standards**.

D. Stormwater Management & Environmental Protection

- **Underground Stormwater Treatment:** The project implements an **underground stormwater treatment system utilizing pipe storage and filters** to **filter runoff**, meeting **Portland's Stormwater Management Manual requirements**.
- **Erosion & Sediment Control:** Measures such as **silt fences, sediment basins, and controlled grading** protect surrounding properties and water bodies during construction.
- **Tree Preservation & Habitat Protection:** The development integrates **existing mature trees and native plant species** to support biodiversity and maintain ecological integrity.

E. Open Space & Recreation

- **Pedestrian Pathways & Trails:** The community features **walking trails and communal green spaces**, connecting residents to **nearby trail systems**.

F. Parking & Transportation Infrastructure

- **Rear-Located Off-Street Parking:** All parking is **located behind buildings**, improving **streetscape aesthetics and pedestrian safety**.
- **Bicycle & Pedestrian-Friendly Design:** The project includes **dedicated bike racks, sidewalks, and crosswalks** to encourage **sustainable transportation**.

G. Lighting & Safety

- **Dark Sky-Compliant Street Lighting:** Outdoor lighting follows **Portland's dark sky ordinances**, minimizing **light pollution while enhancing security**.
- **Clear Sightlines & Visibility:** The design prioritizes **safe intersections, well-lit pathways, and secure public spaces**.

3. Affordable Housing & Density Bonus Compliance

A. 2.5 Density Bonus Under LD 2003

- **Density Increase Eligibility:** Under **Maine's LD 2003**, affordable housing developments with **over 50% affordable units** qualify for a **2.5 times base density bonus**.
- **Stroudwater Commons Compliance:** The development **meets this threshold**, allowing for **higher unit counts while maintaining site functionality and livability**.



B. Long-Term Affordability Commitment

- **30-Year Affordability Requirement:** To qualify for the density bonus, Stroudwater Commons commits to maintaining **affordable units for a minimum of 30 years**.

C. Alignment with State & Local Housing Goals

- **Municipal & State Compliance:** The project aligns with **Maine's LD 2003 affordable housing incentives** and **Portland's zoning updates**, contributing to **expanded housing availability** in the city.

4. Conclusion

- **Comprehensive Compliance:** Stroudwater Commons meets or exceeds **Portland's subdivision and zoning standards**, ensuring a **high-quality, sustainable, and affordable residential community**.
- **Balanced Growth Strategy:** By integrating **affordable housing, open space preservation, sustainable infrastructure, and pedestrian-friendly design**, the development **enhances neighborhood character while addressing housing demand**.
- **Future-Ready Development:** The combination of **smart site planning, infrastructure resilience, and affordability commitments** ensures **long-term value for residents and the Portland community**.

City of Portland ME: Low-Impact Design Requirements				
Owner / applicant name:	GreenMars Real Estate			
Representative name:	Nate Green			
Project address:	1877 Congress Street			
Project CBL:				
Application ID (if known):	Stroudwater Commons			
	Maximum Points	How to Apply	Points Awarded	LID Standard / Approach
CORE METHODS: Wetlands, Streams, & Drainage				
Protect natural drainage paths	Required			
Shoreland Zoning	Required			
Meeting DEP and ACOE standards for stream crossings	Required			
Protect wetlands	12	Select one option		Select a site that does not have wetlands or vernal pools = 12pts
			10	Project maintains a 50' set-back / no-disturb buffer to all wetlands = 10pts
				Project maintains a 25' set-back / no-disturb buffer to all wetlands = 7pts
				Project does not place structures in wetlands and avoids wetlands impacts from construction and stormwater discharges = 5pts
				Project replicates impacted wetlands elsewhere on site or within watershed = 3pt
				Project pays wetlands impact fee = 0pts
Permanently protect stream (intermittent and perennial) and riparian buffers <i>(exclusive of approved stream crossings; must include a no-disturb zone with markers installed and deed restriction recorded at registry of deeds)</i>	12	Select one option		Select a site with no streams = 12pts
			10	Permanently protect all 100ft shoreline buffers = 10pts
				Permanently protect all 75ft shoreline buffers = 7pts
				Permanently protect all 50ft shoreline buffers (intermittent streams) = 6pts
				Permanently protect all 50ft shoreline buffers (required minimum for perennial streams) = 5pts
				Permanently protect all 25ft shoreline buffers (required minimum for intermittent streams) = 5pts
Stream crossings	12	Select one option		Select a site with no streams = 12pts
			10	Avoid any stream crossings = 10pts
				All stream crossings use a bridge or open bottom culvert structure sized at 1.2 times the bank full width of the stream = 10pts
				All stream crossings use Maine Stream Smart Principles to preserve natural pre-development drainage pathways = 6pts
CORE METHODS: Natural Areas & Habitat				
Preserve threatened or endangered species habitat	Required (Beginning with Habitat Maps at a minimum)			
Protect 30% of trees over 10" DBH	Required (Tree survey required)			
Protect intact, contiguous forests and native trees over 10" DBH	8	Select one option	8	All development and land disturbance outside of existing wooded/forested areas (no site clearing in prior 10 years) = 8pts
				Protect 50% of trees over 10" DBH = 6pts
				Protect 40% of trees over 10" DBH = 4pt

CORE METHODS: Soils & Slopes				
USDA Web Soil Survey	Required (provide details how soil limitations will be mitigated)			
Avoid steep slope disturbance	5	Select one option		Selecting a site without slopes 15% or greater = 5pts
				Maintain >20' undisturbed vegetated buffer to all slopes 15% or greater = 3pts
				Maintain 10-20' undisturbed vegetated buffer to all slopes 15% or greater = 2pts
				Maintain 1-10' undisturbed vegetated buffer to all slopes 15% or greater = 1pt
			0	Disturbance of any slope 15% or greater = 0pts
Protect soils	5	Select one option		Redevelopment sites = 5pts
			5	Detailed, site-specific soil survey; preparation of a Soil Management and Protection Plan; protect highly permeable soils = 5pts
Limit site disturbance and earthwork	8	Select one option		Redevelopment limits disturbance to existing footprint = 8pts
				New development disturbs less than 50% of existing undeveloped site area = 8pts
			6	New development disturbs less than 75% of existing undeveloped site area = 6pts
				New development disturbs greater than 75% of existing undeveloped site area = 0pts
Soil preparation & minimizing compaction	6	Select all options that apply	3	Till soils to a depth of at least 10" prior to revegetation = 3pts
			3	Organic matter amendments as needed based on soil tests = 3pts
CORE METHODS: Landscaping				
Low-Impact Landscaping	6	Select all options that apply		Redevelopment sites reduce lawn area by 50%, provided no increase in impervious area (lawn becomes landscaping) = 2pt
				New development results in >50% non-impervious developed area is landscaping = 2pt
			2	Use only native vegetation for landscaped areas = 2pts
			2	Using only locally-sourced landscape materials = 2pt
CORE METHODS: Impervious Area & SW Management				
Meeting City's stormwater management standards	Required			
Reduce impervious and increase permeable surfaces	10	Select all options that apply, up to a maximum of 10 points		50% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 6pts
				Minimize parking impervious area by using only the minimum required number of parking spaces, the minimum required parking lot dimensions, maximizing compact spaces and utilizing low-turnover standard parking space width reductions = 4pt
				25% or more of proposed hard surfaces are permeable (porous pavers, permeable concrete, porous asphalt) = 3pts
			2	Minimize roadway impervious area by developing roadways and driveways at the minimum width and using minimum number of curb cuts = 2pt
			2	Reducing the number of driveways by using a shared driveway design = 2pt
				Providing transportation alternatives (such as bike share, car share, or similar) = 2pt
Use GI / natural stormwater treatment systems	12	Select all options that apply		Treatment requirements and conveyance achieved through vegetated systems = 6pts
				No more than 1-acre of drainage per treatment system = 3pts
			3	Increase time of concentration on site (1" 25 year storm event) = 3pts
Limit / eliminate salt use	4	Select one option	4	Detailed winter maintenance agreement, with annual reporting requirement, limiting chloride use (required in UIS watersheds) = 4pts

Bonus Points				
Bonus points are offered for strategies that may go above and beyond typical approaches; may offer particularly innovative site design or engineering ; or may help achieve the larger goal of low-impact development on a regional scale.	10		10	Utilizing structured parking = 10pts
	10			Utilizing a green roof for at least 50% of a newly developed or redeveloped building roof = 10pts
	10			Restoration of previously disturbed natural resources (minimum 500 square feet of restoration) = 10pts
	10			BMPs designed for known water quality impairment within watershed = 10pts
	10		10	Connecting to City sewer from a site >200 ft from existing City infrastructure = 10pts
	6		6	Detention of 1.5 times the required volume = 6pts
	6			Treatment for 1.5 times the required water quality volume = 6pts
	6			Innovative LID site design and/or stormwater improvement - 6pts
	10			Establishing a Traffic Demand Management plan for projects under 50,000ft = 10pts
	Total Possible Points 178		Total Points Awarded 96	Minimum points required for approval of LID strategies and techniques 80



June 26, 2024

RE: Nate Green, Chris Marshall and GreenMars Real Estate Services, Inc.

To whom it may concern,

I write this letter in support of Nate Green, Chris Marshall and GreenMars Real Estate Services, Inc. Nate and Chris have been long time customers of Norway Savings Bank and have done numerous projects with them. I believe GreenMars Real Estate Services, Inc. and its team of experienced developers/investors has the financial capacity to acquire funding to develop Stroudwater Commons at 1877 Congress Street, Portland, ME. I consider them financially capable and very knowledgeable developers.

This is in the preliminary stages and this letter is not a commitment to lend money.

Should you need further information or clarification, please feel free to contact me at (207) 222-1519.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brian C. Desjardins", is written over a faint, horizontal blue line.

Brian C. Desjardins
Regional Vice President
Commercial Lending

BCD/tbm



GreenMars Real Estate Services
30 Exchange Street, Suite 203
Portland, ME 04101

Technical Ability

- **Overview**

The design and permitting of the project is being completed under the direction of the GreenMars Real Estate Services (GreenMars). GreenMars and their consultants have the technical ability to prepare the construction documents, oversee construction, operate, and manage the project in compliance with applicable regulations.

GreenMars is the primary consultant involved with the civil/site design and site permitting of the project and has assembled the materials in this application. The following firms are acting as consultants to the Department or as subconsultants for the project:

Firm	Services	Contact
GreenMars 30 Exchange Street Portland, Maine	Civil Site Engineering	Travis Letellier, P.E. travis@greenmars.com
Invid Architecture 631 Stevens Ave Portland, Maine	Architect	Virginie Stanley, Architect, Principal virginie@invidarchitecture.com
S.W. Cole 286 Portland Road Gray, Maine	Soils Consultant	Evan Walker, P.E. Evan.Walker@swcole.com
BH2M 380B Maine Street Gorham, Maine	Boundary Survey	Robert Libby, PLS rlibby@bh2m.com
Barton & Loguidice 383 US RT 1 Scarborough, Maine	Traffic Engineer	Bill Bray, P.E. trafficsolutions@maine.rr.com

- **Experience of Project Team**

The team of consultants retained by GreenMars has expertise and experience in the design of large facilities that require a major site plan permitting.

A full list of completed construction projects by GreenMars and their principal members is available upon request.

- **Ability of the Applicant**

GreenMars experience is apparent in the ongoing operation and maintenance of their existing facilities.



AMENDED AND RESTATED OPTION TO PURCHASE REAL ESTATE

THIS AMENDED AND RESTATED OPTION TO PURCHASE REAL ESTATE is made as of June 17, 2024, by and between Portland Children's Dyslexia Foundation, with a mailing address of 1897 Congress St, Portland, ME 04102 (together "Owner") and GreenMars Real Estate Services, Inc., with a mailing address of 30 Exchange St, Suite 3, Portland, ME ("Optionee"), WHO AGREE AS FOLLOWS:

1. This Amended and Restated Option Agreement is hereby executed effective June 13, 2024, to correct certain scrivener's errors in the original option to purchase real estate executed by the parties effective May 15, 2024 (the "Original Option"), and to incorporate the more specific exhibits attached hereto and hereby supersedes and replaces that Option in its entirety. All deadlines and dates in this Amended and Restate agreement shall run from the date of the original option.
2. Option Property: Owner is the owner of certain premises situated at 1897 Congress St. in Portland, Maine, consisting of approximately 1.9996 +/- AC of vacant land, together with all buildings and improvements thereon and all rights and easements appurtenant thereto, which parcel is further identified in the Portland tax assessor's records as Book 30434, Page 141, or Map 217, Block A, Lot 11 (the "Owner's Property"). The option property is to be any/all vacant land directly abutting the parking lot of the above premises to the northeastern most property line (roughly 30,000 +/- SF of vacant land), together with all rights and easements appurtenant thereto, as approximately shown on Exhibit A attached (the "Property").
3. Due Diligence: Optionee shall have a 365 Day period from execution of the Original Option to begin the testing, inspections and approvals process as noted in section 5. During this period, the Owner may not consider any offers submitted for purchase of the option property.
4. Option: In consideration of the "Option Consideration" herewith paid to Owner by Optionee as identified below, Owner hereby grants to Optionee the exclusive, irrevocable right to purchase the Property on the terms set forth in this Agreement (the "Option"). If Optionee elects to purchase the Property, such election shall be made by written notice given to Owner at any time on or before the end of the "Option Period" identified below. The Option Period (hereinafter collectively the "Option Period") and the corresponding payments (hereinafter collectively the "Option Consideration") are as follows:

Option Period

365 days from Option Agreement Effective Date

Option Consideration

██████████

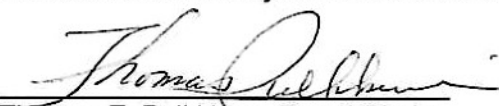
5. Purchase Price: Upon execution of the Option Agreement, the Option Consideration shall become non-refundable and the Purchase Price for the Property shall be [REDACTED]. The Option Consideration shall be credited against the Purchase Price payable at the closing. If Optionee fails to close, Owner shall retain all Option Consideration then paid as full consideration and as its sole remedy. Optionee shall be entitled to a refund of the Option Consideration if Owner's title to the Property proves defective, as provided below.
6. Testing, Inspection, Approvals: During the due diligence and Option Period, Optionee and its employees, contractors and agents shall have the right at their expense to enter upon the Property, after reasonable notice to Owner, for the purposes of conducting inspections, survey work, soils tests, and/or other testing. Owner agrees to cooperate and join with Optionee or its designees in obtaining any rezoning, permits and approvals or the like as Optionee desires, at Optionee's expense. Upon request Optionee agrees to furnish to Owner a copy of any soils testing reports it obtains.
7. Closing: If Optionee elects to purchase the Property, Owner shall convey the Property to Optionee (or its designee) by good and sufficient general Warranty Deed conveying marketable title, free and clear of all encumbrances, defects, liens, tenants and occupants ("Title Defects"), and utilizing the description obtained by Optionee's survey if requested. The closing shall take place within 45 days after written notice from Optionee that it has exercised the Option at the date, time and place specified in the notice. Optionee shall have the right to apply the Purchase Price at the Closing to the removal of any Title Defects. The parties agree to execute and deliver such documents as are reasonably necessary and customary to complete the closing. Real estate taxes and utilities shall be prorated as of the closing date. Real estate transfer taxes, income taxes and gains taxes shall be paid by Owner.
8. Broker: The parties agree that no broker, other than Claire Richardson of The Boulos Company has been involved in this transaction. The buyer shall be responsible for all fees due to The Boulos Company through a separate brokerage agreement.
9. Ownership/Risk of Loss: Owner hereby warrants that Owner is the owner of the Property in fee simple, that Owner has the full right and authority to grant the Option described in this Agreement and that there is no other option, contract or other right to purchase the Property in existence. The risk of loss to the Property or taking by eminent domain during the Option Period shall be on Owner.
10. Owner's Warranties: To the best of Owner's knowledge and belief there are no and have never been "Hazardous Materials" on, under, in or about, or migrating to or from the Property. The presence of such materials at or any time prior to the Closing shall constitute a Title Defect, rendering the title unmarketable as aforesaid. As used herein, "Hazardous Materials" means any hazardous or toxic materials, waste, substances or matter, oil or other petroleum products, underground tanks, asbestos, or similar materials, including as defined in any federal, state or local law or regulation, or any other substances constituting a hazard or threat to the health of persons, animals or plants. This warranty shall survive the Closing and any expiration or other termination of this Option.
11. Memorandum of Option: Owner agrees to execute a document for recording purposes

which will include the terms outlined herein, other than the Purchase Price.

12. Notice: Any notice required to be given by Optionee to extend or exercise this Option shall be in writing, shall be addressed as set forth above, and shall be sent by registered or certified mail, return receipt requested, or by a reputable overnight carrier that provides a receipt, such as Federal Express or Airborne, and shall be deemed delivered on the date postmarked or the date deposited with the overnight carrier
13. Binding Effect: This Option Agreement shall be binding upon the parties and their heirs, administrators, successors and assigns upon full execution by Owner and Optionee in the spaces provided below. Optionee may assign its rights hereunder.
14. Additional Covenants. The Owner and Optionee hereby agree to the additional terms and covenants attached hereto as Exhibit B which shall be carried out prior to Closing, or post-Closing through a post-closing agreement executed by the parties at Closing.

IN WITNESS WHEREOF, Owner and Optionee have executed this Agreement effective as of the date first set forth above.

OWNER:
Portland Children's Dyslexia Foundation


Thomas E. Pulkkinen, Board Chair

OPTIONEE:
GreenMars Real Estate Services, Inc.

By: _____
Christopher Marshall, President

Date: 6/18/, 2024

Date: _____, 2024

EXHIBIT A

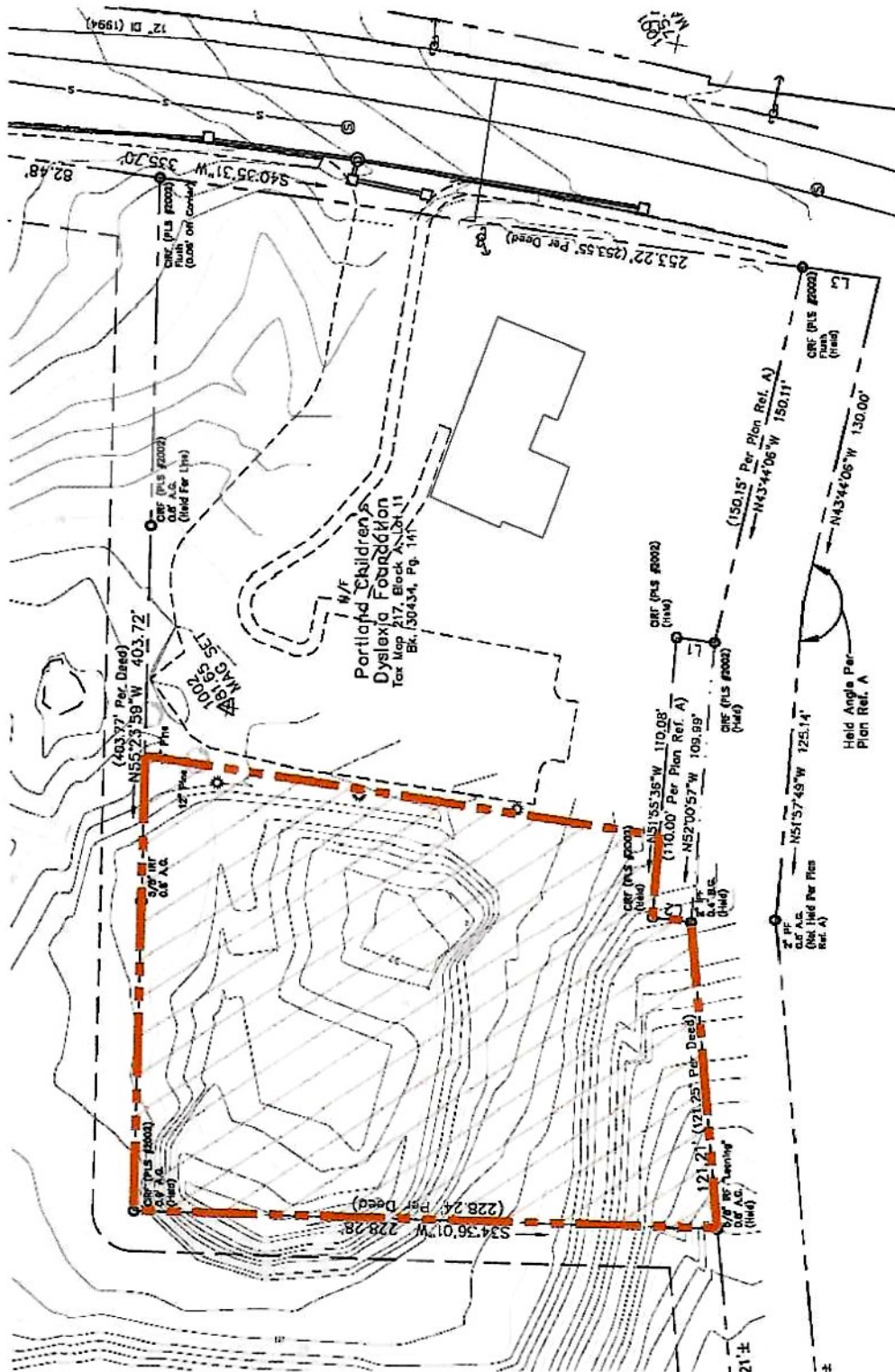


EXHIBIT B

Dear Ms. Richardson:

For the Board of the Portland Children's Dyslexia Foundation {PCDF}, I am pleased to transmit the signed Option to Purchase Real Estate for land owned by the Foundation located at 1897 Congress Street, Portland, Maine.

The document is executed with the caveat that the following commitments contained in your response to me dated April 25, 2024, shall be in honored and be in effect during the option period and /or upon the land being purchased as stipulated in the option agreement:

- 1) The property shall be surveyed by Green Mars during the option period and staked to delineate property lines, and to define dimensions and lot acreage of the respective properties.
- 2) A topographical drawing of the new "circular drop-off driveway" at the PCDF will be completed during the option period to ensure that water will not pool up at the Congress St. end of the circle and to determine whether drainage will be needed during construction by Green Mars.
- 3) The two-way paved driveway from the new 1877 roadway to the PCDF parking lot will be widened to 30 feet to better facilitate two-way turning traffic, and when the driveway connector is constructed, a pavement overlay will be added to the existing CDC parking lot, al at the cost of Green Mars.
- 4) An eight-foot privacy fence will be installed five feet from the edge of the parking lot, and the parking lot lighting (stanchions and underground wiring) will be moved within this five-foot zone. The fencing and lighting changes and related groundwork will be completed by Green Mars at the beginning of the construction phase of the project.
- 5) A split-rail or other agreed-upon fencing along the side property line adjoining the new sidewalk along the 1877 roadway to inhibit dog walkers and others from wandering onto the PCDF grounds will be addressed during the option period.
- 6) Any access to the land through the PCDF driveway and parking area for testing purposes shall be coordinated with the Portland Children's Dyslexia Center {CDC} Director to ensure the safety of children, parents and employees visiting the CDC.

Final execution of the option agreement by both parties is with the understanding that the above provisions shall be faithfully discharged during the option period or any subsequent development of the subject parcel.

GreenMars Stroudwater Commons Community Meeting Comments

Resident Comments

Traffic

Residents had concerns of the effect of the proposed development will have on traffic on congress St, adding to the heavy & highspeed traffic. Many wanted lower speed limits on the road. The Residents did appreciate GreenMars' plan to implement a pedestrian crossing across Congress St., which will immensely help pedestrians cross Congress. St.

GreenMars also made attendants of the meeting aware of the traffic study done, which predicts at peak hours the trips per hour will be <49. Well below the threshold of 100, needed for a D.O.T Movement Permit.

Parking

Residents had concerns about the parking relative to the number of units, & if not adequate the overflow could clog Congress St. and other parking areas around the development. GreenMars were pleased to announce that we greatly exceed minimum parking requirements.

Architecture & Buffers

Residents had concerns about the look of the buildings noting that they were located near a historic part of Portland. GreenMars noted that the architecture for these buildings was done by local and highly regarded architecture firm Invid Architecture, and they mimic the mansard roofs on historical home.

Residents concerns also extended to the quantity and quality of buffer from the development and abutting residential parcels. We ensured residents of the buffers present on the site plan & their relative location to the residential homes abutting the development.

First Name(s)	Last Name	Email Address	Home Address (optional)	Phone Number (optional)
Tom	Palkinen	TPalkinen@co.hon	Po Box 418, East Bay	207-350-9525
Edward	Resnisky	edwardresnisky@yahoo.com	50 Rivers Edge Drive	207-831-9320
Maryann & Eric Lefler	Lefler	mcleffler@aol.com	18 Black Sparrow Dr Portland	207-245-2332
Michael	Chambers	mchambers817@gmail.com	60 Tucker Ave Portland	207-317-0286
Dee Hlaip & Scott Pothin		Stoffahing@gmail.com	1859 Congress St.	(207) 272-3348
Dan Penco	Penco	Dpenco@MATHIE-M.com	58 RIVER'S EDGE	207 749-8215
Mike Thompson	Thompson	thompsonmike02@gmail.com	28 Heritage Ct	207-831-6372
Stephanie	Wals	staphwals@gmail.com	28 Lemison 1832 CALVERT ST	207-233-9228
Joe & Kathy Fleck	Fleck	jwaskylemaine@icloud.com		
Jessica	James	jessicaengellbucemus.com	1871 Congress St	207 852 1304
Reahna	Phillips	rpillips@portlandmaine.gov	4 Dale St.	207 3323251
Stephanie	Grohs	sgrohs@e@gmail.com	33 Old West Rd	(207) 522-8012
Kate	Edwards	Kettiebell@icloud.com	57 Garrison St	207-802-5629
Jennifer	Stenberg	jensen.88@gmail.com	25 Stroudwater Rd	207-831-3828

11.1 207-680-9222 (207) 680-9222

207-831-9320
207-245-2332
207-317-0286
207-749-8215
207-831-6372
207-233-9228
207-852-1304
207-332-3251
(207) 522-8012
207-802-5629
207-831-3828

STROUDWATER COMMONS

CONSERVATION RESIDENTAIL DEVELOPMENT
1877-1897 CONGRESS STREET
PORTLAND, MAINE 04101

PROJECT DEVELOPMENT TEAM

OWNER:
ST ALBANS CORP
1897 CONGRESS ST
PORTLAND, MAINE 04102

APPLICANT:
GREENMARS REAL ESTATE
30 EXCHANGE STREET
PORTLAND, MAINE 04101

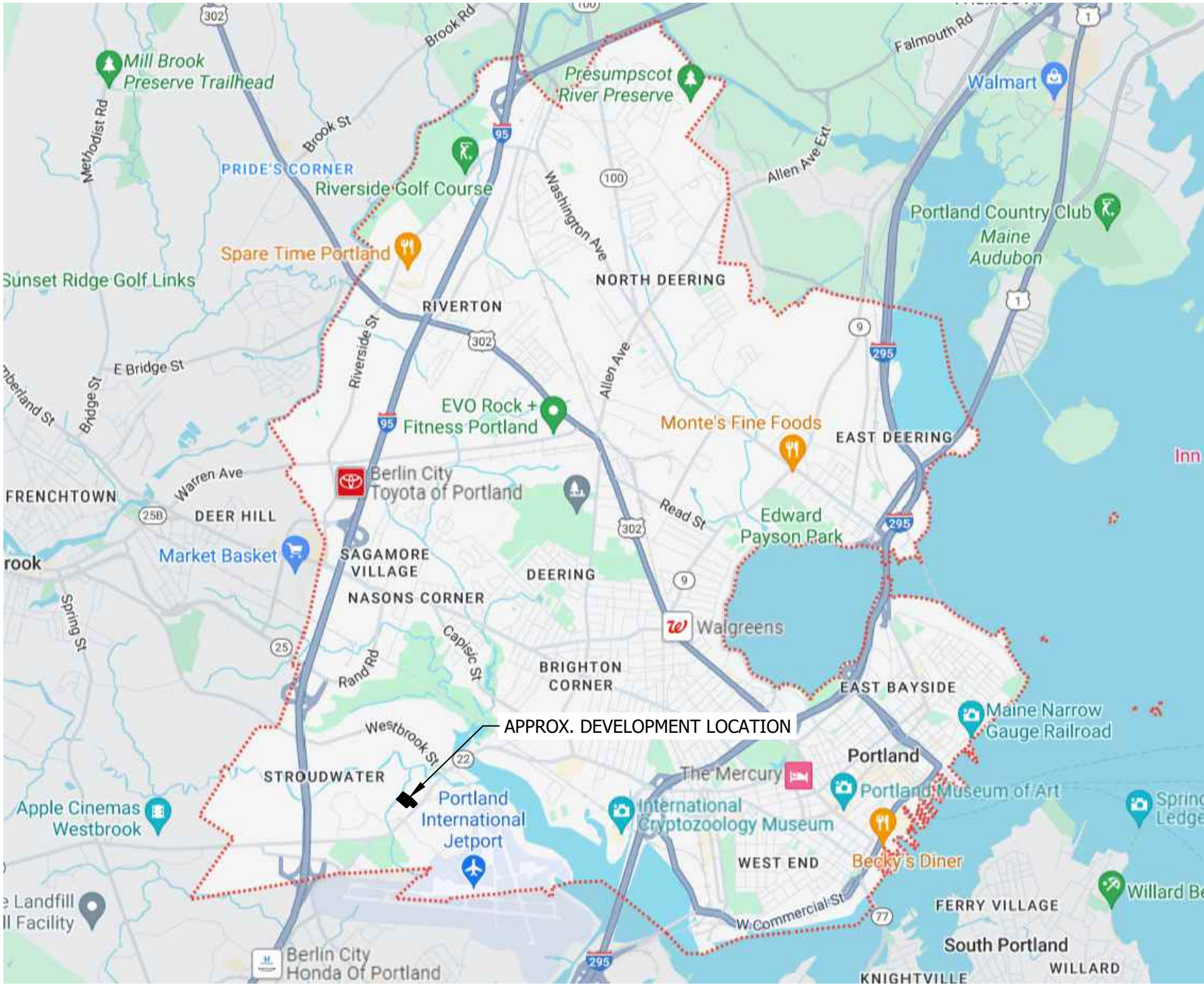
CIVIL ENGINEER:
GREENMARS DEVELOPMENT
30 EXCHANGE STREET
PORTLAND, MAINE 04101
TRAVIS LETELLIER, P.E.

ARCHITECT:
INVIVID ARCHITECTURE
631 STEVENS AVE
PORTLAND, MAINE 04103
VIRGINIE STANLEY, ARCHITECT, PRINCIPAL

SURVEYOR:
BH2M
380B MAIN STREET
GORHAM, MAINE 04038
ROBERT LIBBY, PLS

TRAFFIC ENGINEER
BARTON & LOGUIDICE
383 US RT 1, SUITE 2A
SCARBOROUGH, MAINE 04074
WILLIAM J. BRAY, P.E.

SOIL SCIENTIST
SW COLE ENGINEERING, INC
286 PORTLAND ROAD
GRAY, MAINE 04039
EVAN WALKER, P.E.



LOCUS MAP
SCALE: 1"=10,000'

SHEET INDEX

C100	COVER/INDEX
C101	BOUNDARY SURVEY PLAN (BH2M)
C102	SUBDIVISION PLAN
C103	CONDO PLAT
C104	SITE PLAN
C105	GRADING AND DRAINAGE PLAN
C106	PROFILE
C107	UTILITY PLAN
C108	EROSION CONTROL PLAN
C401	EROSION CONTROL NOTES & DETAIL
C501-C507	CONSTRUCTION DETAILS
C508	DETAILED SIDEWALK GRADING PLAN



PREPARED FOR:
GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

PROJECT:
STROUDWATER
COMMONS
PARCEL ID: 217 A010001 & 217 A011001

COVER & INDEX

NO.	DATE	DESCRIPTION
1	07/01/24	CITY SITE PLAN SUBMISSION
2	11/21/24	RESPONSE TO CITY REVIEW COMMENTS
3	03/08/25	REVISED PER CONS. RES. DEV. STANDARDS

DRAWN:
TAL
SCALE:
NOTED
DATE:
4/17/2024

SHEET:

C100

N/F
Stroudwater Farms
Association
Tax Map 217, Block A, Lot 39
(See Plan Ref. C)

N/F
Richard E. Parent &
Richard A. Moore
Tax Map 217, Block A, Lot 39
Bk. 33405, Pg. 183

N/F
Daniel E. & Lindley S.
Peaco
Tax Map 217, Block A, Lot 38
Bk. 19819, Pg. 47

N/F
Edward J. Resnisky
Tax Map 217, Block A, Lot 37
Bk. 28110, Pg. 189

N/F
Scott A. Fortin &
Jae C. Allain
Tax Map 217, Block A, Lot 12
Bk. 35808, Pg. 181

N/F
Dustin Brooks &
Jessica A. James
Tax Map 217, Block A, Lot 7
Bk. 35863, Pg. 122

N/F
Life Insurance
Company
Tax Map 217, Block A, Lot 6
Bk. 14310, Pg. 345

N/F
Portland Children's
Dyslexia Foundation
Tax Map 217, Block A, Lot 11
Bk. 150434, Pg. 11

N/F
Gateway Business
Park Condo
Tax Map 216, Block A, Lot 6
Bk. 33958, Pg. 1

APPROVED BY THE CITY OF
PORTLAND PLANNING BOARD

CHAIRPERSON DATE

LOT	MIN. LOT AREA	PROPOSED LOT AREA	MIN. LOT FRONTAGE	PROPOSED LOT FRONTAGE
1	3,250 SF	4,972 SF	20'	42.50'
2		4,972 SF		42.50'
3		4,972 SF		42.50'
4		4,972 SF		42.50'
5		4,972 SF		42.50'
6		7,098 SF		42.50'
7		7,098 SF		42.50'
8		7,098 SF		42.50'
9		7,098 SF		42.50'
10		7,098 SF		42.50'
11		4,972 SF		42.50'
12		4,972 SF		42.50'
13		4,972 SF		42.50'
14	6,500 SF	18,211 SF	40'	329.93'

PLAN REFERENCES

- "PLAN OF LAND OF MASONIC TRUSTEES OF PORTLAND", DATED NOVEMBER 2010, B Y LAND SERVICES INC. AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 211, PAGE 111.
- "STATE OF MAINE, DEPARTMENT OF TRANSFORMATIONS, RIGHT OF WAY MAP, STATE AND HIGHWAY "7", DATED APRIL 1993 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 197, PAGES 204-205.
- "FINAL SUBDIVISION PLAN, RIVERS EDGE", DATED APRIL 2001, FOR STROUDWATER FARMS ASSOCIATES, BY OWNE HASKELL, INC. AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 201, PAGE 494.
- "SUBDIVISION PLAT, 1945 CONGRESS STREET", DATED APRIL 2016, FOR NORTHLAND ENTERPRISES, BY PINKHAM & GREER CIVIL ENGINEERS, JOB NUMBER 13151.

GENERAL NOTES

- THE SITE, MAP 217, BLOCK A, LOT 10, IS OWNED BY PORTLAND/ST. ALBANS, CORP AS RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 29756 PAGE 145.
- AREA OF EXISTING LOT = 4.037 ACRES (175,874 S.F.)
- ZONING REQUIREMENTS: ZONE: RESIDENTIAL 1 (RN-1)

- MIN. LOT AREA 6,500 SF
- STREET FRONTAGE 40 FT.
- MIN. FRONT YARD 20 FT.
- MIN. REAR YARD 25 FT.
- MIN. SIDE YARD 8 FT.
- MAX. IMPERVIOUS AREA 70%
- MAX. BUILDING HEIGHT 35 FT.
- BASE DENSITY 4 UNITS PER LOT

REQUIREMENT FOR CONSERVATION RESIDENTIAL DEVELOPMENT

- MIN. LOT AREA 3,250 SF
- STREET/OPEN SPACE FRONTAGE 20 FT.
- MIN. FRONT YARD 10 FT.
- MIN. REAR YARD 12.5 FT.
- MIN. SIDE YARD 5 FT.
- MAX. IMPERVIOUS AREA n/a FOR LOTS UNDER 5,000 SF
- MAX. BUILDING HEIGHT 35 FT.

- WETLANDS SHOWN ARE DELINEATED FROM THE US FISH & WILDLIFE SERVICE'S NATIONAL WETLANDS INVENTORY ONLINE MAPPING
- ALL NEW HOMES IN THE STROUDWATER COMMONS SUBDIVISION WILL REQUIRE SPRINKLER SYSTEMS.

- ALL STORMWATER INFRASTRUCTURE, LOCATED OUTSIDE OF THE PROPOSED RIGHT-OF-WAY, SHALL BE THE RESPONSIBILITY OF THE STROUDWATER COMMONS HOMEOWNERS ASSOCIATION AS DESCRIBED IN THE STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT TO BE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.

- RIGHT-OF-WAY MONUMENTS AND COVERS SHOWN SHALL BE SET BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL STANDARDS MANUAL.

- AN ELEVATION BENCHMARK SHALL BE ESTABLISHED ON AT LEAST ONE OF THE NEW STREET MONUMENTS, AND IT SHALL BE SHOWN AND DESCRIBED ON THE AS-BUILT PLAN FOR THIS PROJECT.

- AT LEAST TWO OF THE NEW STREET MONUMENTS SHALL BE LABELED WITH STATE PLANE COORDINATES ON A REVISED COPY ON THE SUBDIVISION PLAN.

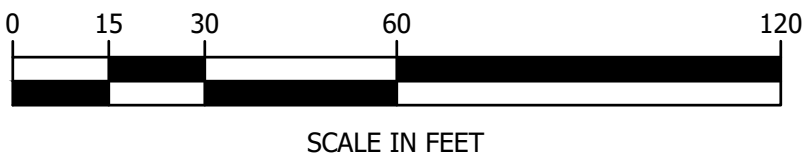
- CONDEMNATION SUBJECT TO A STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT AND BY LAWS OF THE STROUDWATER COMMONS HOMEOWNER'S ASSOCIATION.

- [CONDITION 1]
- [ROAD NAME HERE] HAS BEEN DEDICATED AS A PUBLIC CITY STREET, SUBJECT TO ACCEPTANCE BY THE CITY OF PORTLAND AS OUTLINED IN CONDITION 2, BELOW, AND PURSUANT TO STATE AND LOCAL LAW.

LEGEND

- #5 REBAR WITH PLASTIC CAP (PROPOSED)
- SET CITY OF PORTLAND RIGHT-OF-WAY MONUMENT & COVER (PROPOSED)
- FOUND IRON (SIZE & TYPE AS NOTED)
- UTILITY POLE (NUMBER AS NOTED)
- GUY WIRE ANCHOR
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- ABUTTER LINE
- BUILDING SETBACK
- OVERHEAD UTILITY
- EASEMENT
- NOW OR FORMERLY OWNED BY DEED BOOK AND PAGE (CCRD)
- TAX MAP-LOT
- WETLAND

FOR REVIEW
NOT FOR CONSTRUCTION



SCALE IN FEET



PREPARED FOR:

PROJECT:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

STROUDWATER
COMMONS
PARCEL ID: 217 A010001 & 217 A011001

TITLE:

SUBDIVISION PLAN

REVISION:

NO.	DATE	APPR.	TAL	DESCRIPTION
1	07/01/24			CITY SITE PLAN SUBDIVISION SUBMISSION
2	11/21/24			RESPONSE TO CITY REVIEW COMMENTS
3	03/08/25			REVISED PER CONS. RES. DEV. STANDARDS

DRAWN:

TAL

SCALE:

NOTED

DATE:

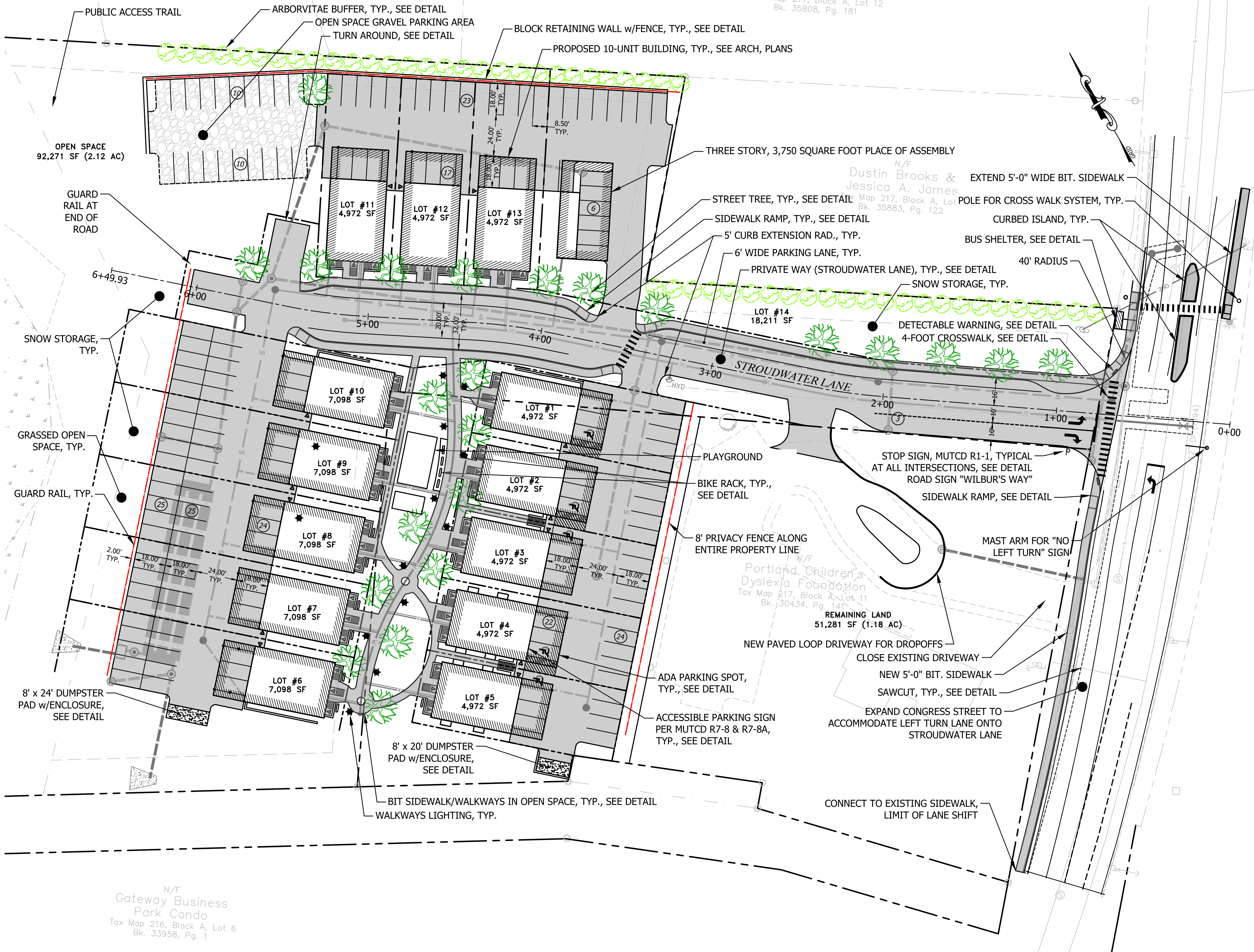
4/17/2024

SHEET:

C102

03/08/25

3 of 18

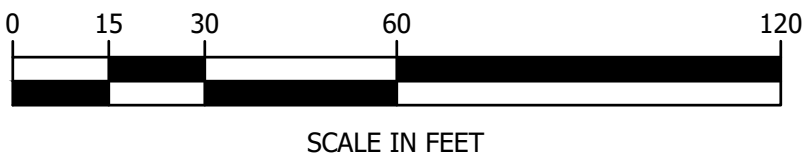


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 - MIN. SIDE YARD 8 FT.
 - MAX. IMPERVIOUS AREA 70%
 - MAX. BUILDING HEIGHT 35 FT.
 - BASE DENSITY 4 UNITS PER LOT
- REQUIREMENT FOR CONSERVATION RESIDENTIAL DEVELOPMENT
- MIN. LOT AREA 3,250 SF
 - STREET/OPEN SPACE FRONTAGE 20 FT.
 - MIN. FRONT YARD 10 FT.
 - MIN. REAR YARD 12.5 FT.
 - MIN. SIDE YARD 5 FT.
 - MAX. IMPERVIOUS AREA N/A FOR LOTS UNDER 5,000 SF
 - MAX. BUILDING HEIGHT 35 FT.
- SITE CLEARING SHALL BE LIMITED TO PHASE 1 WHEN IT IS CONSTRUCTED. THE AREA FOR PHASE 2 SHALL BE LEFT IN A NATURAL STATE UNTIL BUILDING PERMITS HAVE BEEN ISSUED FOR THE UNITS IN THAT PHASE. PRIOR TO CLEARING FOR THE CURRENT PHASE, THE CLEARING LIMITS SHALL BE FLAGGED.
 - PRIOR TO CONSTRUCTION THE TOWN ENGINEER/DIRECTOR OF PUBLIC WORKS SHALL APPROVE THE CONSTRUCTION DRAWINGS.
 - THE CONTRACTOR SHALL CONFIRM HORIZONTAL AND VERTICAL CONTROL BEFORE BEGINNING WORK.
 - ALL DISTURBED SURFACES NOT COVERED WITH OTHER MATERIALS SHALL RECEIVE 4" TOPSOIL, LOAM, & SEED.
 - CLEARING DEBRIS AND GRUBBINGS SHALL BE REMOVED, OR GROUND UP AND USED IN EROSION CONTROL. WHAT CANNOT BE RE-USED WILL BE SUBJECT TO BURNING, WITH COORDINATION FROM PORTLAND FIRE DEPARTMENT
 - THE LIMITS OF CLEARING SHALL BE LOCATED AND MARKED PRIOR TO CUTTING OF TREES.
 - TREES, SHRUBS, AND GROUND COVER IN AREAS NOT TO BE DISTURBED SHALL BE PROTECTED.
 - REMOVE DEAD WOOD, PRUNE AND CLEAN UP TRIMMED VEGETATION TO THE CLEARING LIMIT IN WOODED AREAS.
 - INSTALL TEMPORARY EROSION CONTROL BEFORE BEGINNING EARTHWORK. REMOVE WHEN UPSLOPE AREAS ARE STABILIZED
 - SEE PLUMBING AND ELECTRICAL PLANS FOR LOCATION AND INVERTS OF SLEEVES IN FOUNDATIONS.
 - ELECTRIC SERVICE SHALL BE INSTALLED IN CONDUIT UNDER PAVEMENT/CONC.
 - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL SEWER, WATER, ELECTRICAL, AND SANITARY CONDUIT, MANHOLES, TRANSFORMERS, AND FITTINGS FOR APPROVAL.
 - ALL UNDERGROUND UTILITIES LOCATED ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - ALL SIGNAGE AND PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE MUTCD STANDARDS.
 - ALL ACCESS ROUTES TO BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS.
 - ALL WATER SERVICE WORK TO BE COORDINATED WITH PORTLAND WATER DISTRICT STANDARDS.
 - DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF AWWA C150 AND C151, CLASS 52, AND HAVE PUSH ON OR FLANGED JOINTS AS REQUIRED. FITTINGS SHALL HAVE MECHANICAL JOINTS WITH RETAINER GLANDS.
 - SANITARY SEWER PIPE AND FITTINGS TO BE SDR-35 PVC.
 - INSTALL 2" RIGID STYROFOAM INSULATION OVER SANITARY SEWER IN AREAS WHERE THERE IS LESS THAN 4' OF COVER.
 - CONNECTIONS AT MANHOLES/CATCH BASINS SHALL HAVE A FLEXIBLE BOOT CAST ONTO THE BARREL AND SECURED WITH STAINLESS STEEL BANDS.
 - SEE SHEET C105 FOR GRADING, DRAINAGE, STORM DRAIN DATA & SHEET C108 FOR EROSION CONTROL MEASURES.

PLANTING SCHEDULE			
QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
32 *	ACER RUBRUM 'RED SUNSET' *	RED SUNSET MAPLE *	6'-7"
32	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	3'-4'

* VARY SPECIES FROM CITY OF PORTLAND APPROVED TREE LIST

FOR REVIEW
NOT FOR CONSTRUCTION



PREPARED FOR:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

TITLE:

SITE PLAN

PROJECT:

STROUDWATER
COMMONS
PARCEL ID: 217 A010001 & 217 A011001

REVISION:

NO.	DATE	DESCRIPTION
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DRAWN:

TAL

SCALE:

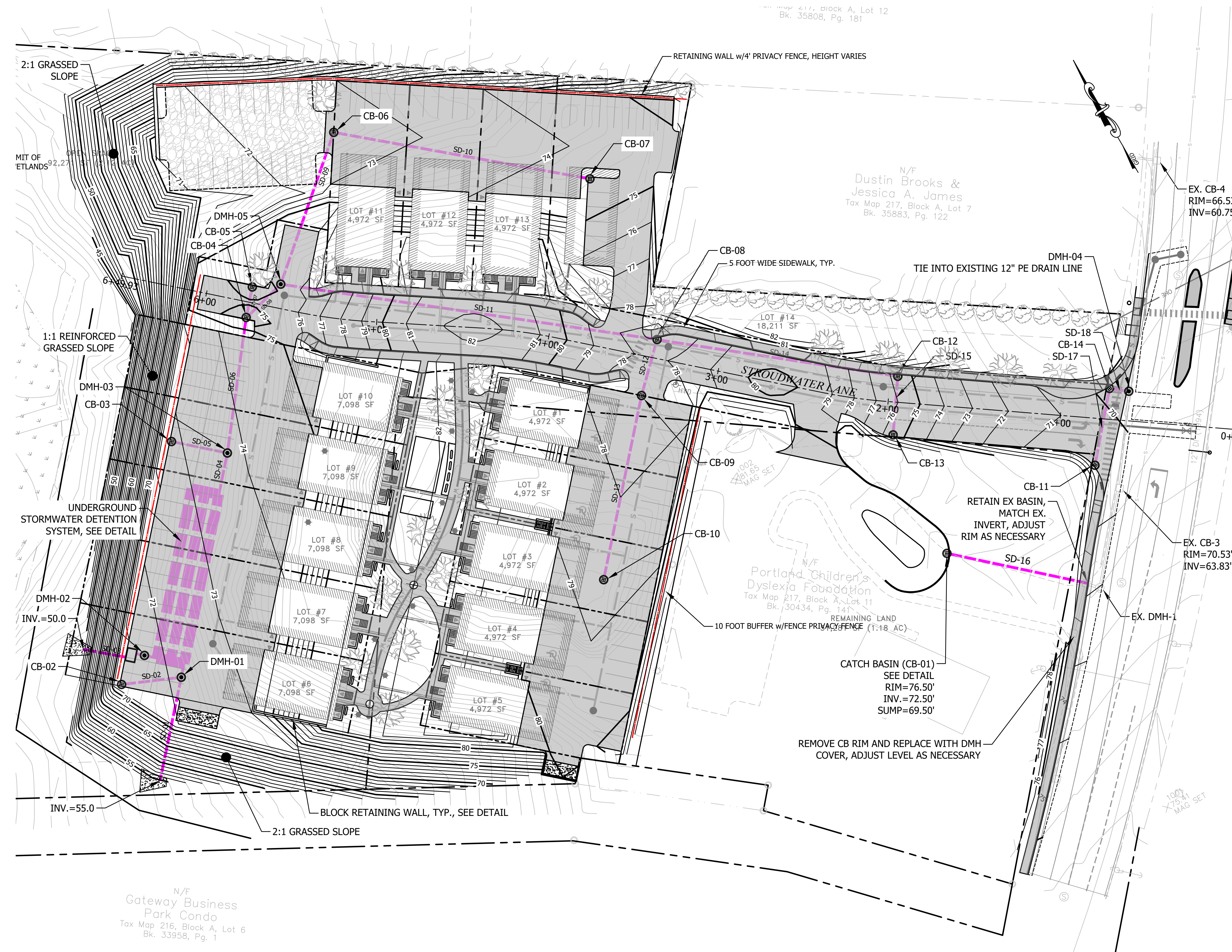
NOTED

DATE:

4/17/2024

SHEET:

C104



- GENERAL CONSTRUCTION SEQUENCE
1. INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
 2. CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
 3. INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
 4. GRUB SITE WITHIN GRADING LIMITS.
 5. STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
 6. INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
 7. PROCEED WITH WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM OF UNCOVERED DISTURBED EARTH AT ANY ONE TIME IS FIVE ACRES. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
 8. BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

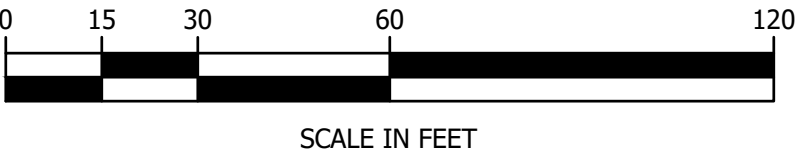
AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A) A BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
 9. INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
 10. PAVE DRIVEWAY AND PARKING AREAS.
 11. PLACE TOPSOIL, SEED AND MULCH.
 12. COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.

PIPE SCHEDULE				
PIPE	PIPE DIAMETER	PIPE LENGTH (FT)	PIPE SLOPE (FT/FT)	TYPE
SD-01	18"	58.6'	0.1877	ADS HP STORM PIPE
SD-02	12"	29.8'	0.0402	ADS HP STORM PIPE
SD-03	12"	24.7'	0.6072	ADS HP STORM PIPE
SD-04	24"	21.9'	FLAT	ADS HP STORM PIPE
SD-05	12"	28.0'	0.0100	ADS HP STORM PIPE
SD-06	24"	74.1'	FLAT	ADS HP STORM PIPE
SD-07	12"	13.0'	FLAT	ADS HP STORM PIPE
SD-08	18"	22.8'	0.0702	ADS HP STORM PIPE
SD-09	12"	88.0'	0.0100	ADS HP STORM PIPE
SD-10	12"	146.0'	0.0100	ADS HP STORM PIPE
SD-11	18"	215.0'	0.0100	ADS HP STORM PIPE
SD-12	12"	28.7'	0.0200	ADS HP STORM PIPE
SD-13	12"	103.8'	0.0200	ADS HP STORM PIPE
SD-14	12"	135.0'	0.0100	ADS HP STORM PIPE
SD-15	12"	29.0'	FLAT	ADS HP STORM PIPE
SD-16	12"	81.0'	FLAT	ADS HP STORM PIPE
SD-17	12"	40.2'	FLAT	ADS HP STORM PIPE
SD-18	12"	6.3'	0.0100	ADS HP STORM PIPE

STRUCTURE SCHEDULE				
STRUCTURE	RIM (FT)	INVERT IN (FT)	INVERT OUT (FT)	SUMP (FT)
CB-01	SEE PLAN			
CB-02	71.20		67.20 (SD-02)	64.20
CB-03	72.80		68.80 (SD-05)	65.80
CB-04	74.70	66.00 (SD-08) 70.00 (SD-07)	66.00 (SD-06)	63.00
CB-05	74.70		70.00 (SD-07)	67.00
CB-06	72.50	68.50 (SD-10)	68.50 (SD-09)	65.50
CB-07	74.50		70.00 (SD-10)	67.00
CB-08	77.30	69.85 (SD-12) 69.85 (SD-14)	69.85 (SD-11)	66.85
CB-09	77.10	70.42 (SD-13)	70.42 (SD-12)	67.42
CB-10	78.70		72.50 (SD-13)	69.50
CB-11	70.50		66.50 (SD-17)	63.50
CB-12	75.50	71.10 (SD-15)	71.10 (SD-14)	68.10
CB-13	75.50		71.10 (SD-15)	68.10
CB-14	69.80	66.50 (SD-17)	66.50 (SD-18)	68.75
DMH-1	72.20	66.00 (UGSD*) 66.00 (SD-02)	66.00 (SD-01)	
DMH-2	71.80	66.00 (UGSD*)	66.00 (FILTER)	
DMH-3	73.75	66.00 (SD-06) 66.00 (SD-05)	66.00 (UGSD*)	
DMH-4	69.35	62.77 (EX. CB-3) 65.47 (SD-18)	62.75 (EX. CB-4)	
DMH-5	75.20	67.60 (SD-11) 67.60 (SD-09)	67.60 (SD-09)	
OCS-1	SEE DETAIL			

* UNDERGROUND STORMWATER DETENTION

FOR REVIEW
NOT FOR CONSTRUCTION



PREPARED FOR:
GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

PROJECT:
STROUDWATER COMMONS
PARCEL ID: 217 A010001 & 217 A011001

TITLE:
GRADING & DRAINAGE PLAN

REVISION:
SUBMISSION
CITY REVIEW COMMENTS
RESPONSE TO CITY REVIEW COMMENTS
REVISED PER CONS. RES. DEV. STANDARDS

DRAWN:
TAL

SCALE:
NOTED

DATE:
4/17/2024

SHEET:
C105

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GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

STROUDWATER COMMONS

PARCEL ID: 217 A010001 & 217 A011001

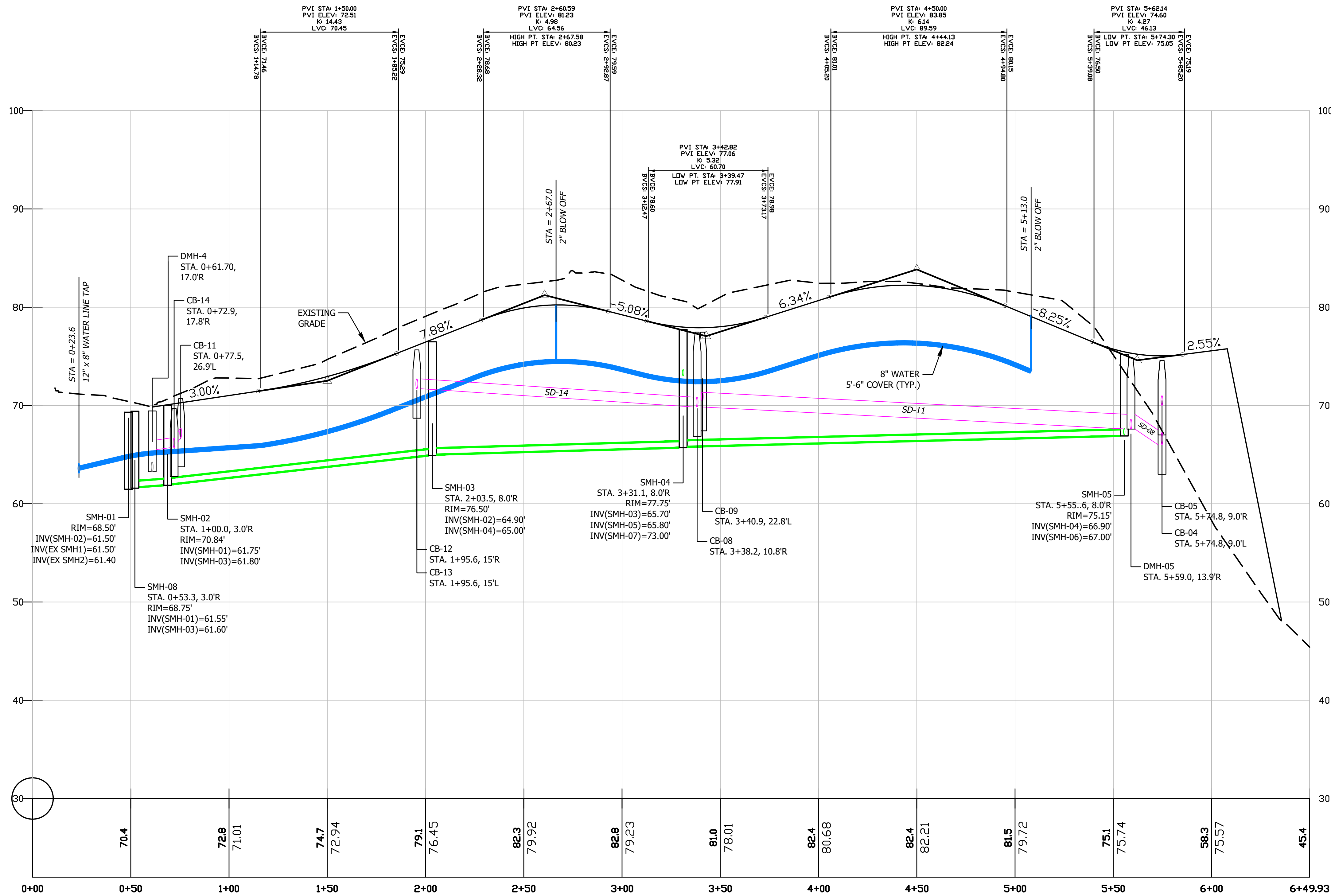
ROAD PROFILE

REVISION:	
NO.	DESCRIPTION
1	CITY SITE PLAN SUBMISSION
2	RESPONSE TO CITY REVIEW COMMENTS
3	REVISED PER CONS. RES. DEV. STANDARDS
DRAWN: TAL	
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7 of 18

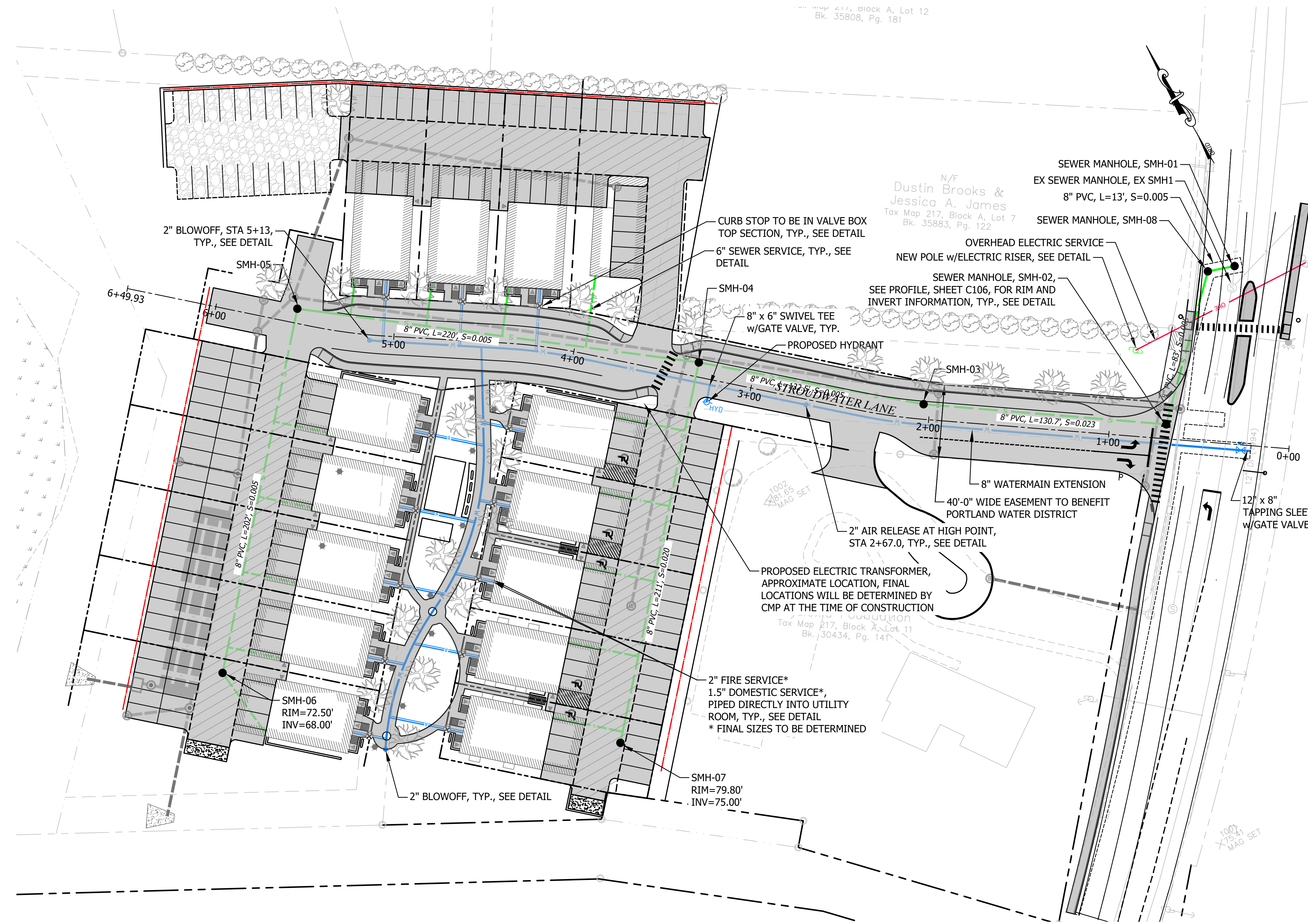


CONSTRUCTION NOTES

- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND HAVE BEEN DETERMINED BY SURFACE EVIDENCE AND/OR PREVIOUSLY GENERATED PLANS. NO GUARANTEE IS MADE THAT ALL UTILITIES ARE SHOWN OR WILL BE FOUND IN LOCATIONS INDICATED. THIS INFORMATION IS PROVIDED FOR REFERENCE AND THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AND POINTS OF CONNECTION IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND RESTORATION OF ALL UTILITIES DISTURBED DURING CONSTRUCTION AT NO EXTRA EXPENSE TO THE OWNER.
- 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 CONFORMING 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.
- CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
- THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND/OR DEVIATIONS OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSIONS AND CONDITIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
- 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 GREENMARS 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 ON ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA. CONTACT DIG-SAFE (888) DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
- COORDINATE ALL ELECTRICAL WORK WITH CENTRAL MAINE POWER PRIOR TO CONSTRUCTION.
- ALL PAVEMENT MARKINGS AND PAINT STRIPING TO MEET THE STANDARDS OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL WATER LINE WORK SHALL MEET PORTLAND WATER DISTRICT STANDARDS (PWD). COORDINATE ALL WORK WITH THE DISTRICT PRIOR TO CONSTRUCTION.

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NOT FOR CONSTRUCTION

03/08/25



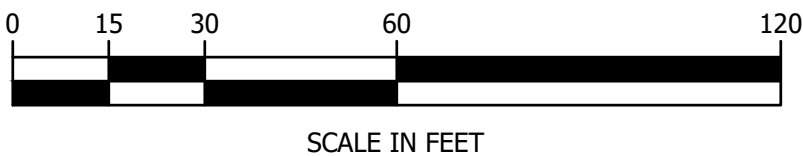
WATER SUPPLY GENERAL NOTES

- 1. **GENERAL**
BUILD THE WATER SUPPLY SYSTEM IN CONFORMANCE WITH THE WATER USE RULES, REGULATIONS AND CONSTRUCTION SPECIFICATIONS, AND THE PORTLAND WATER DISTRICT..
- 2. **PIPE AND FITTING MATERIALS:**
PIPES WITH DIAMETERS GREATER THAN 2 INCHES MUST BE DUCTILE IRON. ALL PIPES MUST HAVE A PRESSURE RATING OF 200 PSI OR GREATER.
- 3. **JOINT RESTRAINT:** USE MECHANICALLY RESTRAINED JOINTS FOR THE ENTIRE LENGTH OF THE NEW 6" DI FIRE SERVICE LINE.
- 4. **PRESSURE TESTING:** PRESSURE TEST IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT REQUIREMENTS OR ANSI/AWWA C600 IF AHJ DOES NOT HAVE A PREFERRED METHOD OF TESTING. MINIMUM TEST PRESSURE IS 1.5 x MAXIMUM SYSTEM PRESSURE OR 100 PSI, WHICHEVER IS GREATER.
- 5. **DISINFECTION:** DISINFECT WATER MAIN AND DOMESTIC SERVICES IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT REQUIREMENTS AND ANSI/AWWA C651.

- STANDARD TRENCH NOTES - SEWER
- 1. **ORDERED EXCAVATION OF UNSUITABLE MATERIAL** BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL. SEE ALSO NOTE 4.
 - 2. **BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.
 - 100% PASSING 1 INCH SCREEN
90-100% PASSING 3/4 INCH SCREEN
20-55% PASSING 3/8 INCH SCREEN
0-10% PASSING #4 SIEVE
0-5% PASSING #8 SIEVE
 - 3. **SAND BLANKET:** CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% PASSES A #200 SIEVE.
 - 4. **SUITABLE MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED FROM THE TRENCH DURING THE COURSE OF CONSTRUCTION, AFTER EXCLUDING DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL NOT APPROVED BY THE ENGINEER.
 - TRENCH BACKFILL IN CROSS-COUNTRY LOCATIONS SHALL BE SUITABLE MATERIAL AS DESCRIBED ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK, OR PEAT MAY BE USED PROVIDED THAT THE COMPLETED CONSTRUCTION WILL BE STABLE AND ACCESS TO THE PIPE FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED. BACKFILL SHALL BE MOUNDED TO A HEIGHT OF SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE
 - 5. **SHEETING:** ALL TRENCH SUPPORTS SHALL CONFORM TO OSHA STANDARDS. CONTRACTOR IS RESPONSIBLE FOR OSHA COMPLIANCE AND WORKER SAFETY THROUGHOUT CONSTRUCTION.
 - 6. **TRENCH DIMENSIONS:** W = MAXIMUM ALLOWABLE TRENCH WIDTH MEASURED 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER (D) OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS THE PIPE OUTSIDE DIAMETER. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. THE MAXIMUM ALLOWABLE TRENCH PAVEMENT PAYMENT WIDTH SHALL BE 8 FEET CENTERED OVER PIPE.
 - 7. **PIPE INSULATION AT STORM DRAIN CROSSING:** INSTALL 2" THICK RIGID FOAM INSULATION OVER SEWER AT STORM DRAIN CROSSINGS, EXTEND INSULATION 4 FEET EITHER SIDE OF STORM DRAIN ALONG SEWER.

- STANDARD TRENCH NOTES - WATER
- 1. **ORDERED EXCAVATION OF UNSUITABLE MATERIAL** BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL. SEE ALSO NOTE 4.
 - 2. **BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.
 - 100% PASSING 1 INCH SCREEN
90-100% PASSING 3/4 INCH SCREEN
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 - 7. **WATER/SEWER SEPARATION:** WATER MAINS SHALL BE SEPARATED FROM SANITARY SEWER BY A MINIMUM OF 10 FEET HORIZONTALLY AND A MINIMUM OF 18 INCHES VERTICALLY, WITH THE WATER MAIN ABOVE THE SEWER.
 - 8. **PIPE COVER:**
COVER OVER WATER SHALL BE 5'-6" IN ALL LOCATIONS.

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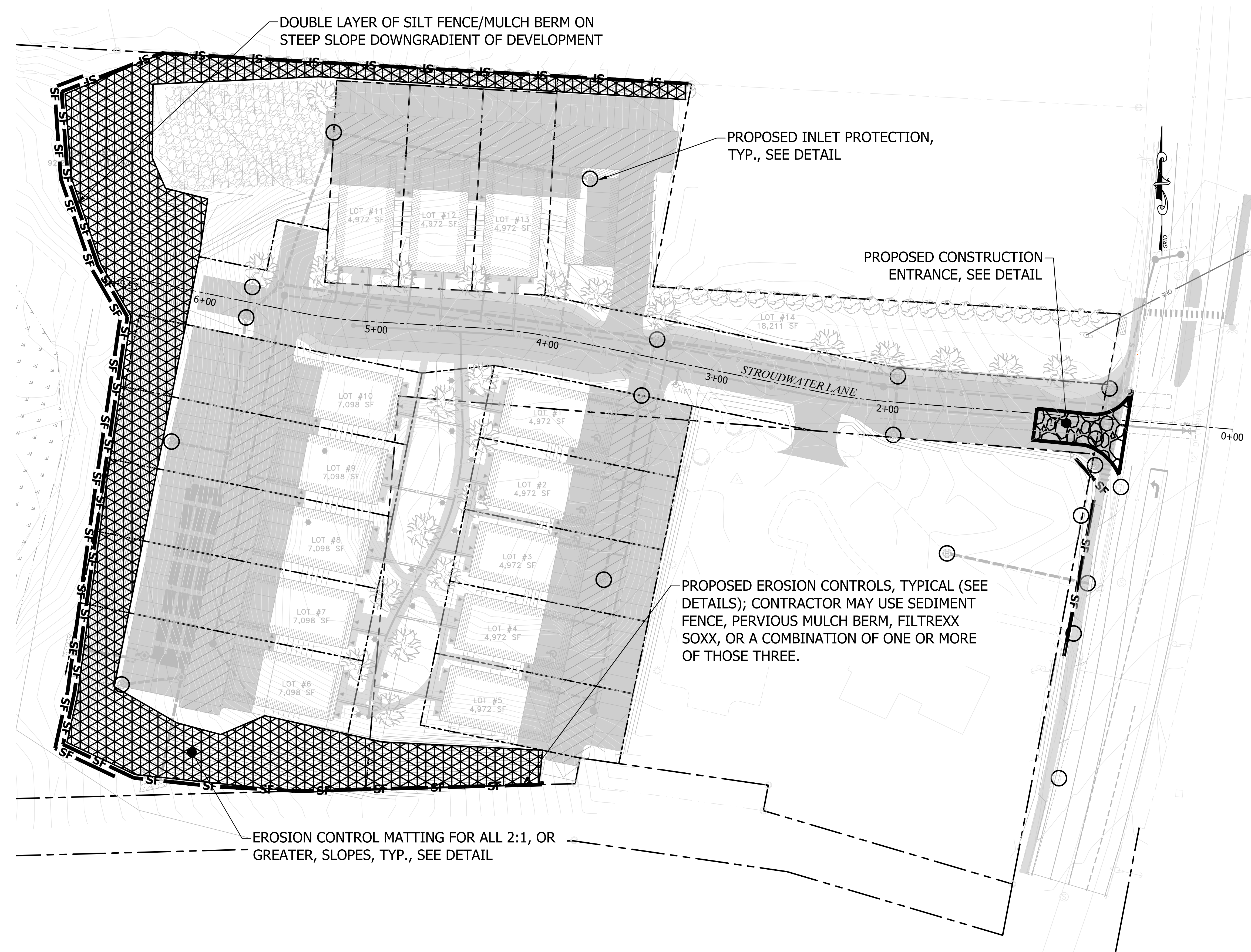
PROJECT:
STROUDWATER COMMONS
PARCEL ID: 217 A010001 & 217 A011001

TITLE:
UTILITY PLAN

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NO.	DATE	APPR.	TAL
1	07/01/24	TAL	CITY SITE PLAN SUBDIVISION SUBMISSION
2	11/21/24	TAL	RESPONSE TO CITY REVIEW COMMENTS
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SHEET:

C107



GENERAL EROSION CONTROL NOTES

A. KEEP SITE MODIFICATION TO A MINIMUM

1. CONSIDER FITTING THE BUILDING AND DRIVEWAY TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
2. EXPOSE AREAS OF BARE SOIL TO EROSION ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
3. SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
4. LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
5. AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.

B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES

1. STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
2. PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
3. USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
4. USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
5. USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
6. PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.

C. PROTECT AREA AFTER CONSTRUCTION.

1. ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEEDED WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
2. MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
3. MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
4. DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
5. IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, REFER TO 'COLD WEATHER SITE STABILIZATION REQUIREMENTS'.

D. INVASIVE SPECIES AND FUGITIVE DUST

1. THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:51-S7 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE.
2. FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

COLD WEATHER SITE STABILIZATION REQUIREMENTS

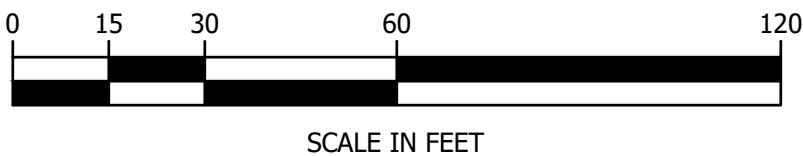
TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:

1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1 ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST.
2. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE, SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX.
3. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH PROPERLY INSTALLED AND ANCHORED EROSION CONTROL MATTING OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX.
4. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
5. INSTALLATION OF EROSION CONTROL MATTING SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
6. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN 1 DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
7. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
8. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS.

LEGEND

- SF** MULCH BERM/EROSION CONTROL MIX OR SILT FENCE
-  STABILIZED CONSTRUCTION ENTRANCE
-  EROSION CONTROL MATTING

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PROJECT:

STROUDWATER
COMMONS
PARCEL ID: 217 A010001 & 217 A011001

TITLE:

EROSION
CONTROL PLAN

REVISION:

NO.	DATE	APPR.	DESCRIPTION
1	07/01/24	TAL	CITY SITE PLAN SUBDIVISION SUBMISSION
2	11/21/24	TAL	RESPONSE TO CITY REVIEW COMMENTS
3	03/08/25	TAL	REVISED PER CONS. RES. DEV. STANDARDS

DRAWN:

TAL

SCALE:

NOTED

DATE:

4/17/2024

SHEET:

C108

EROSION AND SEDIMENTATION CONTROL PLAN

INTRODUCTION

THE FOLLOWING PLAN FOR CONTROLLING SEDIMENTATION AND EROSION FROM THIS PROJECT IS BASED UPON SOUND CONSERVATION PRACTICES, AND ADHERES TO THE STANDARDS DETAILED IN THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES BY THE GUNDELRAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED OCTOBER 2016. THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THE AFOREMENTIONED PUBLICATION AND COMPLY WITH THE PRACTICES PRESENTED THEREIN.

THIS REPORT ADDRESSES THE EROSION CONTROL MEASURES TO BE APPLIED TO THE PROPOSED SITE WORK. FOR PROJECT REFERENCE IS MADE TO THE EROSION CONTROL EXHIBITS, SHOWING THE LOCATIONS OF PROPOSED MEASURES INCLUDED IN THIS REPORT.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES

1. EROSION/SEDIMENT CONTROL DEVICES

THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.

1.1 SILT FENCE: SILT FENCE WILL BE INSTALLED ALONG THE DOWNGRADIENT EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SILT FENCE WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SILT FENCE AND TO PROVIDE ADDITIONAL TREATMENT.

1.2 HAY BALES: PLACE IN DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES.

1.3 RIPRAP: PROVIDE RIPRAP IN AREAS WHERE SLOPES ARE STEEPER THAN 2:1 AND AS SHOWN ON THE PLANS.

1.4 LOAM, SEED, & MULCH: ALL DISTURBED AREAS, WHICH ARE NOT OTHERWISE TREATED, SHALL RECEIVE PERMANENT SEEDING AND MULCH TO STABILIZE THE DISTURBED AREAS WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.

1.5 JUTE MESH: STRAW AND HAY MULCH; USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH CAN BE USED ON SLOPES LESS THAN 3:1. USE JUTE MESH ON SLOPES IN EXCESS OF 3:1.

1.6 INLET PROTECTION: STRAW BALE DROP INLET STRUCTURE

1.6.1 BALES SHALL BE EITHER WIRE-BOUND OR STRING TIED WITH THE BINDINGS ORIENTATED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.

1.6.2 BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.

1.6.3 THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED AROUND THE INLET THE WIDTH OF A BALE TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.

1.6.4 EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.

1.6.5 LOOSE STRAW SHALL BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.

1.7 MAINTENANCE

1.7.1 THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOW DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

1.7.2 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.

2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:

2.1 STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY HAUL TO OR FROM THE SITE.

2.2 SILTATION FENCE ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS, THE SILTATION FENCE WILL REMAIN IN PLACE UNTIL THE SITE IS REVEGETATED.

2.3 HAY BALES AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.

2.4 PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:

- SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
- AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES.
- STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
- SURROUND STOCKPILE SOIL WITH SILTATION FENCE.

2.5 ALL DENUDED AREAS WHICH ARE BEING ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA, SHALL BE RESEED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 15 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOO WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE IS NOT REQUIRED.

2.6 IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.

2.7 TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

3. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:

3.1 STORMWATER RUNOFF GENERATED BY THE DEVELOPMENT OF THIS SITE WILL BE COLLECTED IN A CLOSED DRAINAGE SYSTEM.

3.2 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), SHALL BE LOAMED, LIMED, FERTILIZED AND SODDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

3.3 SLOPES GREATER THAN 2:1 WILL BE TREATED WITH RIPRAP.

4. CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

4.1 ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION. IF FINAL GRADING, LOAMING AND SEEDING WILL NOT OCCUR WITHIN 15 DAYS, SEE ITEM NO. 4.4

4.2 PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING AND/OR HAY BALES WILL BE INSTALLED AT THE TOE OF SLOPE AND IN AREAS AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION. IMMEDIATELY FOLLOWING CONSTRUCTION OF CULVERTS AND SWALES, RIP RAP APRONS SHALL BE INSTALLED, AS SHOWN ON THE PLANS.

4.3 TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM THE EXISTING DRAINAGE COURSE. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 15 DAYS SHALL BE:

- TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
- SEEDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.

STOCKPILES EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE ENCRUSTED WITH HAY BALES OR SILT FENCE AT THE TOE OF THE PILE.

4.4 ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE EITHER:

- TREATED WITH ANCHORED MULCH IMMEDIATELY, OR
- SEEDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED IMMEDIATELY.

4.5 ALL GRADING WILL BE HELD TO A MAXIMUM 2:1 SLOPE WHERE PRACTICAL. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING, OR WITH STONE, WITHIN 5 DAYS AFTER FINAL GRADING IS COMPLETE. (SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION.)

4.6 CONSTRUCTION TRAFFIC WILL BE DIRECTED OVER THE PROPOSED ROADWAY SYSTEM. ANY AREAS THAT WILL BE STABILIZED IMMEDIATELY, THE ENTRANCE WILL BE SWEEP WEEKLY, SHOULD MUD BE TRACKED ONTO IT.

5. POST-CONSTRUCTION REVEGETATION

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

5.1 A MINIMUM OF 4" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE, OR STONE WILL BE PLACED ON SLOPES TO STABILIZE SURFACES.

5.2 IF FINAL GRADING IS REACHED DURING THE NORMAL GROWING SEASON (4/15 TO 9/15), PERMANENT SEEDING WILL BE DONE AS SPECIFIED BELOW. PRIOR TO SEEDING, LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/1000 SQ. FT. AND 10:20:20 FERTILIZER AT A RATE OF 18.4 LBS/1000 SQ.FT WILL BE APPLIED. BROADCAST SEEDING AT THE FOLLOWING RATES:

KENTUCKY BLUEGRASS 0.46 LBS/1000 SF. CREEPING RED FESCUE 0.46 LBS/1000 SF. RED TOP 0.05 LBS/1000 SF. TALL FESCUE 0.46 LBS/1000 SF. PERENNIAL RYEGRASS 0.11 LB/1000 SF.

5.3 AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IT HAS BEEN SEED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO- MULCH OR ANY SUITABLE SUBSTITUTE DEEMED ACCEPTABLE BY THE DESIGNER.

A. HAY MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. HAY MULCH SHALL BE SECURED BY EITHER:

- BEING DRIVEN OVER BY TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
- BLANKETED BY TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING, OR WITH SPRAY, ON GRADES GREATER THAN 5%.
- HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.

5.5 CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN SEPTEMBER 15 AND APRIL 15. SHOULD SEEDING BE NECESSARY BETWEEN SEPTEMBER 15 AND APRIL 15, THE FOLLOWING PROCEDURE SHALL BE FOLLOWED:

- ONLY UNFROZEN LOAM SHALL BE USED.
- LOAMING, SEEDING AND MULCHING WILL NOT BE DONE OVER SNOW OR ICE COVER. IF SNOW EXISTS, IT MUST BE REMOVED PRIOR TO PLACEMENT OF SEED.
- WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (12 LBS/1000 SQ.FT) SHALL BE ADDED TO THE PREVIOUSLY NOTED AREAS.
- WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.6 LBS/1000 SQ. FT.) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
- FERTILIZING, SEEDING AND MULCHING SHALL BE DONE ON LOAM THE DAY THE LOAM IS TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.
- HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.

5.6 FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 30 DAYS UNTIL 80% COVER HAS BEEN ESTABLISHED. RESEEDING WILL BE CARRIED OUT BY THE CONTRACTOR WITHIN 10 DAYS OF NOTIFICATION BY THE ENGINEER THAT THE EXISTING CATCH IS INADEQUATE.

6. MONITORING SCHEDULE

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MONITORING, MAINTAINING, REPAIRING, REPLACING AND REMOVING ALL OF THE EROSION AND SEDIMENTATION CONTROLS OR APPROPRIATE A QUALIFIED SUBCONTRACTOR TO DO SO. MAINTENANCE MEASURES WILL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, A VISUAL INSPECTION WILL BE MADE OF ALL EROSION AND SEDIMENTATION CONTROLS AS FOLLOWS:

- HAY BALE BARRIERS AND SILT FENCE SHALL BE INSPECTED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING. SHOULD THE HAY BALE BARRIERS PROVE TO BE INEFFECTIVE, THE CONTRACTOR SHALL INSTALL SILT FENCE BEHIND THE HAY BALES.
- VISUALLY INSPECT RIP RAP ONCE A WEEK OR AFTER EACH SIGNIFICANT RAINFALL AND REPAIR AS NEEDED. REMOVE SEDIMENT TRAPPED BEHIND THESE DEVICES ONCE IT ATTAINS A DEPTH EQUAL TO 1/2 THE HEIGHT OF THE DAM OR RISER. DISTRIBUTE REMOVED SEDIMENT OFF-SITE OR TO AN AREA UNDERGOING FINAL GRADING.
- REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEED AS NEEDED. EXPOSED AREAS WILL BE RESEED AS NEEDED UNTIL THE AREA HAS OBTAINED 100% GROWTH RATE. PROVIDE PERMANENT RIPRAP FOR SLOPES IN EXCESS OF 3:1 AND WITHIN 25' OF DRAINAGE COURSE.

7. EROSION CONTROL REMOVAL

AN AREA IS CONSIDERED STABLE IF IT IS PAVED, GRAVEL, OR IF 80% GROWTH OF PLANTED SEEDS IS ESTABLISHED. ONCE AN AREA IS CONSIDERED STABLE, THE EROSION CONTROL MEASURES CAN BE REMOVED AS FOLLOWS:

7.1 HAY BALES AND SILT FENCE THE HAY BALES AND SILT FENCE SHALL BE DISPOSED OF LEGALLY AND PROPERLY OFF-SITE. ALL SEDIMENT TRAPPED BEHIND THESE CONTROLS SHALL BE:

- DISTRIBUTED TO AN AREA UNDERGOING FINAL GRADING.
- GRADED IN AN AESTHETIC MANNER TO CONFORM TO THE TOPOGRAPHY, FERTILIZED, SEEDED AND MULCHED IN ACCORDANCE WITH THE RATES PREVIOUSLY STATED.

7.2 MISCELLANEOUS: ONCE ALL THE TRAPPED SEDIMENTS HAVE BEEN REMOVED FROM THE TEMPORARY SEDIMENTATION DEVICES, THE DISTURBED AREAS MUST BE REPAIRED IN AN AESTHETIC MANNER TO CONFORM TO THE SURROUNDING TOPOGRAPHY. ONCE GRADED, THESE DISTURBED AREAS MUST BE LOAMED (IF NECESSARY) FERTILIZED, SEEDED AND MULCHED IN ACCORDANCE WITH THE RATES PREVIOUSLY STATED.

8. WINTER CONSTRUCTION

8.1 WINTER CONSTRUCTION: CONSTRUCTION PERFORMED ANY TIME BETWEEN NOVEMBER 1 AND APRIL 15 OF ANY YEAR SHALL BE CONSIDERED "WINTER CONSTRUCTION," AND SHALL CONFORM TO THE FOLLOWING CRITERIA.

8.2 MAXIMUM AREAS WITHOUT STABILIZATION: WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE WITHOUT STABILIZATION AT ANY ONE TIME. EXPOSED AREAS SHALL BE LIMITED TO THE AREA THAT CAN BE MULCHED IN ONE DAY. PRIOR TO ANY SNOW EVENT, CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED WITH EROSION CONTROL PROTECTION.

9. STABILIZATION

9.1 AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB PER 1,000 SF. (WITH OR WITHOUT SEEDING), OR DORMANT SEED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT THE SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.

9.2 LOAM OR SEED WILL NOT BE REQUIRED BETWEEN THE DATES OF OCTOBER 15, AND APRIL 15. DURING PERIODS WHEN TEMPERATURES ARE ABOVE FREEZING, EXPOSED SLOPES SHALL BE FINE-GRADED AND PROTECTED WITH MULCH, OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. AFTER NOVEMBER 1, ANY LOAMED, SMOOTH, FINAL GRADED AREAS MAY BE DORMANT SEED AT A RATE OF 200% TO 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED, AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING TEMPERATURES, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING, AND THE SURFACE SHALL BE PROTECTED TEMPORARILY FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED DURING THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH PERMANENT SURFACE TREATMENT, EROSION CHECK DAMS WILL BE CONTROLLED BY THE STANDARD DETAILS.

9.3 MULCH ANCHORING: MULCH ANCHORING SHALL BE INSTALLED ACCORDING TO THE FOLLOWING CRITERIA:

- BETWEEN NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PER LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR TRACK OR WOOD CELLULOSE FIBER.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE CWAYS WITH SLOPES GREATER THAN ONE PERCENT. MULCH SHALL BE TIED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 5%.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 5%.

9.4 DAILY PROTECTION: DURING THE PERIOD OF OCTOBER 1 TO APRIL 15, ALL BARE SOILS AND EXPOSED EARTH SHALL BE COVERED WITH A DORMANT SEEDING, MULCHED AND ANCHORED AT THE END OF EACH WORKING DAY.

9.5 SNOW REMOVAL: SNOW SHALL BE REMOVED PRIOR TO THE APPLICATION OF SEED AND MULCH.

10. LIMITS OF CONSTRUCTION

10.1 LIMIT OF CONSTRUCTION: THE LIMIT OF CONSTRUCTION FOR THE SITE SHALL BE AS INDICATED ON THE PLANS. NO DISTURBANCE OF SOILS, VEGETATION, OR WETLANDS WILL BE PERMITTED BEYOND THE LIMIT OF DISTURBANCE, EXCEPT IN THE AREAS OF STORMWATER DITCHES, CULVERTS, AND DISCHARGE APRONS.

10.2 CONSTRUCTION STAGING AREAS: THE CONSTRUCTION AND STAGING AREAS FOR THE SITE SHALL BE LOCATED IN WITHIN THE LIMIT OF DISTURBANCE. SILT FENCING SHALL BE PLACED ALL AROUND THE PERIMETER OF THE STAGING/STORAGE AREAS.

10.3 SCHEDULE: THE ANTICIPATED CONSTRUCTION SCHEDULE IS DURING THE YEAR OF 2014, AND WILL BEGIN WITH THE INSTALLATION OF EROSION CONTROL SYSTEMS TO PROTECT DRAINAGE WAYS AND AREAS OUTSIDE THE CONSTRUCTION LIMITS. SILT FENCING AND DITCH PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE IN THE DISTURBED AREAS. CONSTRUCTION AS SOON AS CONTROL MEASURES ARE IN PLACE, AND PRIOR TO COMMENCING SOIL DISTURBANCE ACTIVITIES, THE CONSTRUCTION ROAD SHALL BE INSTALLED. IT IS IMPERATIVE THAT DISTURBANCES TO VEGETATION BE LIMITED ONLY TO THOSE AREAS, WHICH ARE NECESSARY TO ACCOMPLISH THE WORK.

10.4 THE FINE AND VERY FINE SANDY LOAMS THAT WILL BE EXPOSED DURING SITE PREPARATION MAY BE SUSCEPTIBLE TO EROSION, AND CAN UNDERGO STRENGTH LOSS WHEN SUBJECTED TO CONSTRUCTION TRAFFIC AND EXCAVATION ACTIVITIES, PARTICULARLY DURING PERIODS OF PRECIPITATION AND HIGH GROUND WATER LEVELS. THEREFORE, CARE WILL BE EXERCISED DURING CONSTRUCTION TO MINIMIZE DISTURBANCE OF THE BEARING SOILS. ALL TOPSOIL, ORGANIC AND LOOSE SURFACE SOIL WILL BE STRIPPED AND STORED FOR REUSE LATER. SHOULD THE SUBGRADE BECOME SOFT OR DIFFICULT TO WORK AND/OR WHEREVER SUBSURFACE DRAINAGE CAVITIES ARE ENCOUNTERED, THE SUBGRADE WILL BE OVER EXCAVATED AS REQUIRED, AND BACKFILLED WITH GRANULAR FILL OR CRUSHED STONE.

11. HOUSEKEEPING

11.1 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.

11.2 GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER SHALL NOT BE STORED OR USED 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.

11.3 FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

11.4 DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

11.5 TRENCH OR FOUNDATION DE-WATERING: TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER 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 BY THE DEPARTMENT.

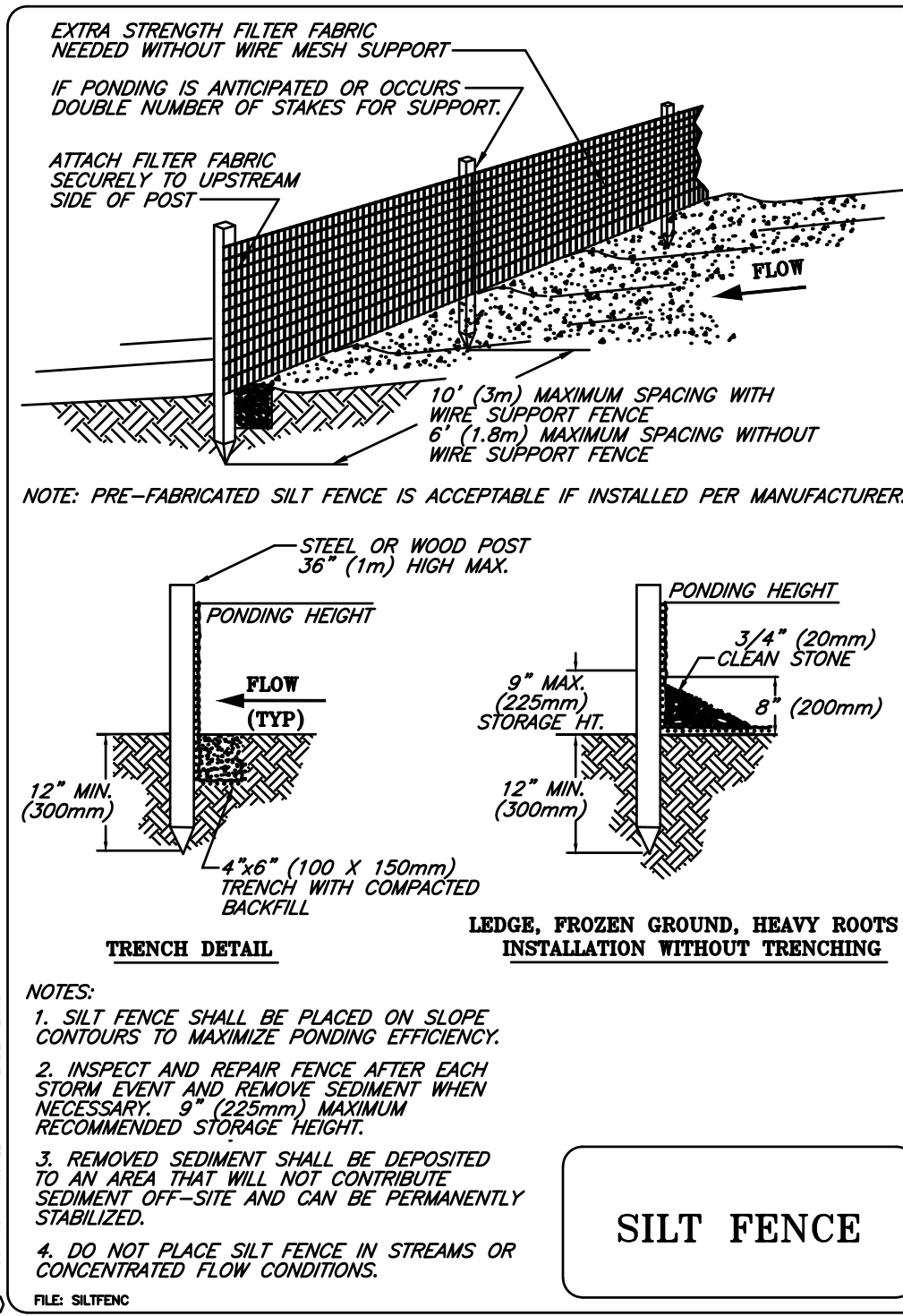
11.6 NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES.

11.7 STREET SWEEPING: ANY SOIL MATERIAL TRACKED ONTO THE PUBLIC ROADWAY SHALL BE SWEEP ON A DAILY BASIS.

11.8 ADDITIONAL REQUIREMENTS: ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.

BASIC STANDARDS - EROSION CONTROL MEASURES:

MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.



EROSION CONTROL MIX BERMS

EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

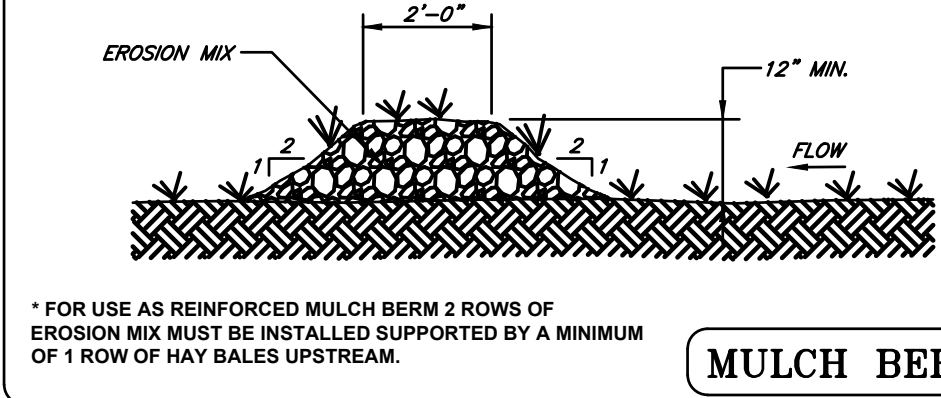
COMPOSITION

EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:

- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A # 20 SCREEN AND A MINIMUM OF 70% MAXIMUM OF 80% PASSING A # 100 SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMH2O/GM.
- THE PH SHOULD FALL BETWEEN 5.0 AND 6.0.

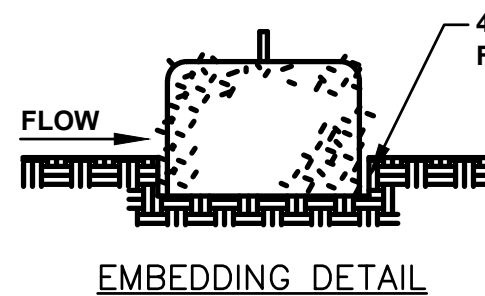
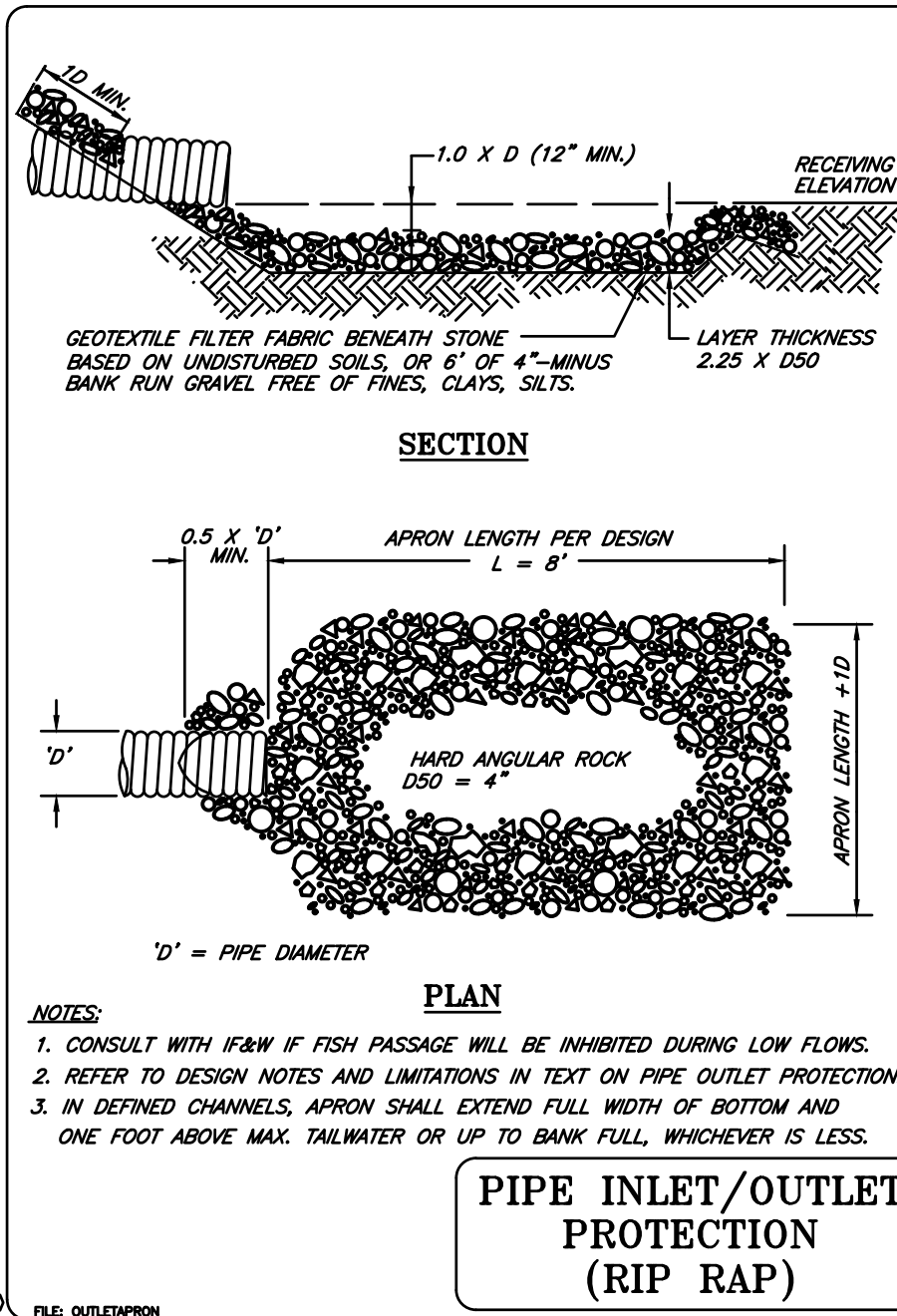
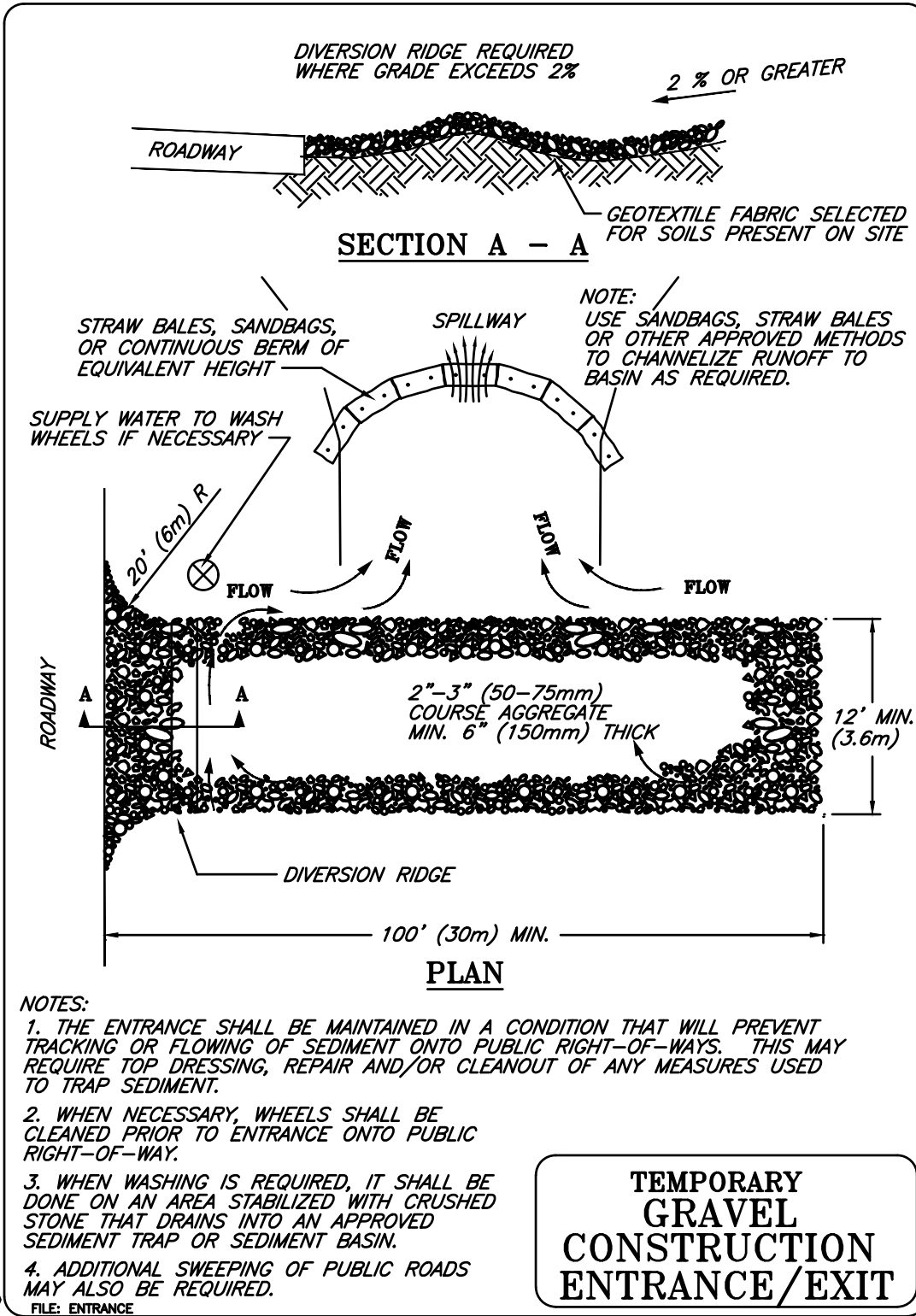
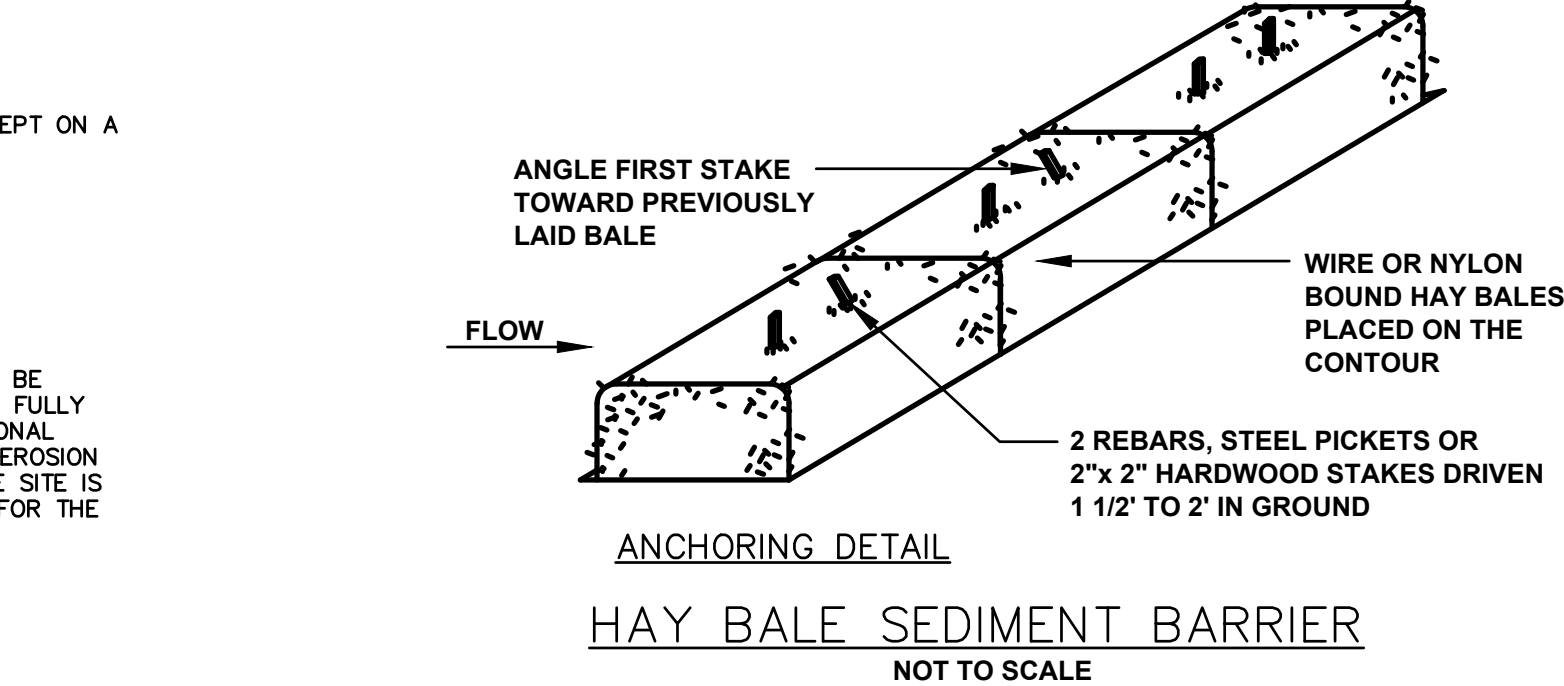
INSTALLATION

- THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
- ON SLOPES LESS THAN 5% OR AT THE BOTTOM OF STEEPER SLOPES (<2:1 UP TO 20 FEET LONG, THE BARRIER MUST BE A MINIMUM OF 12" HIGH, AS MEASURED ON THE UPHILL SIDE OF THE BARRIER, AND A MINIMUM OF TWO FEET WIDE. ON LONGER OR STEEPER SLOPES, THE BARRIER SHOULD BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.
- FROZEN GROUND, OUTCROPS OF BEDROCK AND VERY ROOTED FORESTED AREAS ARE LOCATIONS WHERE BERMS OF EROSION CONTROL MIX ARE MOST PRACTICAL AND EFFECTIVE.
- OTHER BMPs SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM (I.E., A LARGE UP GRADIENT CONTRIBUTING WATERSHED).



NOTES:

- BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS DIRECTED BY PROJECT ENGINEER.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



FOR REVIEW
NOT FOR CONSTRUCTION



PREPARED FOR:

PROJECT:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

STROUDWATER
COMMONS

PARCEL ID: 217 A010001 & 217 A011001

TITLE:

EROSION CONTROL
NOTES & DETAILS

REVISION:

NO.	DESCRIPTION	APPR.	DATE
1	CITY SITE PLAN SUBMISSION	TAL	07-03-24
2	RESPONSE TO CITY REVIEW COMMENTS	TAL	11-21-24
3	REVISED PER CONS. RES. DEV. STANDARDS	TAL	03-08-25

DRAWN:

TAL

SCALE:

NOTED

DATE:

4/17/2024

SHEET:

C401



PREPARED FOR:

PROJECT:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

STROUDWATER
COMMONS

PARCEL ID: 217 A010001 & 217 A011001

TITLE:

REVISION:

CONSTRUCTION
DETAILS

NO.	DATE	APPR.	TAL	DESCRIPTION
1	07/01/24	TAL		CITY SITE PLAN SUBDIVISION SUBMISSION
2	11/21/24	TAL		RESPONSE TO CITY REVIEW COMMENTS
3	03/08/25	TAL		REVISED PER CONS. RES. DEV. STANDARDS

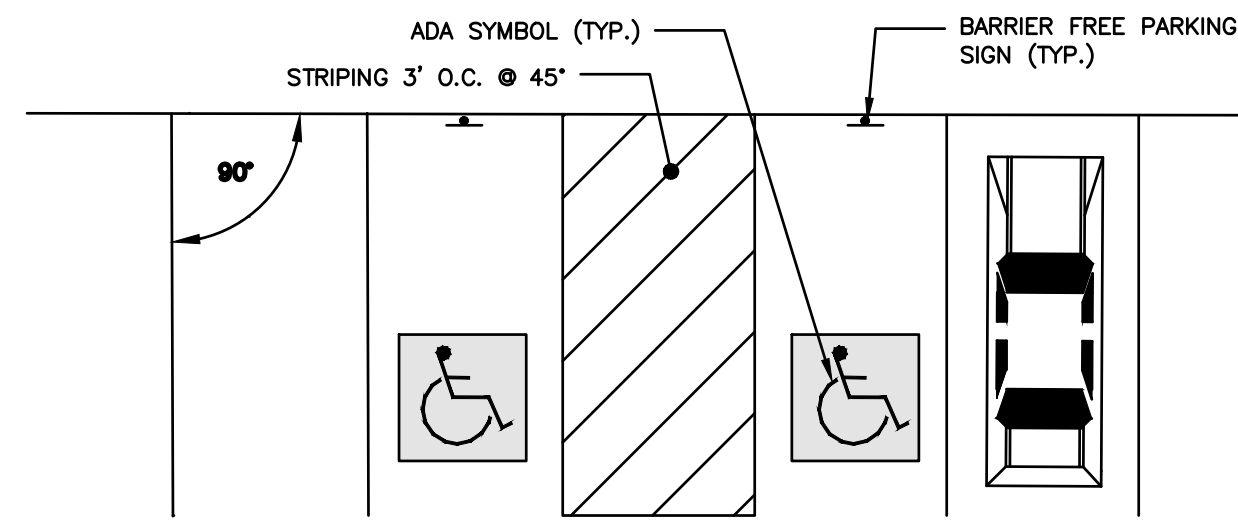
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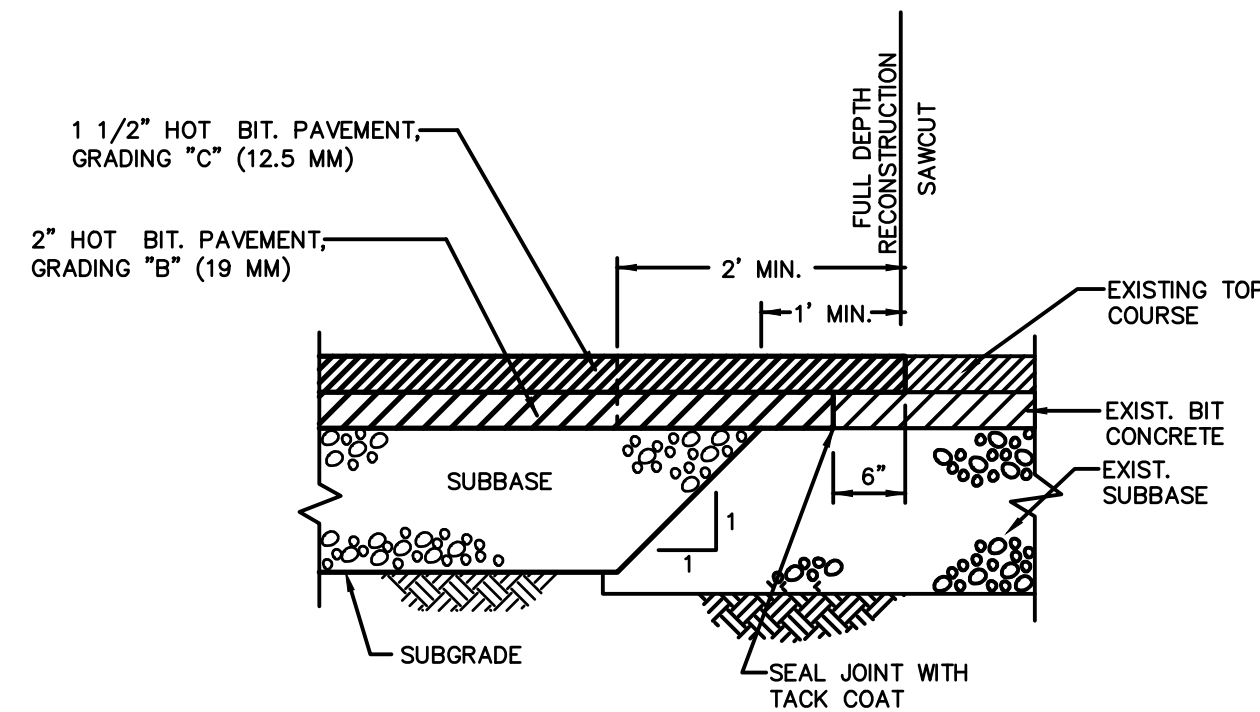
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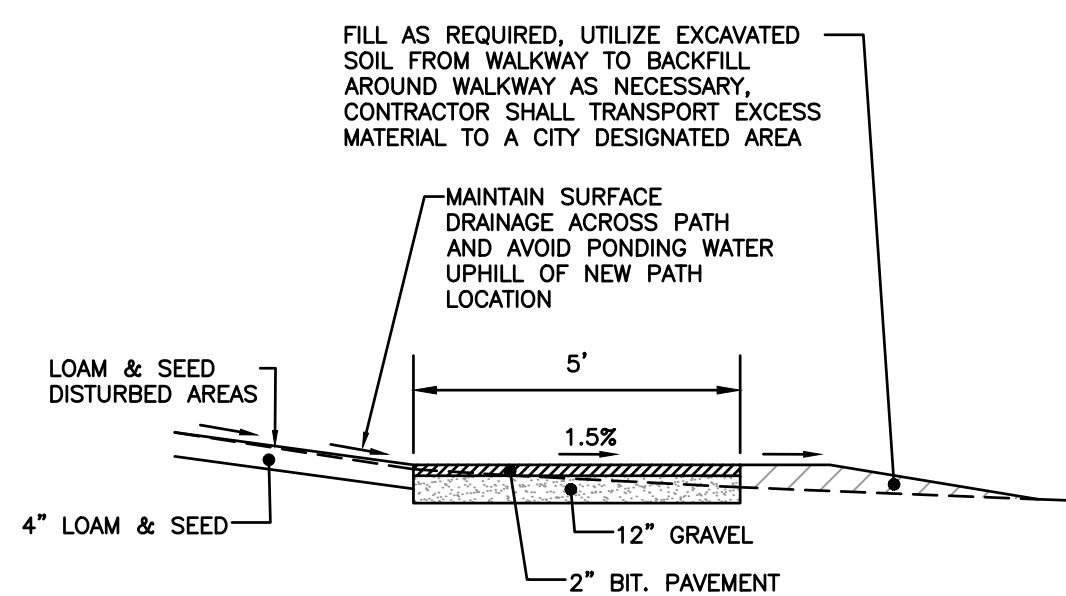
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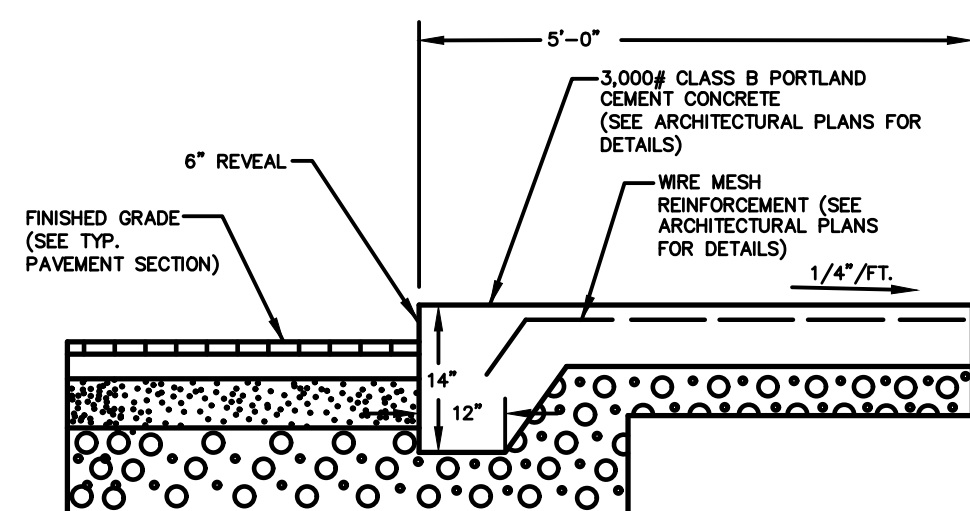
PARKING SPACE DIMENSIONS
NOT TO SCALE



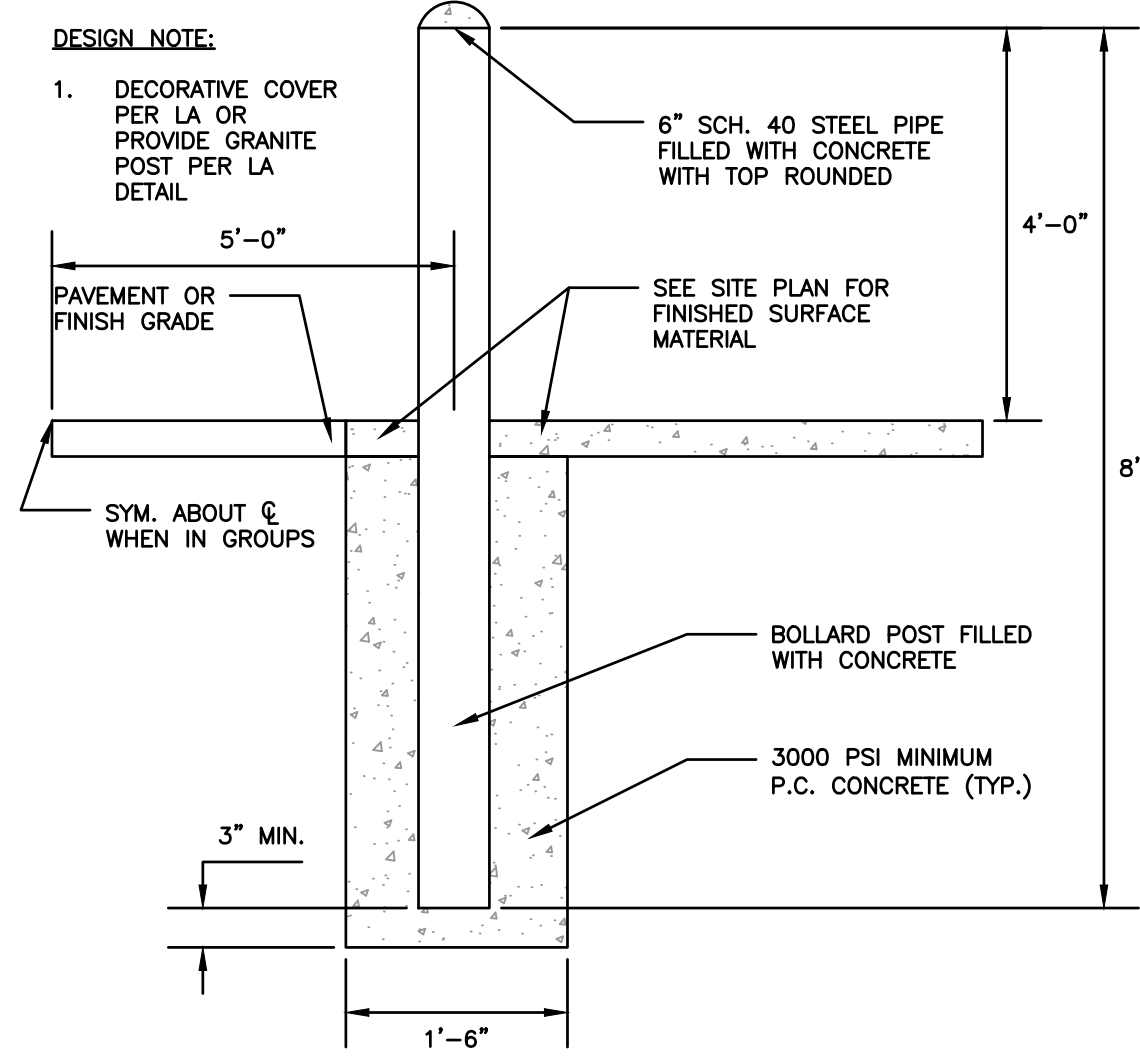
SAWCUT & PAVEMENT
MATCH DETAIL
N.T.S.



5' WIDE PAVED WALKWAY
NOT TO SCALE



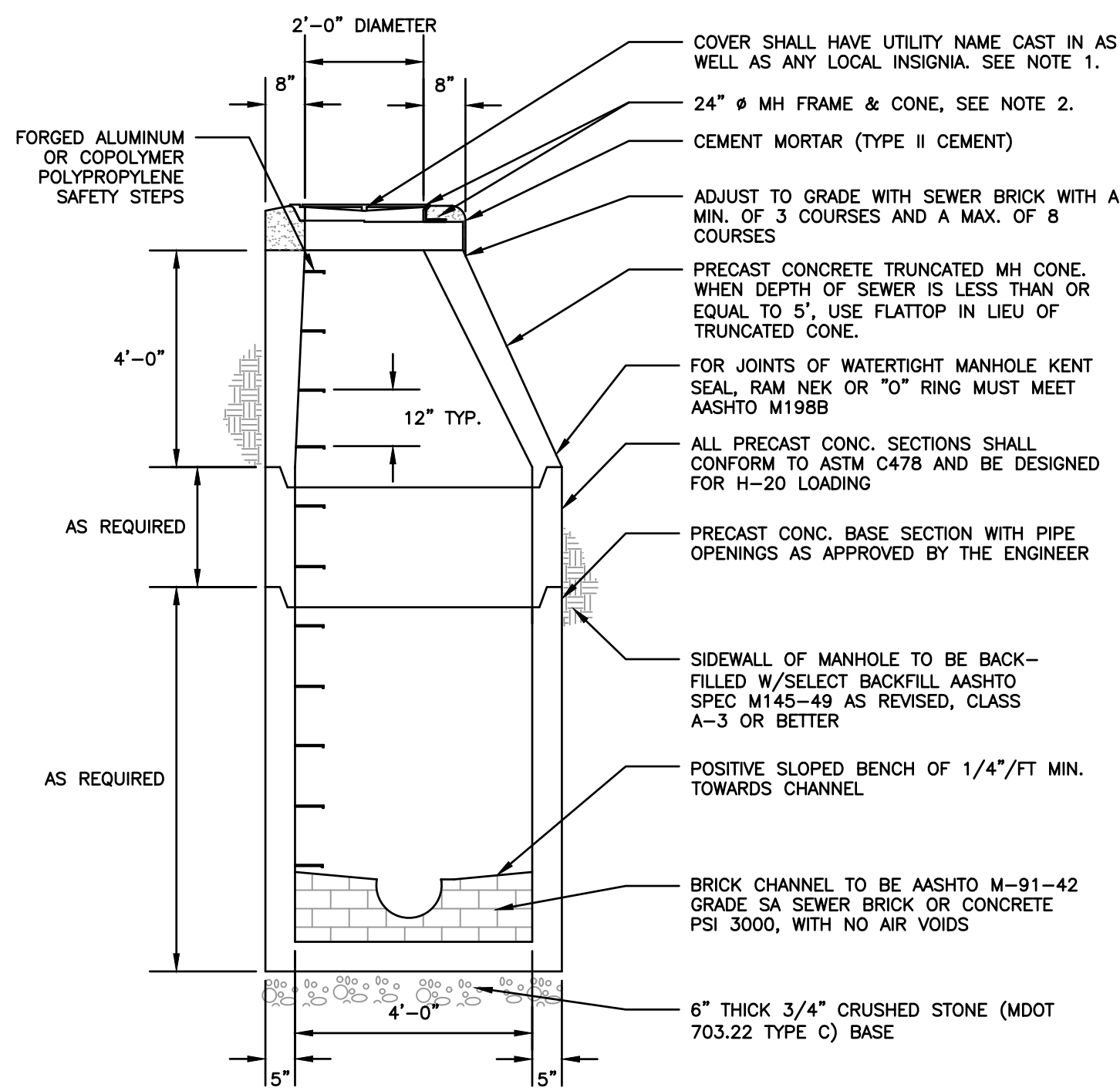
PCC SIDEWALK DETAIL
NOT TO SCALE



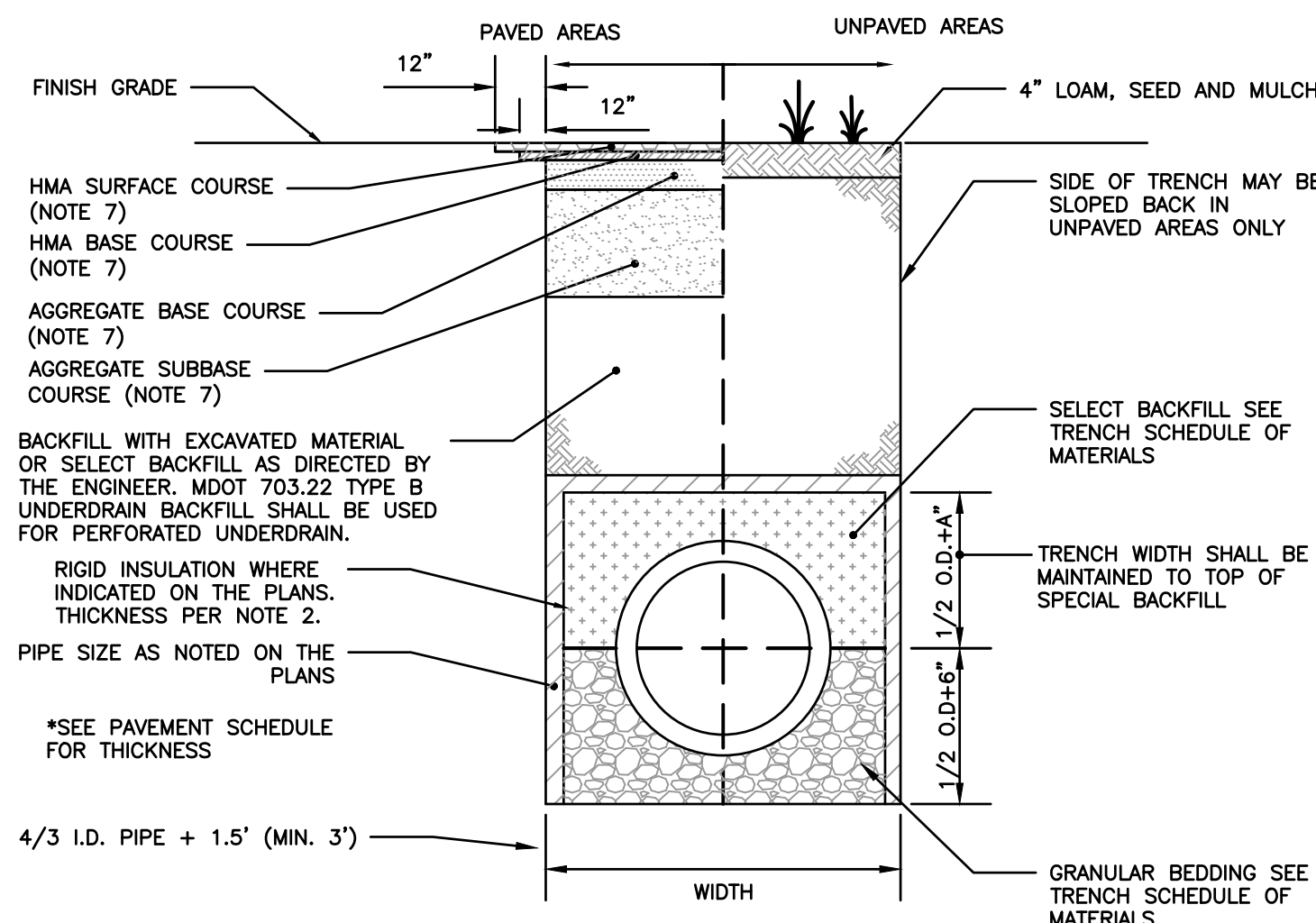
PIPE BOLLARD
NOT TO SCALE

NOTES:

- MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
- MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.
- WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 - SANITARY SEWER AND STORM DRAIN, FIGURE II-1
- SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



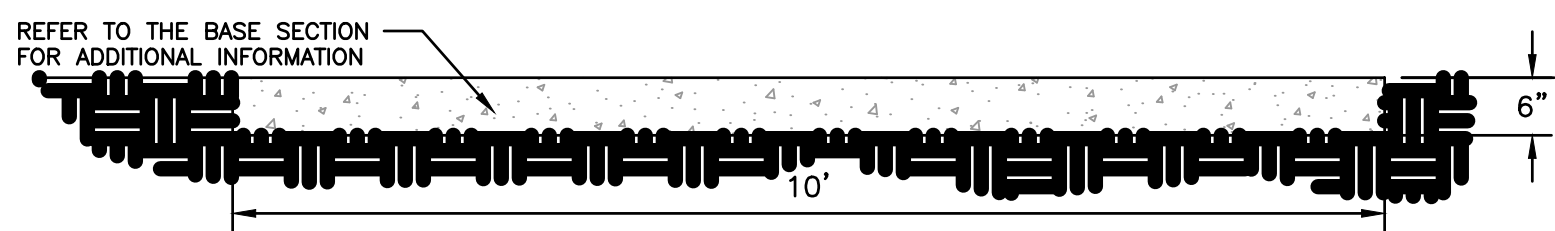
STANDARD PRECAST SEWER MANHOLE
NOT TO SCALE



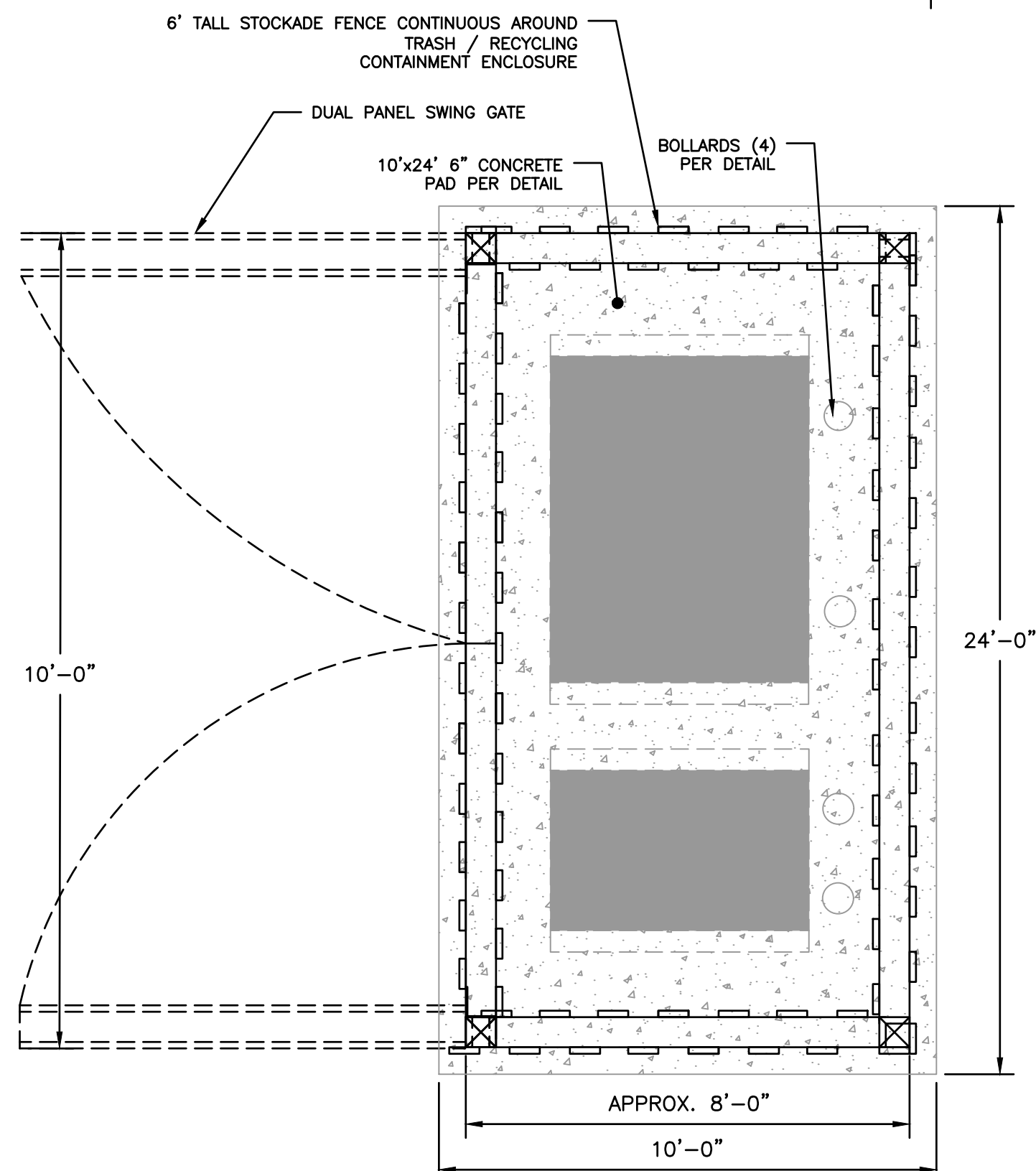
INTERNAL STORM DRAIN TYPICAL TRENCH SECTION
NOT TO SCALE

NOTES:

- COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
- FINISH WITH A STIFF, COARSE, FIBER BROOM.

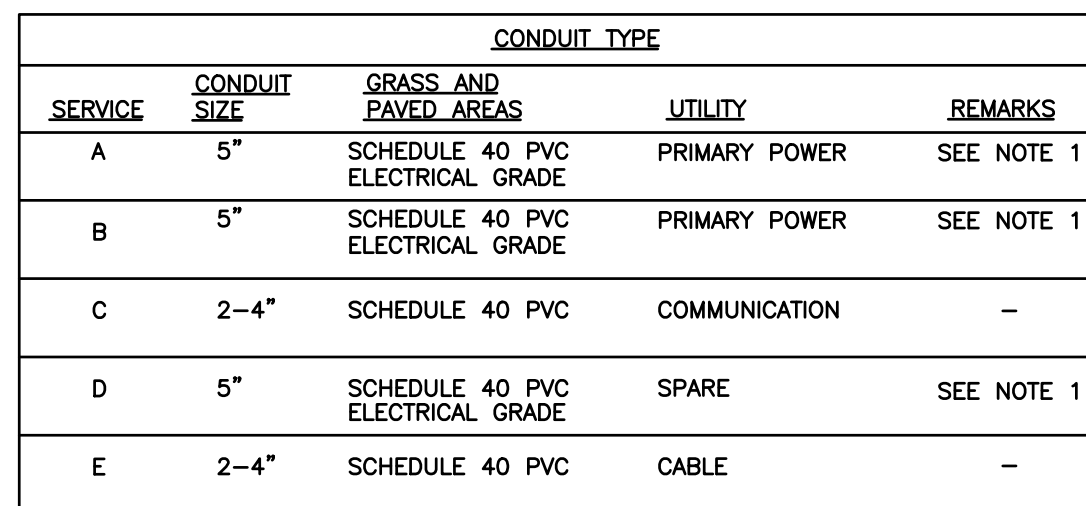
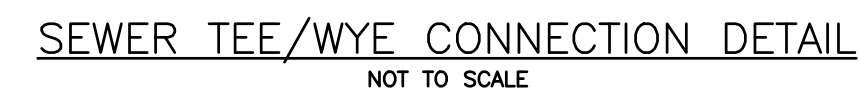
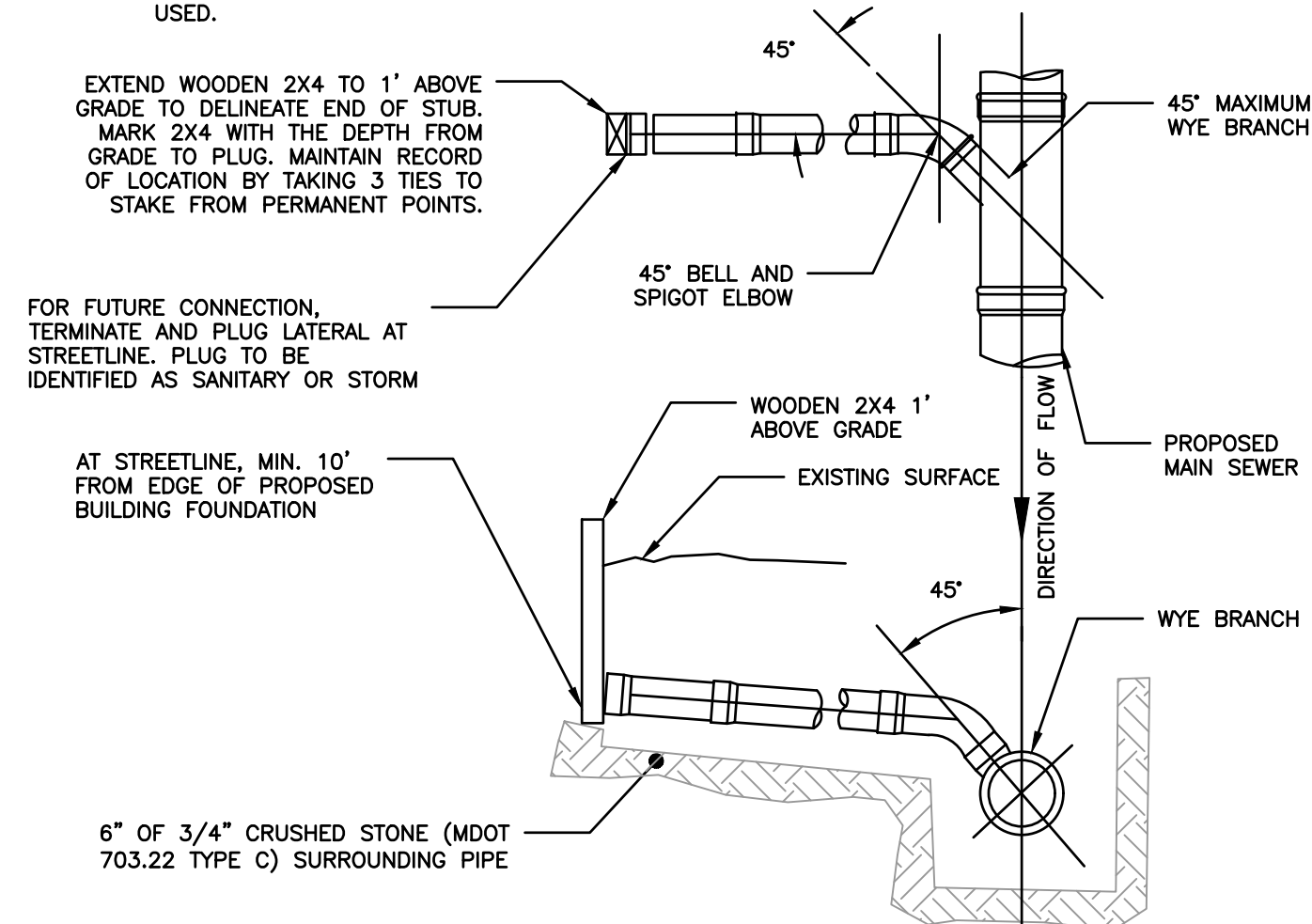
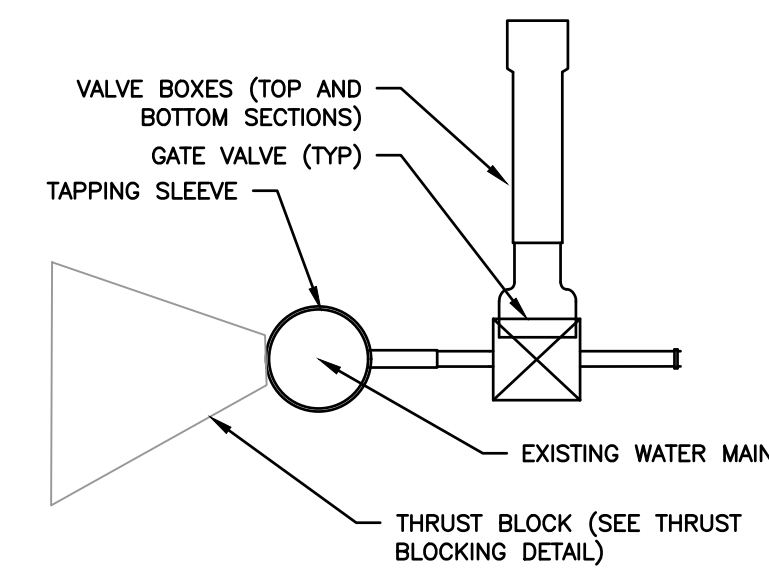


CONCRETE PAD DETAIL
NOT TO SCALE



PLAN VIEW
TRASH ENCLOSURE DETAIL
NOT TO SCALE

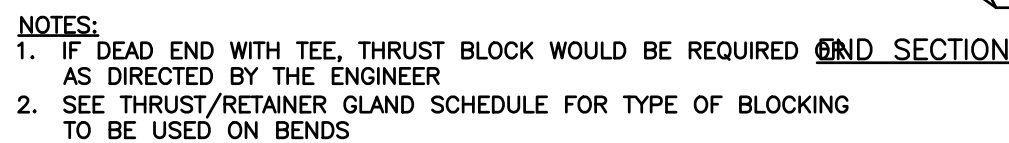
FOR REVIEW
NOT FOR CONSTRUCTION



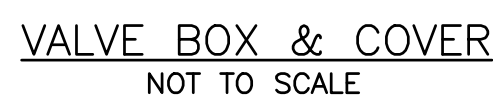
- NOTES:**
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STUB-ON OF BRACKETS.
 2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
 3. CONDUITS WITHIN THE TOWN RIGHT-OF-WAY SHALL BE ENCASED IN CONCRETE.
 4. FINISH SIZE OF CONDUITS TO BE SPECIFIED BY MEP, ELECTRICIAN, OR DESIGN/BUILD ELECTRICAL CONTRACTOR.

UTILITY TRENCH — PRIMARY AND SECONDARY POWER,
TELEPHONE, AND CABLE

NOT TO SCALE



THRUST BLOCKING: REGULAR BEND
NOT TO SCALE



FOR REVIEW
NOT FOR CONSTRUCTION



GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

**STROUDWATER
COMMONS**
PARCEL ID: 217 A010001 & 217 A011001

PARCEL ID: 217 A010001 & 217 A011001

TITLE:

REVISION

	NO.	DATE	APPR.	DESCRIPTION
	1	07-03-24	TAL	CITY SITE PLAN/SUBDIVISION SUBMISSION
	2	11-21-24	TAL	RESPONSE TO CITY REVIEW COMMENTS
	3	01-08-25	TAL	REVISED PER CONS. RES. DEV. STANDARDS

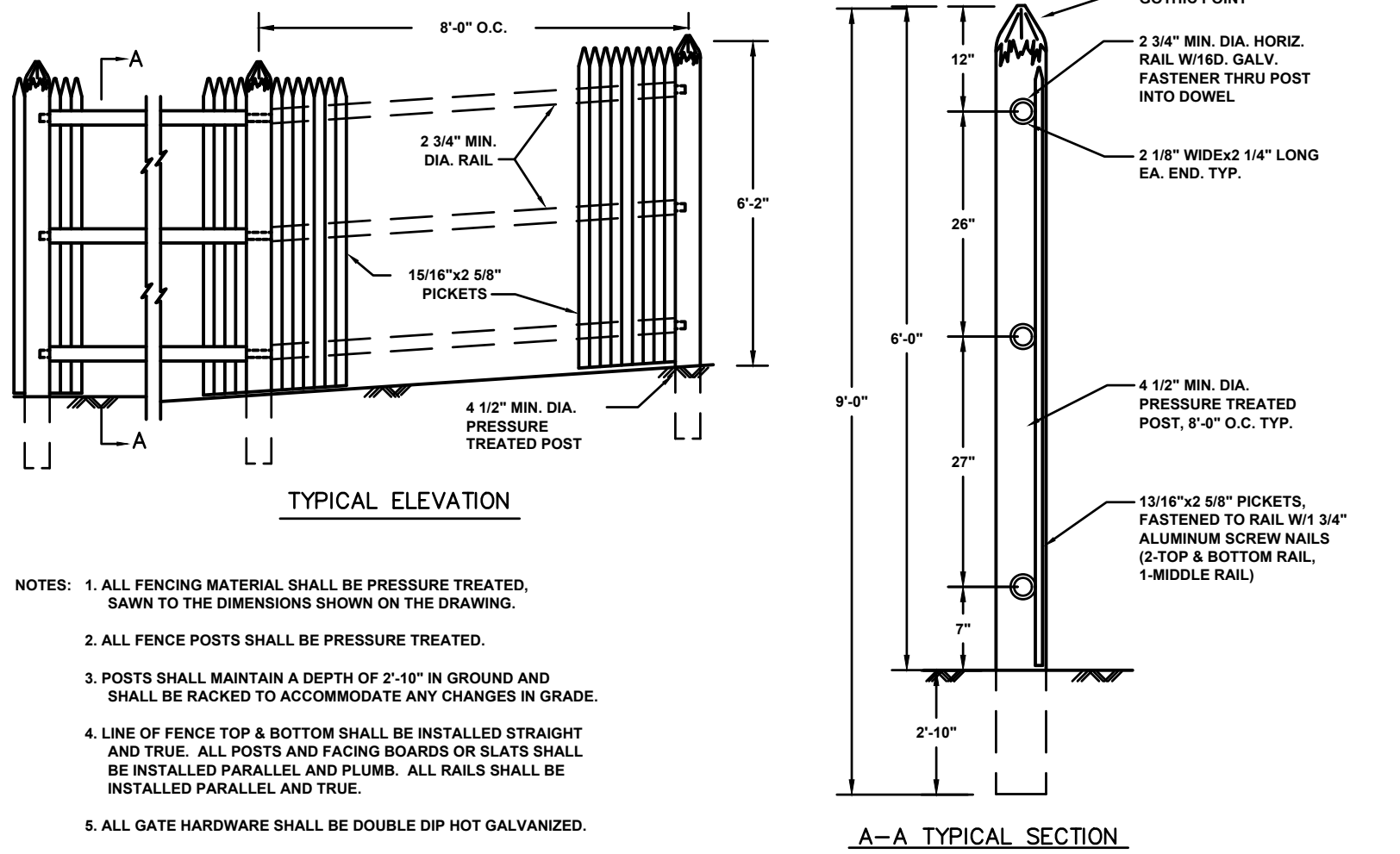
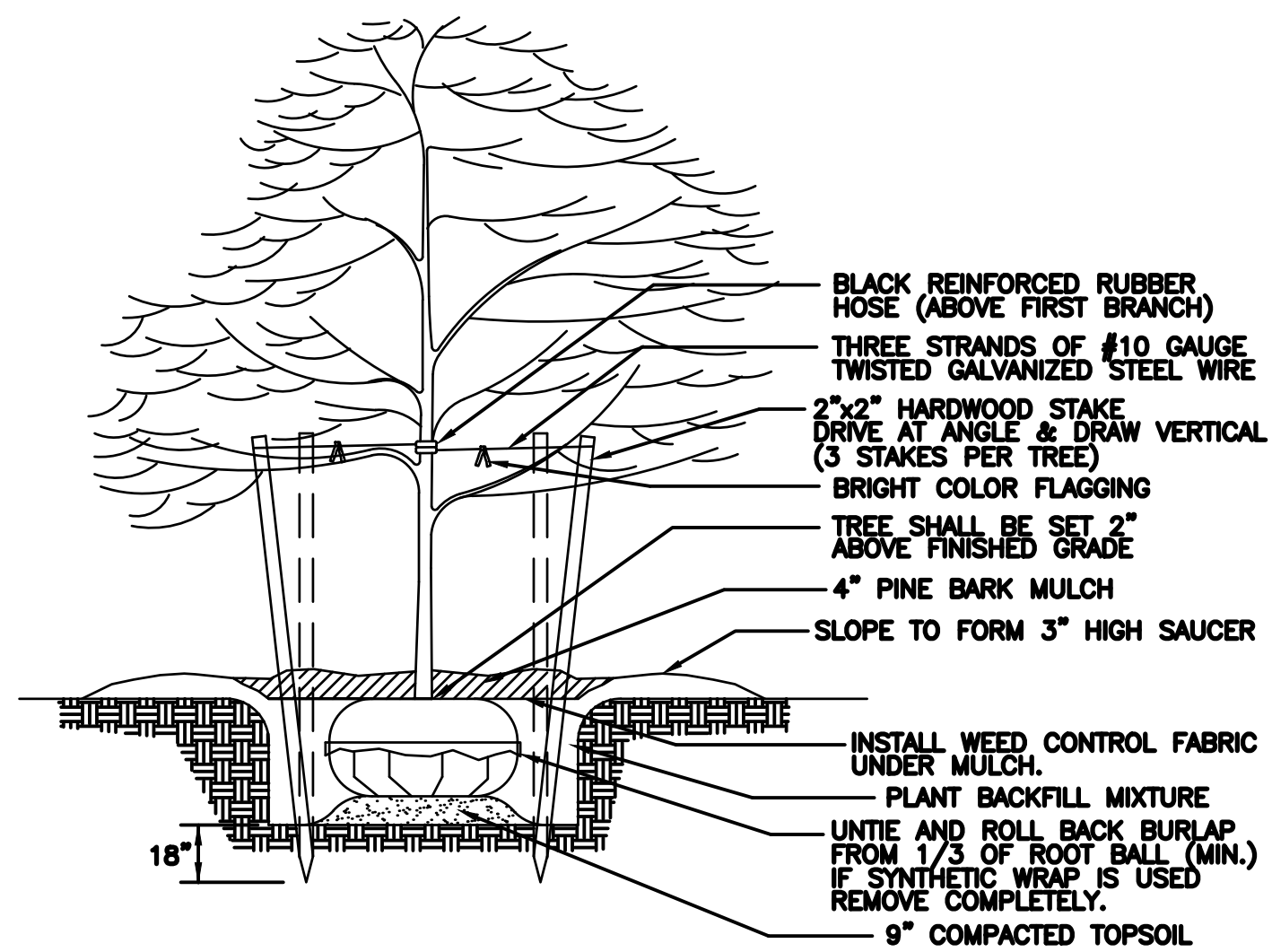
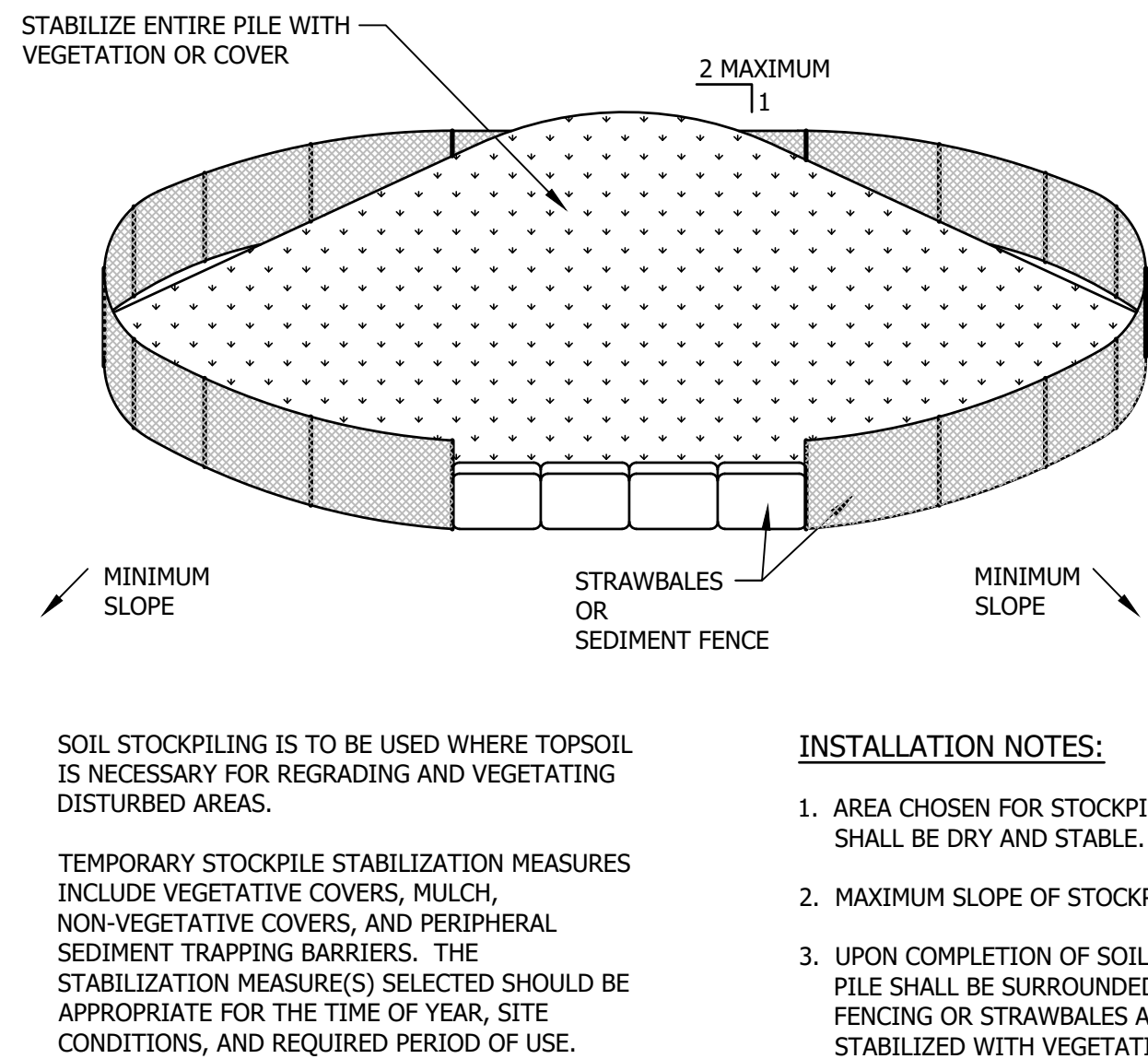
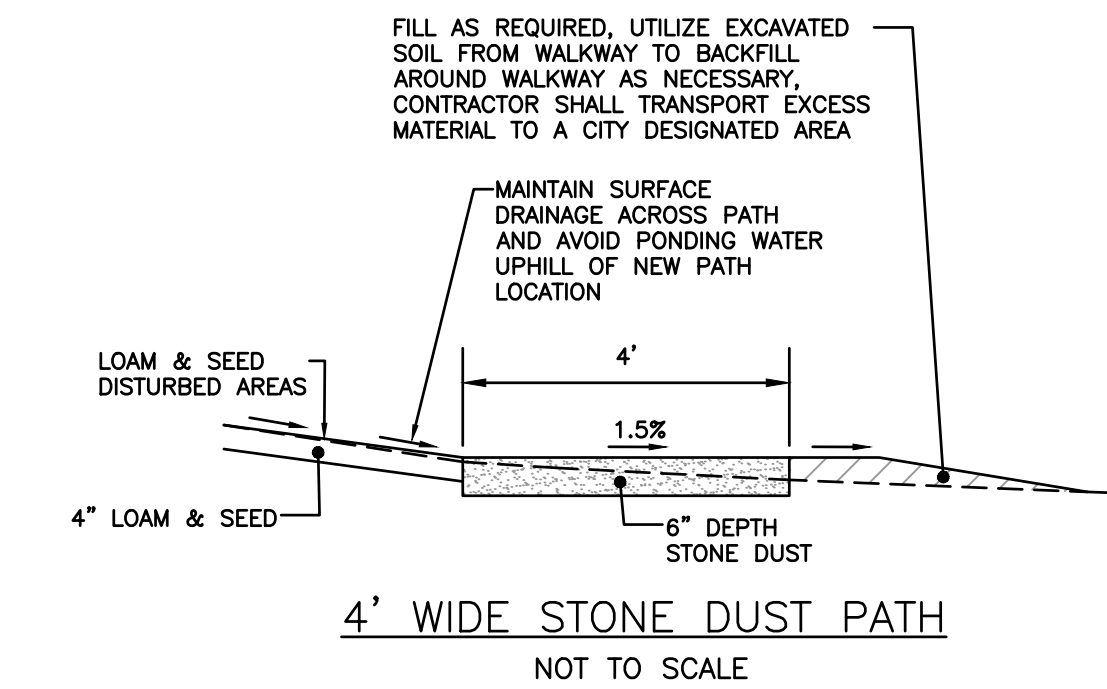
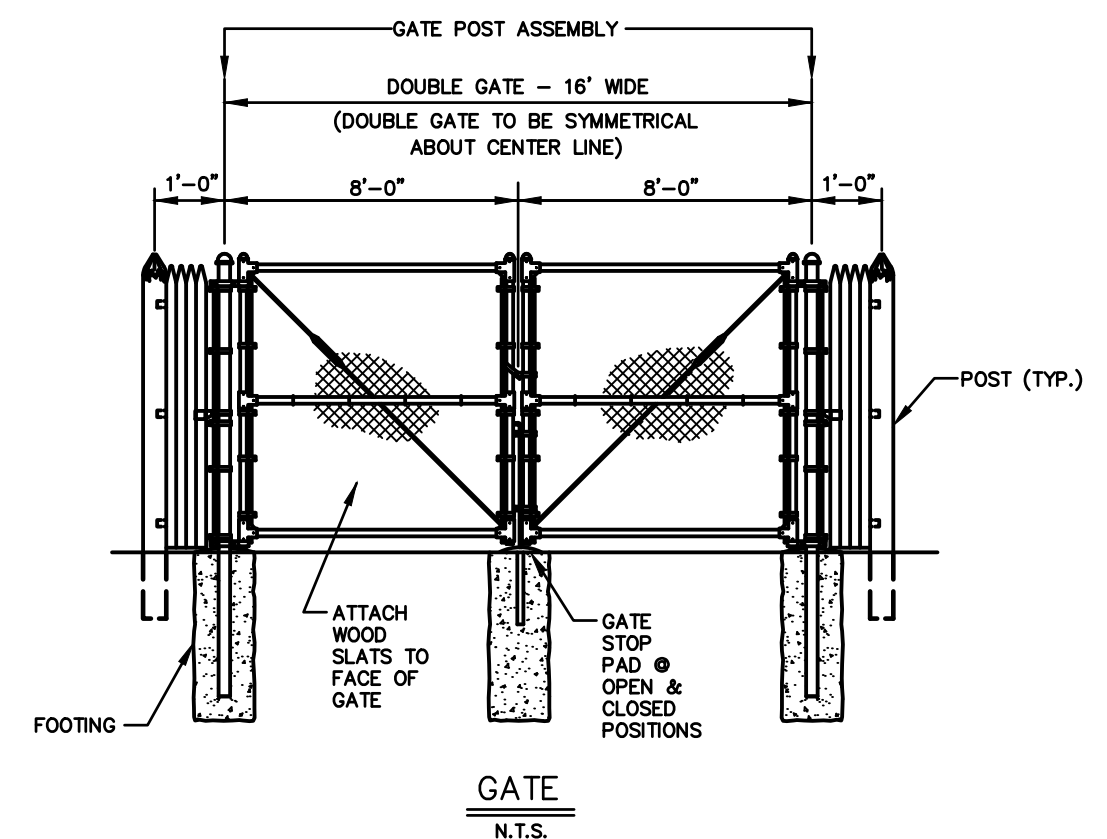
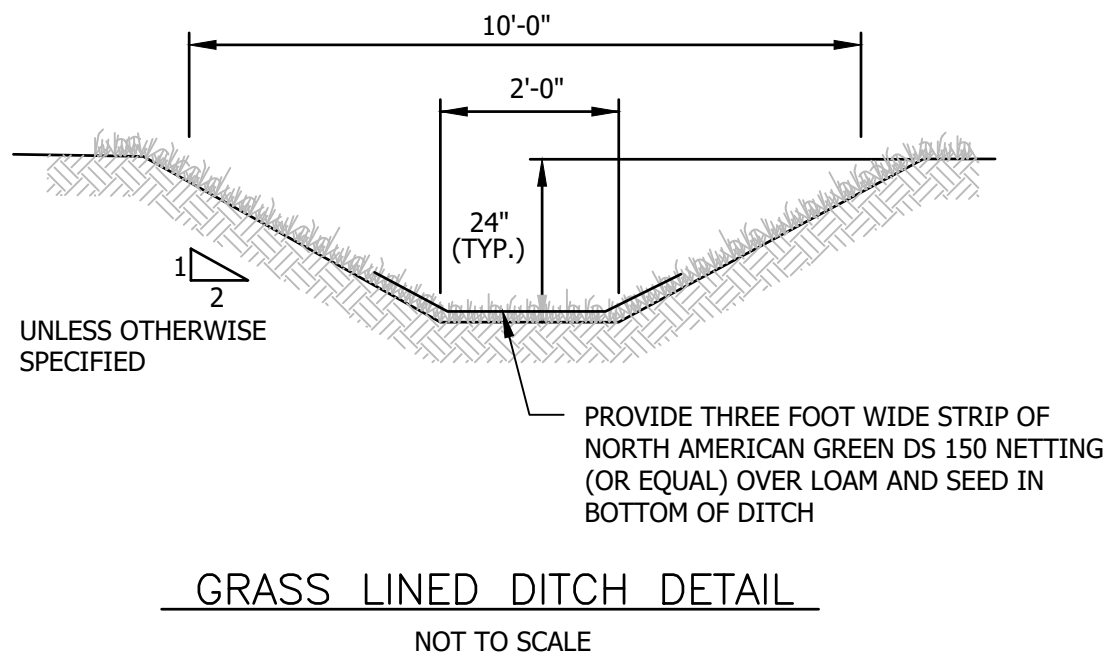
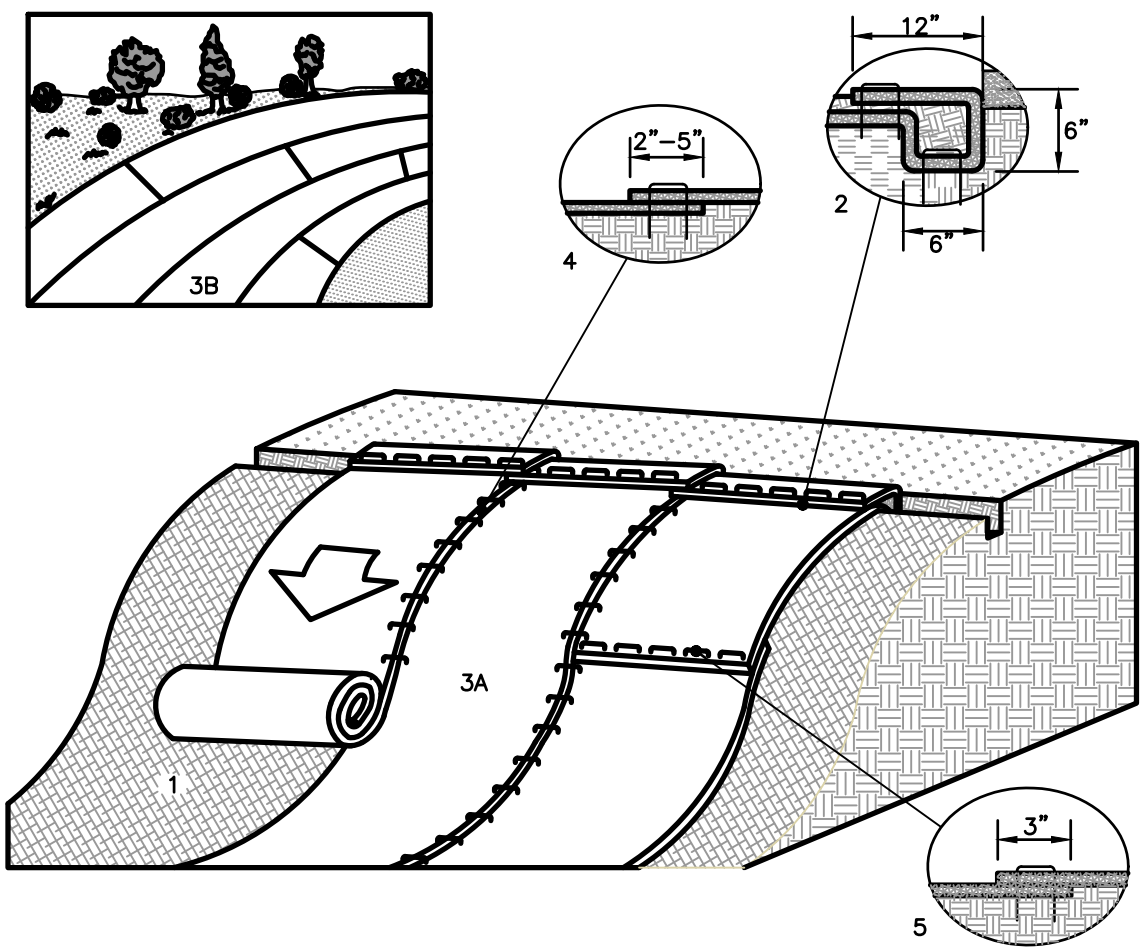
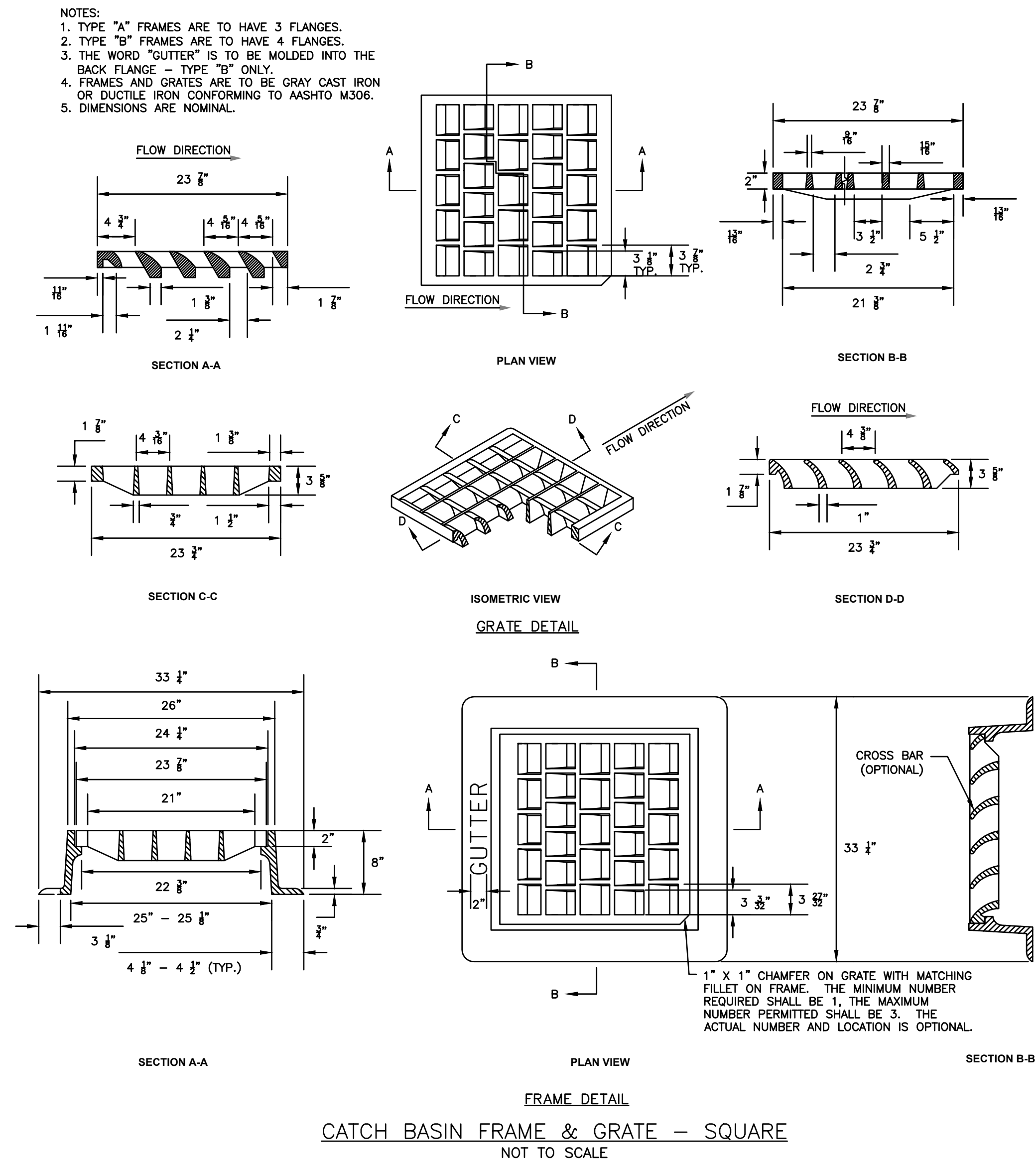
DRAWN:
TAL

SCALE:
NOTED

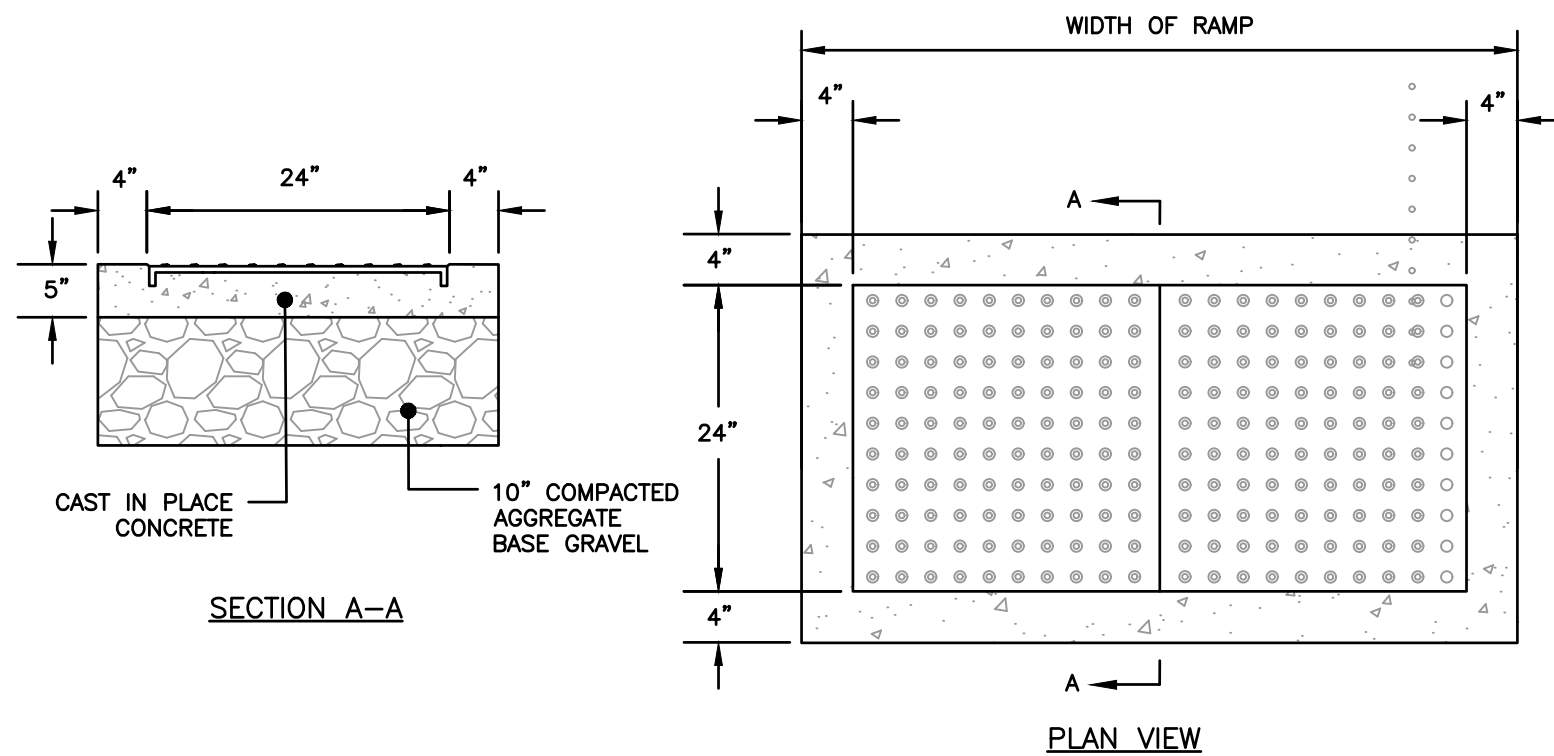
DATE:
4/17/2024

SHEET:

C503



- NOTES:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
 2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
 3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
 4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
 5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



FOR REVIEW
NOT FOR CONSTRUCTION



PREPARED FOR:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

PROJECT:

STROUDWATER
COMMONS

PARCEL ID: 217 A010001 & 217 A011001

TITLE:

CONSTRUCTION
DETAILS

REVISION:

NO.	DATE	APPR.	TAL	DESCRIPTION
1	07/01/24	TAL	TAL	CITY SITE PLAN SUBMISSION
2	11/21/24	TAL	TAL	RESPONSE TO CITY REVIEW COMMENTS
3	03/08/25	TAL	TAL	REVISED PER CONS. RES. DEV. STANDARDS

DRAWN:

TAL

SCALE:

NOTED

DATE:

4/17/2024

SHEET:

C504

03/08/25

14 of 18



FOR REVIEW
NOT FOR CONSTRUCTION

PREPARED FOR:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

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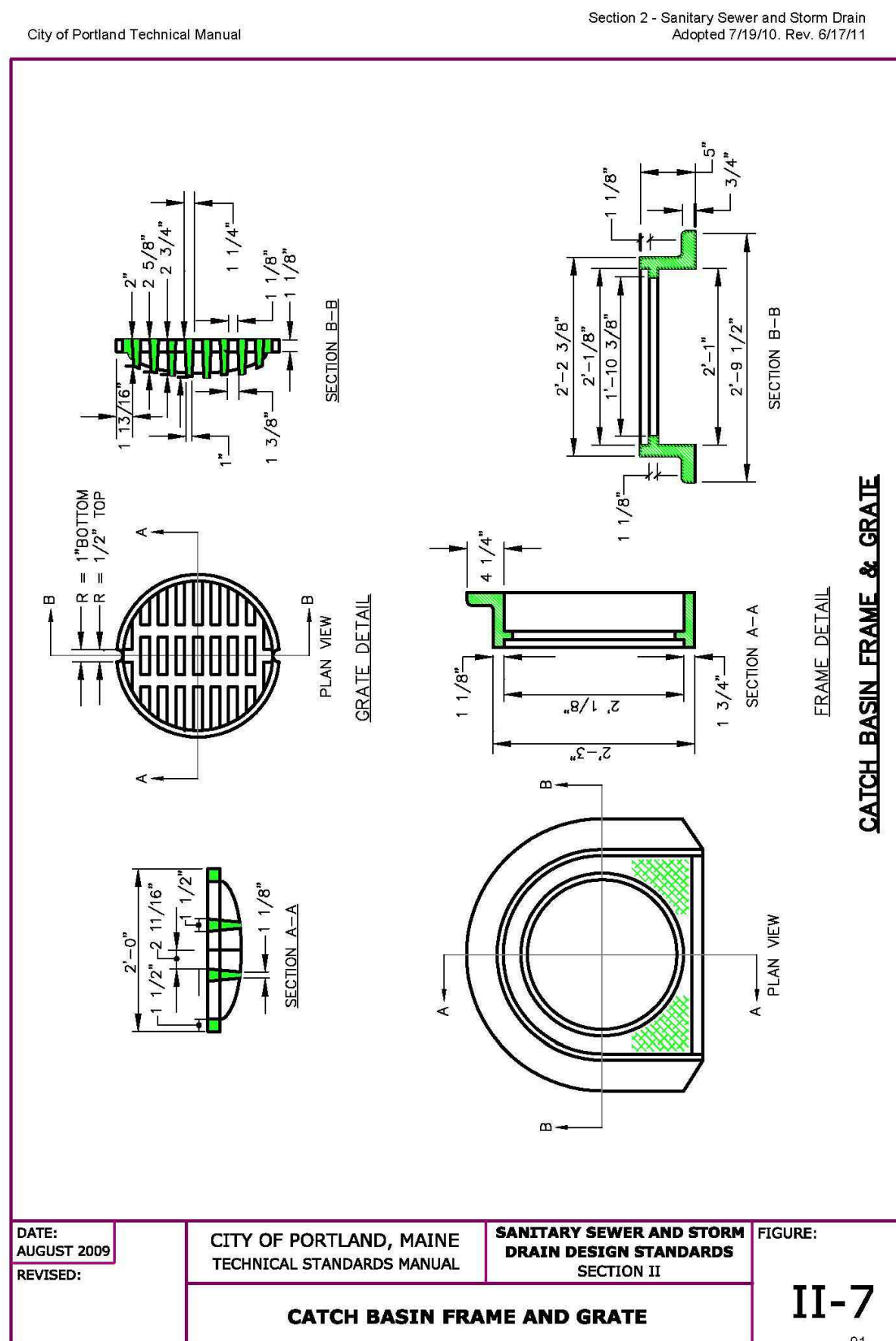
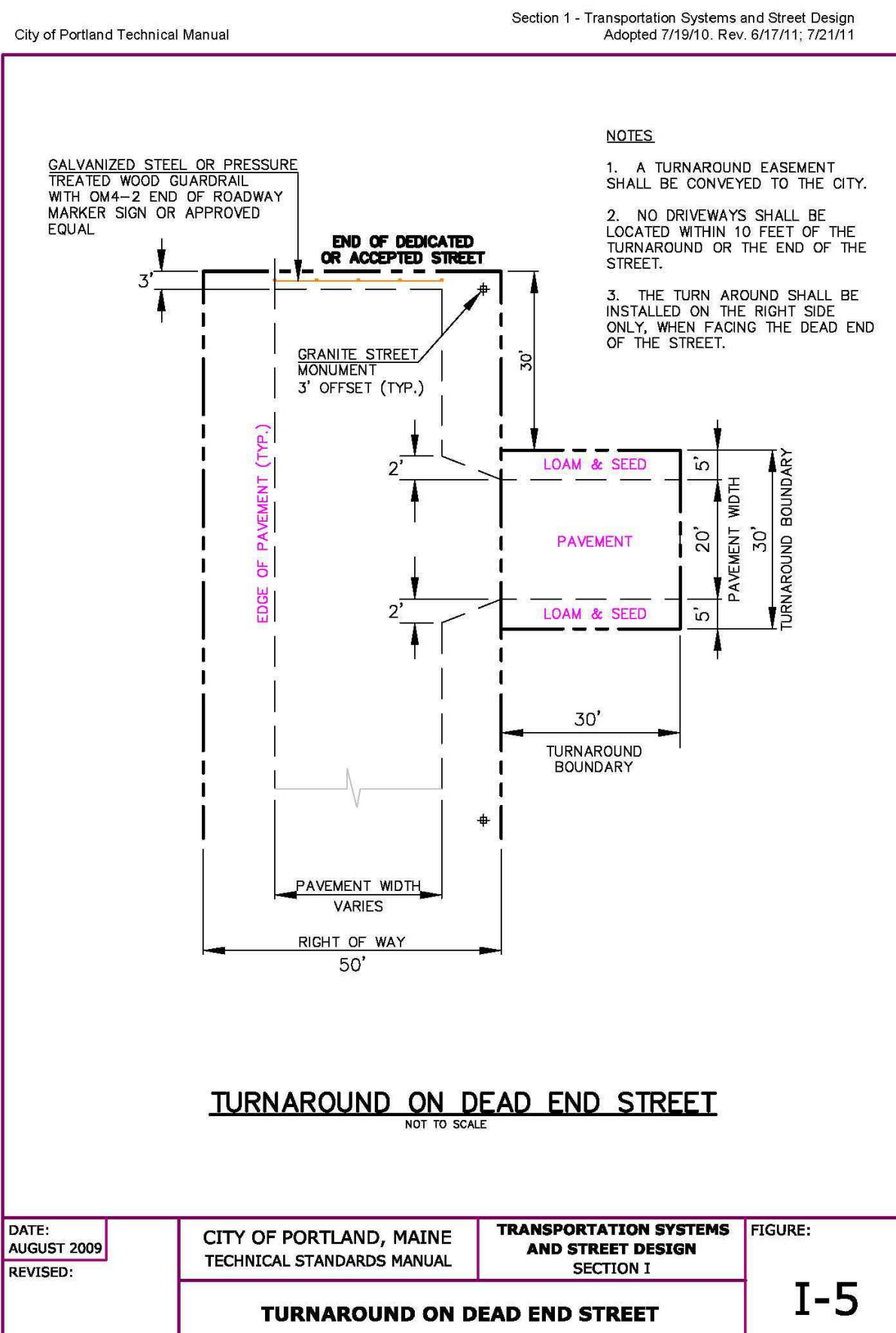
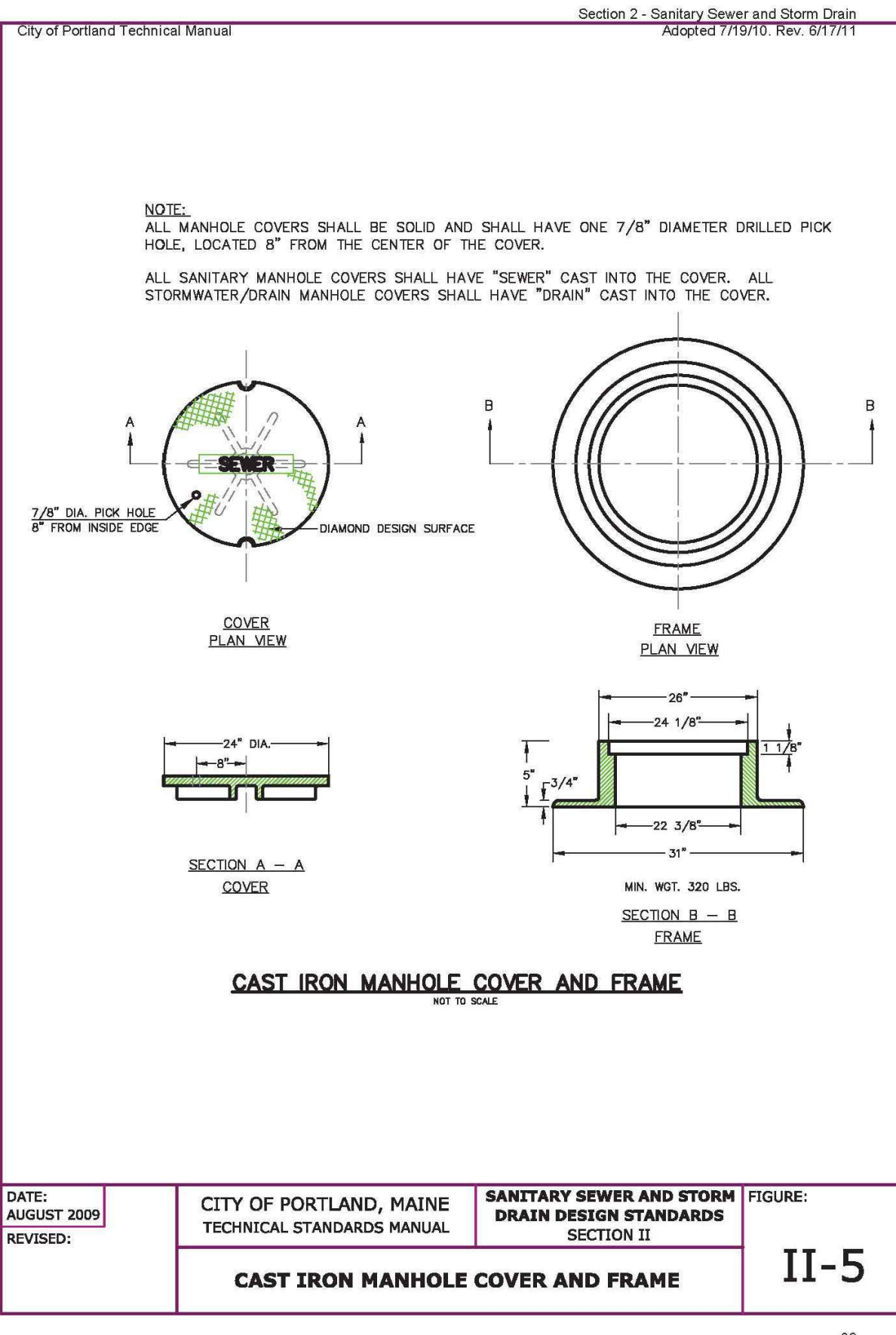
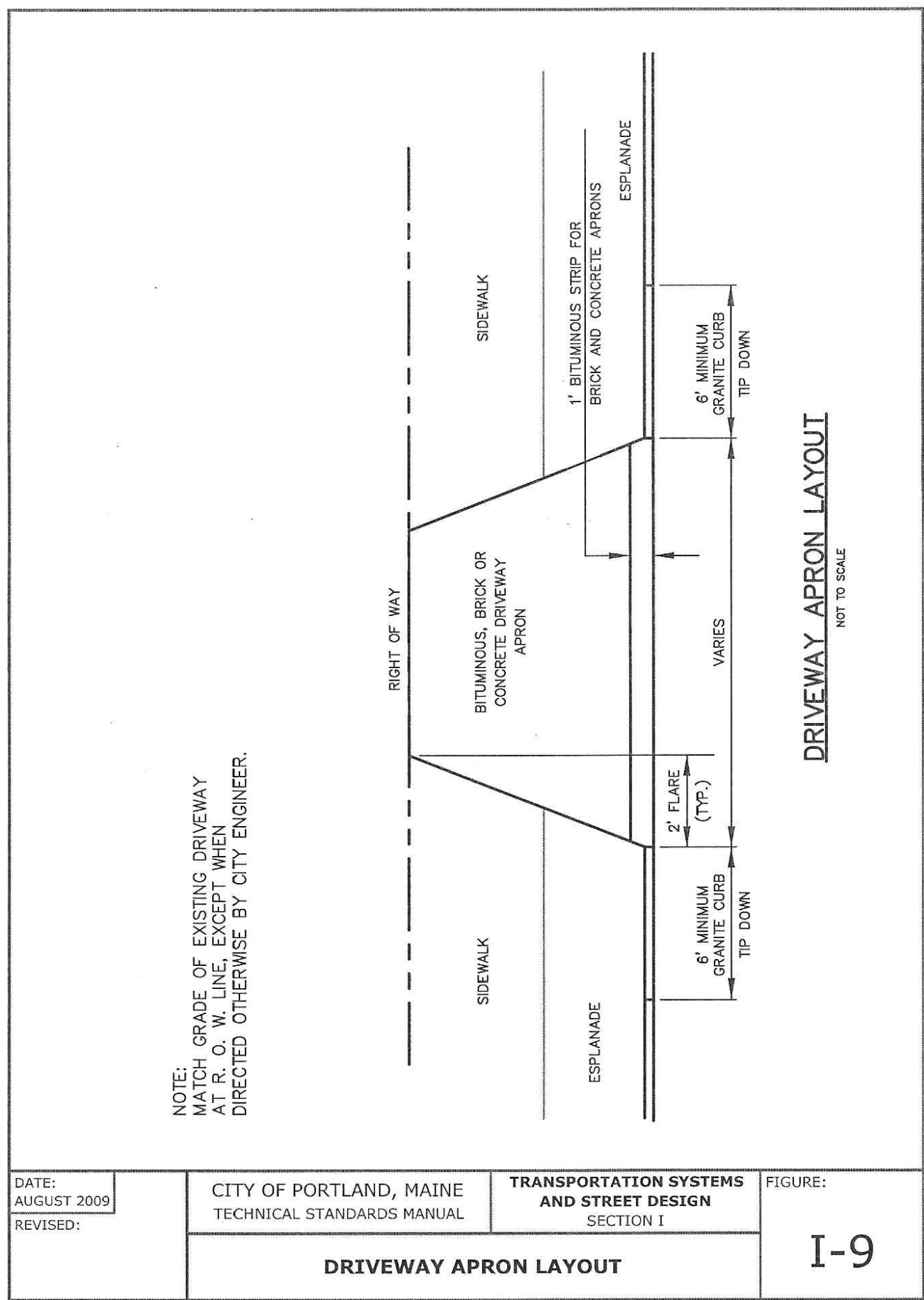
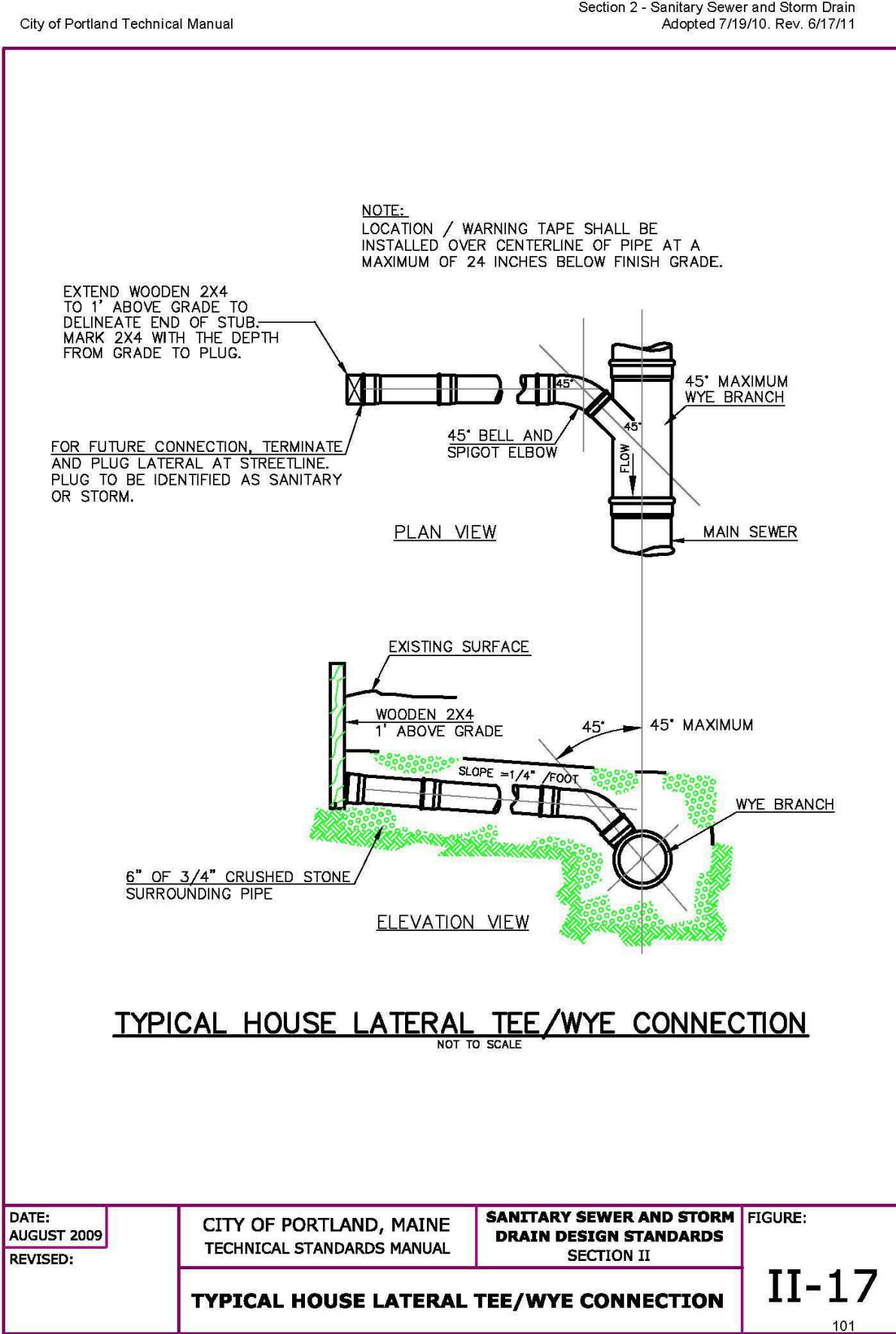
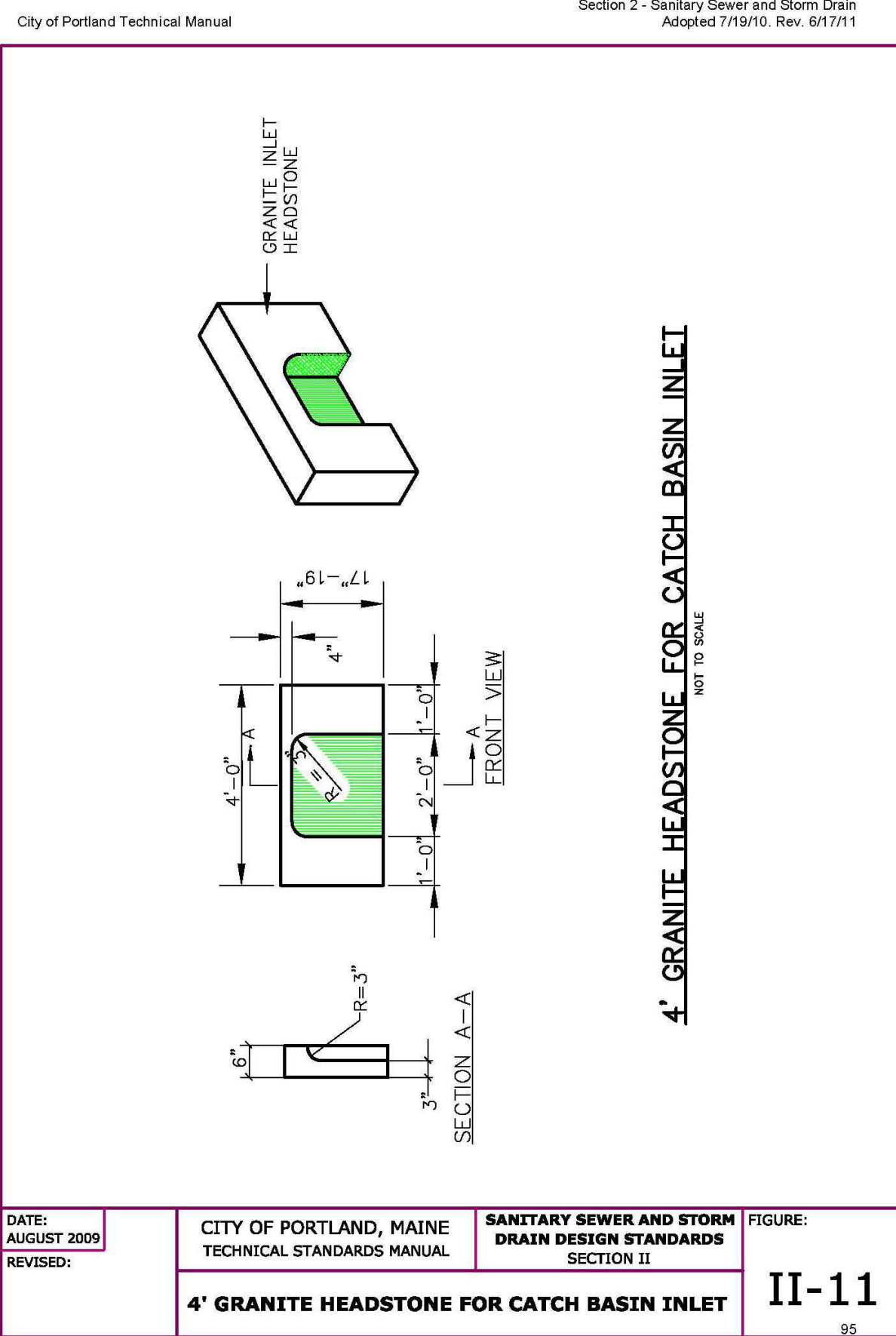
DRAWN:
TAL

SCALE:
NOTED

DATE:
4/17/2024

SHEET:

C505



PER MDOT ITEM 604.
PRECAST CONCRETE CATCH BASIN DETAIL
 N.T.S.

SIDEWALK LAYOUT DETAIL
N.T.S.

UNDERGROUND GAS PIPING INSTALLATION, NOTE:

COVER DEPTH - SHOULD BE INSTALLED AT LEAST 18" OF COVER. CAN BE 12" IN AREAS WHERE EXTERNAL DAMAGE IS NOT LIKELY. IF LESS THAN 12", PROVIDE A PROTECTIVE CONDUIT OR BRIDGING. ALWAYS USE WARNING TAPE AND TRACER WIRE FOR PLASTIC PIPING.

BACK FILLING TRENCHES - PIPE SHOULD HAVE A FIRM, CONTINUOUS BEARING ON TRENCH BOTTOM WHEN INSTALLING GAS PIPING. ESPECIALLY PLASTIC. IN A FLOODED TRENCH, CARE SHOULD BE TAKEN TO PREVENT THE PIPE FROM FLOATING UP IN THE TRENCH DURING BACK FILLING OPERATIONS.

COORDINATE ALL INSTALLATIONS WITH UTILITY.

The diagram illustrates a cross-section of a trench for gas line installation. The trench is a trapezoidal shape. At the bottom, there is a circular 'GAS LINE'. Above the gas line is a layer of 'GAS LINE BEDDING', represented by a stippled pattern. Above the bedding is a layer of 'TRACER WIRE (FOR PLASTIC PIPE)', represented by a dashed line. Above the tracer wire is a layer of 'YELLOW WARNING TAPE', represented by a solid line. The top of the trench is indicated by a horizontal line. The entire diagram is labeled 'GAS LINE TRENCH DETAIL' and 'NOT TO SCALE'.

Diagram illustrating the details of a gas line trench installation:

- YELLOW WARNING TAPE
- TRACER WIRE (FOR PLASTIC PIPE)
- CONTINUOUS PIPE BEDDING
- GAS LINE

GAS LINE TRENCH DETAIL

NOT TO SCALE

TYPICAL ROAD CROSS SECTION
NOT TO SCALE

NOTES:

- 1) LOAM AND SEED SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS 615 AND 618, METHOD #1.
- 2) AGGREGATE SUBBASE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS, SECTION 403 AND SHALL NOT CONTAIN PARTICLES OF ROCK EXCEEDING 6" IN ANY DIMENSION. MATERIAL FOR ROAD EMBANKMENT SHALL BE GRADEABLE EXCAVATED MATERIAL APPROVED BY TOWN INSPECTOR AND MUST MEET MDOT SPECIFICATION 703.19 GRANULAR BORROW. SUITABLE GRANULAR FILL MATERIAL SHALL CONSIST OF HARD DURABLE MINERALS LESS VERY FINE SANDS, SILT, CLAY OR ORGANIC MATERIALS. MATERIAL IS TO BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES. COMPACTION SHALL BE ACHIEVED BY MECHANICAL MEANS OF A "DYNAPAC", RIDING ROLLER, OR TRACKING WITH HEAVY EQUIPMENT.
- 3) ENTIRE WIDTH OF ROAD AND SHOULDERS IS TO BE STRIPPED AND GRUBBED OF TOP SOIL, ORGANICS AND ALL DELETERIOUS MATERIAL. ALL STUMPS AND UNSUITABLE MATERIAL (IF ANY) SHALL BE REMOVED IF WITHIN 5 FEET OF FINISHED GRADE UNDER PAVED AREAS.
- 4) SEE GRADING PLAN & PROFILE FOR GRADING INTENT.
- 5) ALL PROPOSED INFRASTRUCTURE LOCATED WITHIN THE ROAD RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.

PREPARED FOR:

PROJECT:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
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**STROUDWATER
COMMONS**
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TITLE:

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CONSTRUCTION DETAILS

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3	03-08-25	TAL	REVISED PER CONS. RES. DEV.

DRAWN:
TAL

SCALE:
NOTED

DATE:
4/17/202

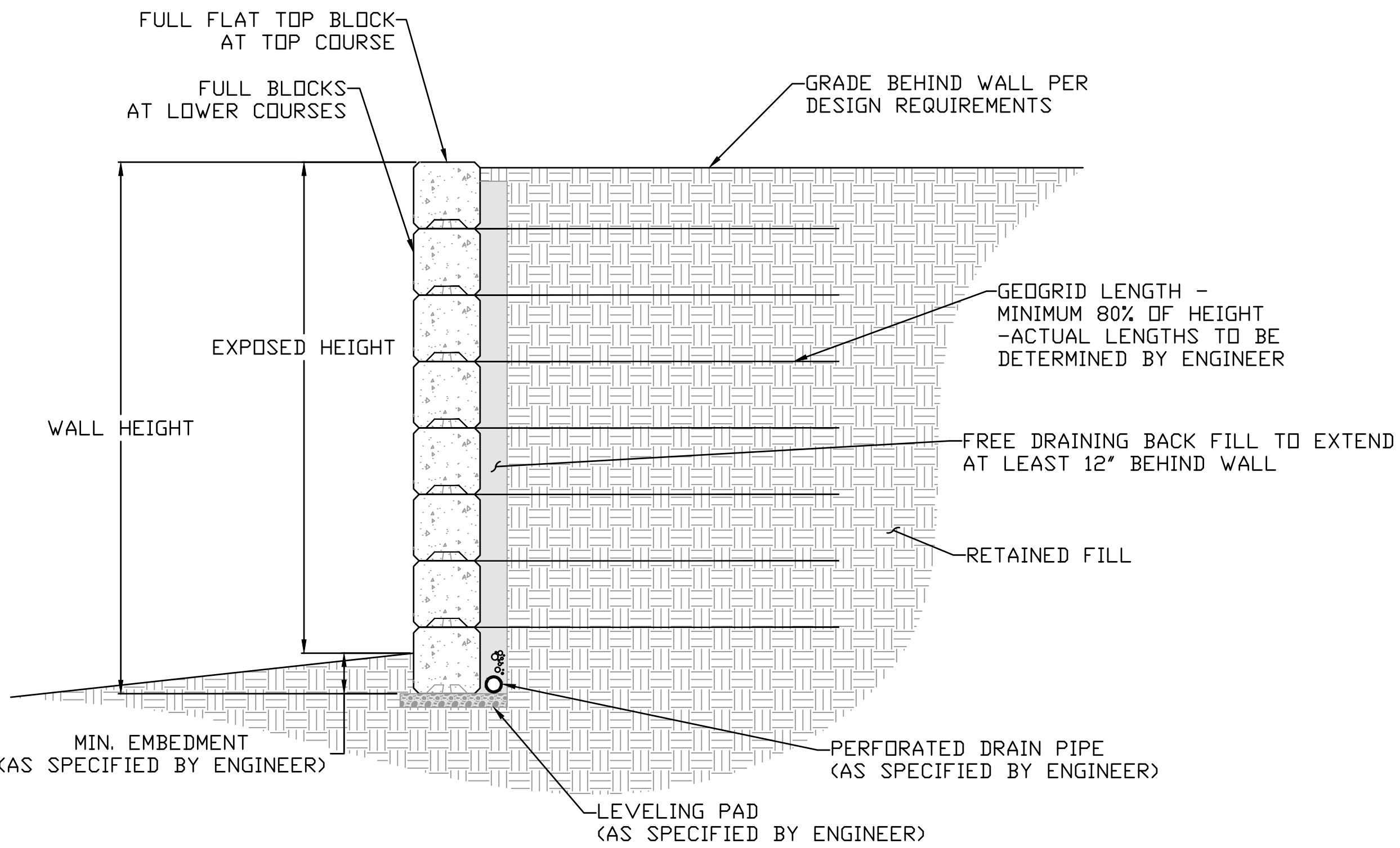
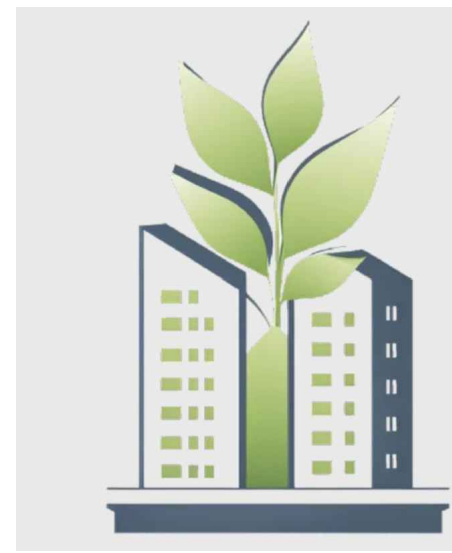
SHEET:

C506

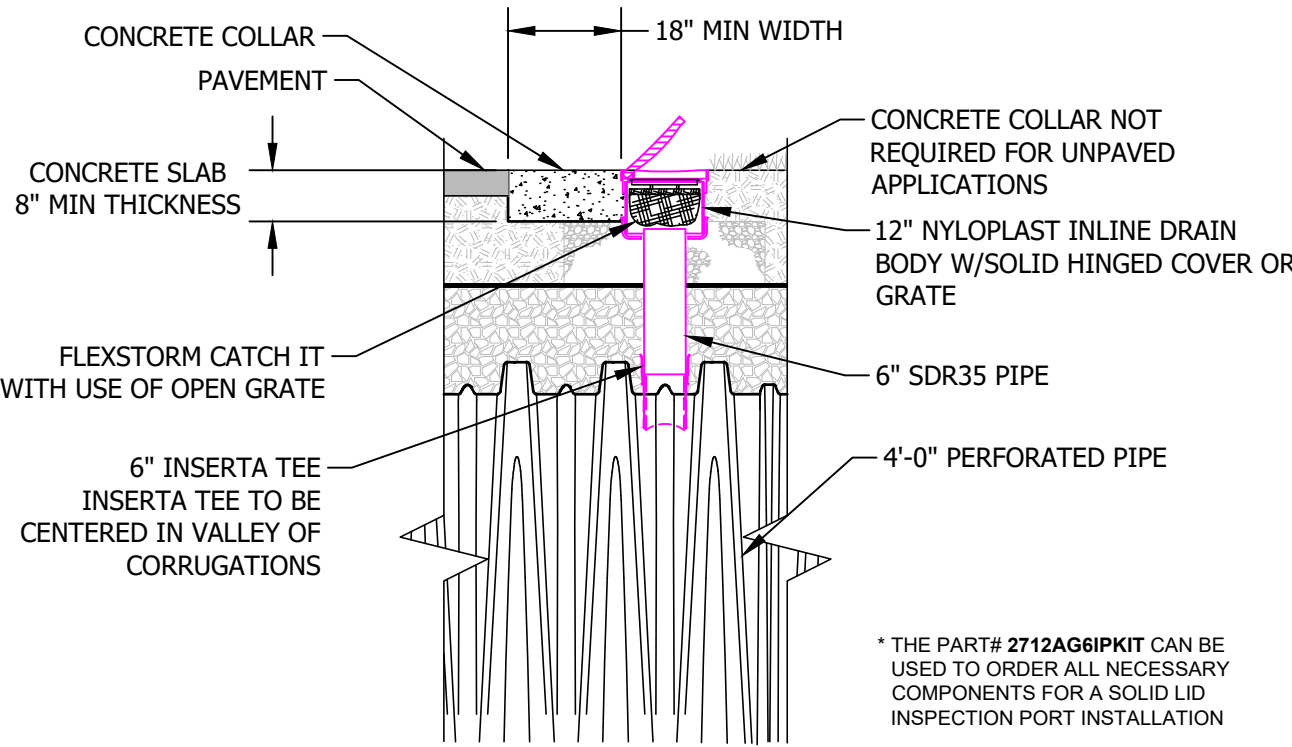
03/08/25

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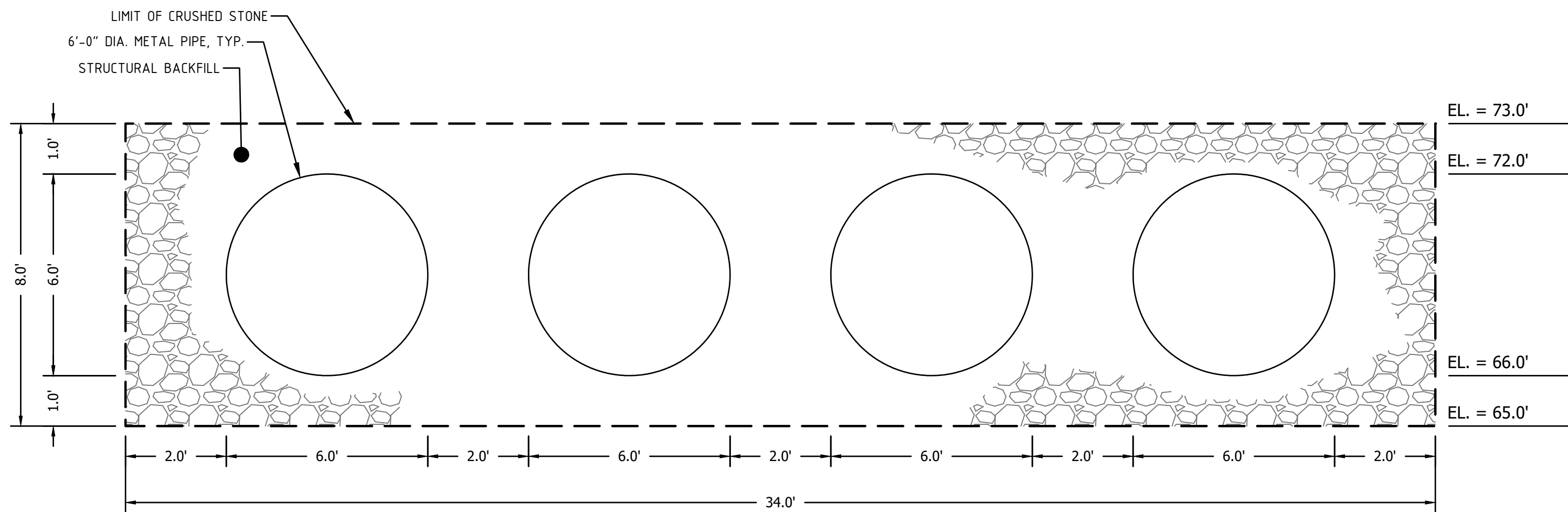
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TYPICAL BLOCK WALL DETAIL
NOT TO SCALE



6" INSPECTION PORT DETAIL
NOT TO SCALE



UNDERGROUND DETENTION CROSS SECTION A-A
SCALE: NTS

PREPARED FOR:

GREENMARS REAL ESTATE
30 EXCHANGE STREET, SUITE#3
PORTLAND, MAINE 04101

PROJECT:

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PARCEL ID: 217 A010001 & 217 A011001

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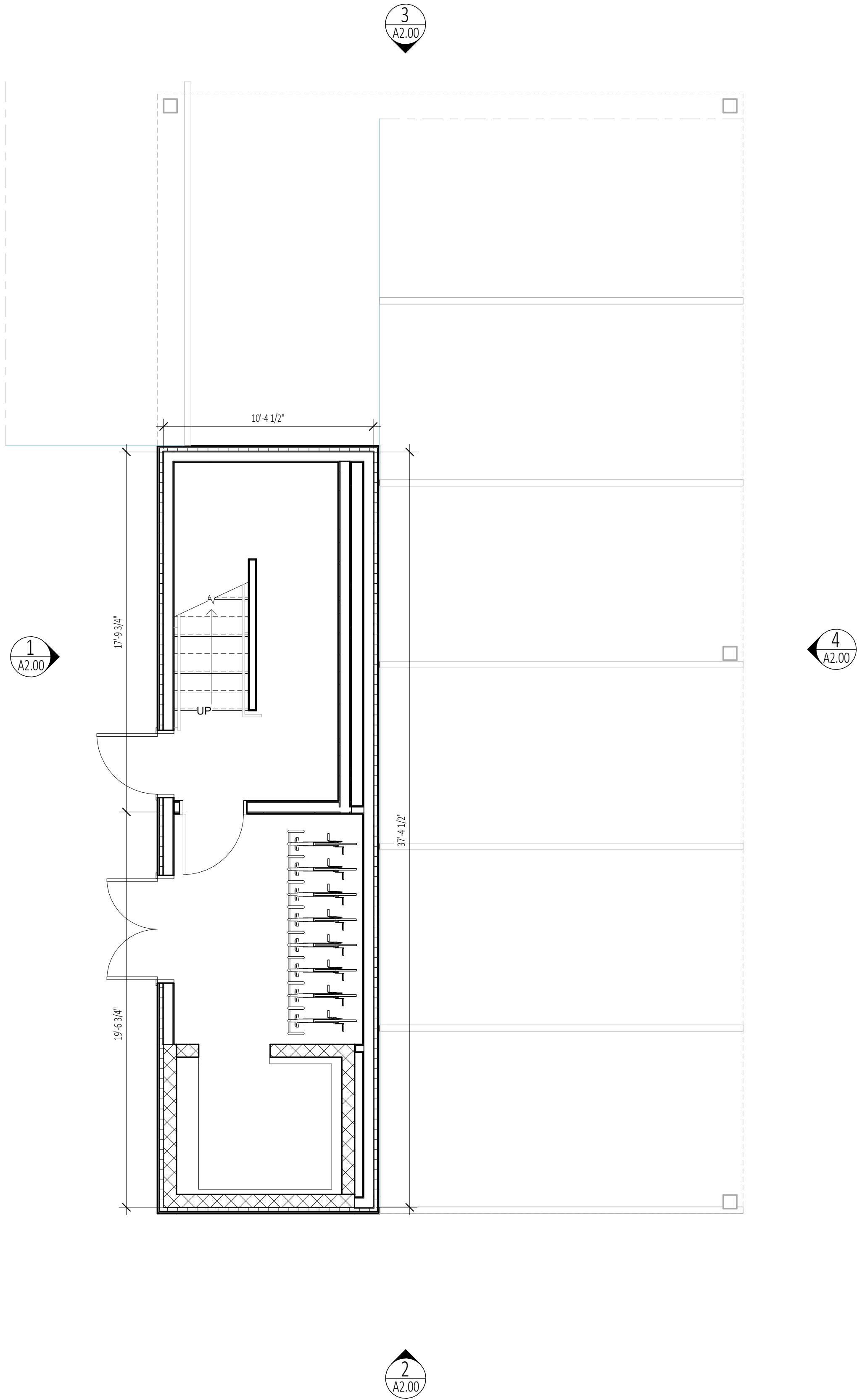
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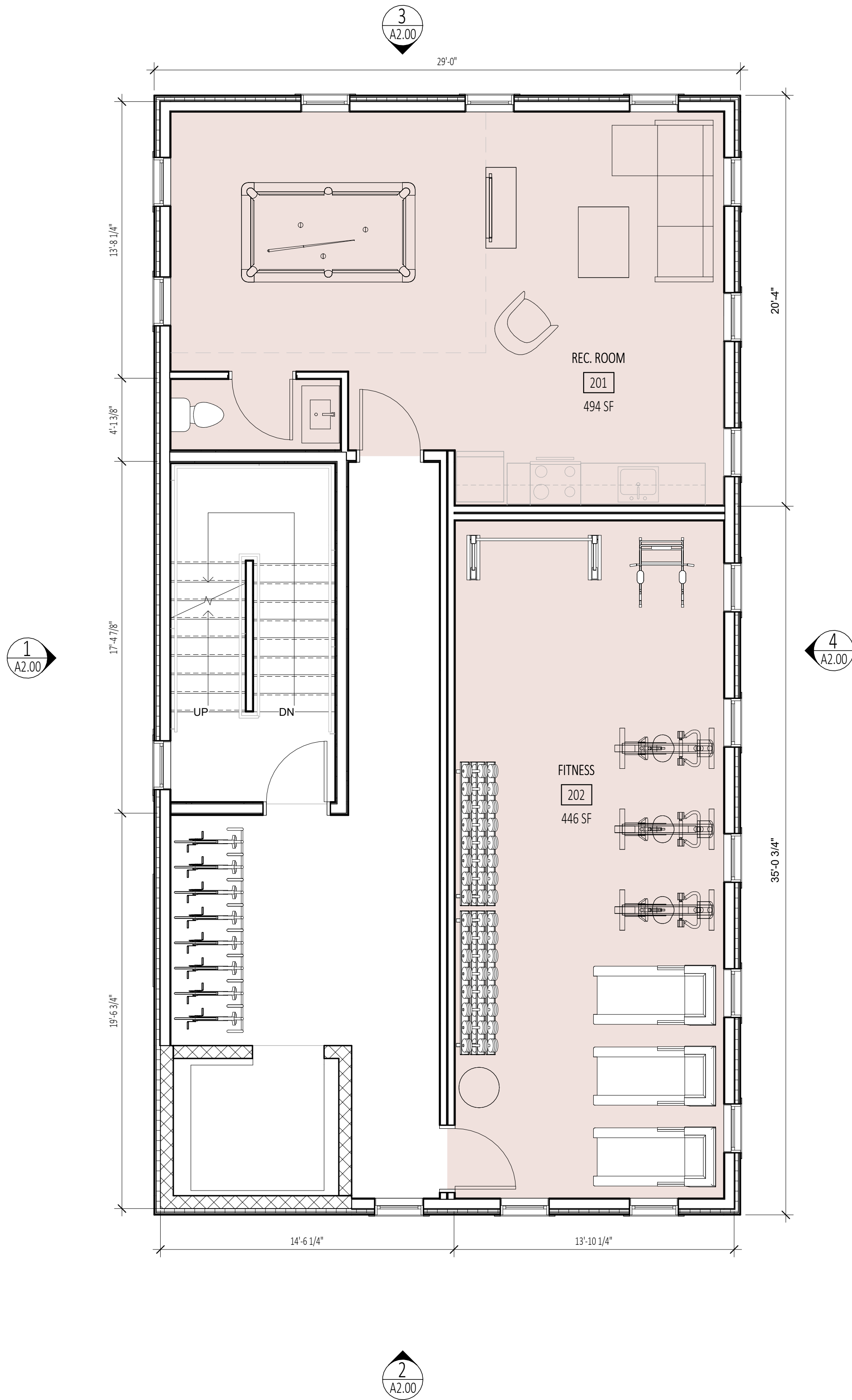
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4/17/2024

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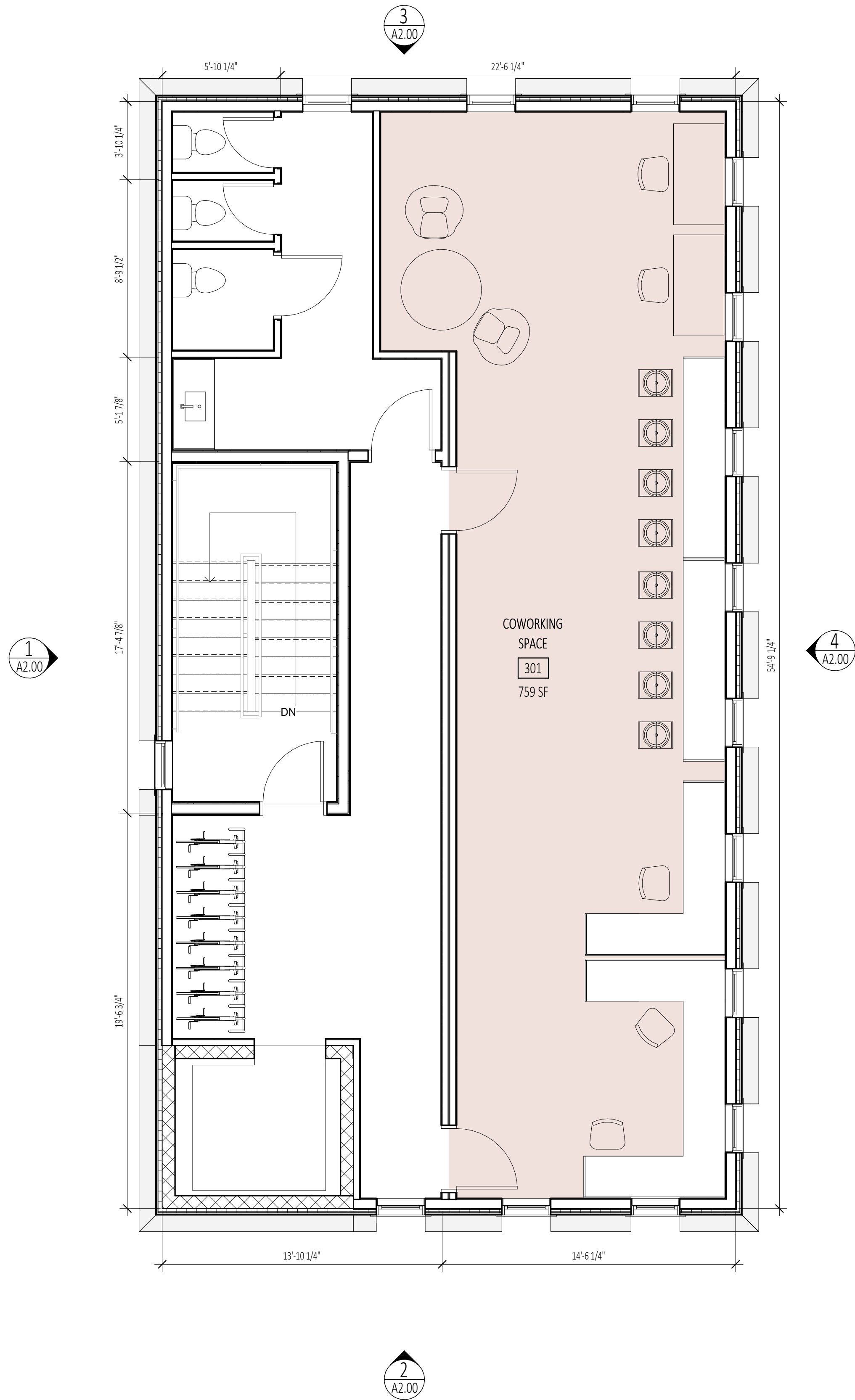
C507



NOT FOR CONSTRUCTION



1 2ND FLOOR
1/4" = 1'-0"



2 3RD FLOOR
1/4" = 1'-0"

Project:

1877 CONGRESS ST

PORTLAND, ME

Owner/Client:

GREENMARS

Stamp:

Consultant:

Issuance:

SCHEMATIC DESIGN

Revisions:

NOT FOR CONSTRUCTION

EXTERIOR ELEVATIONS

Scale: As indicated

04/02/2025

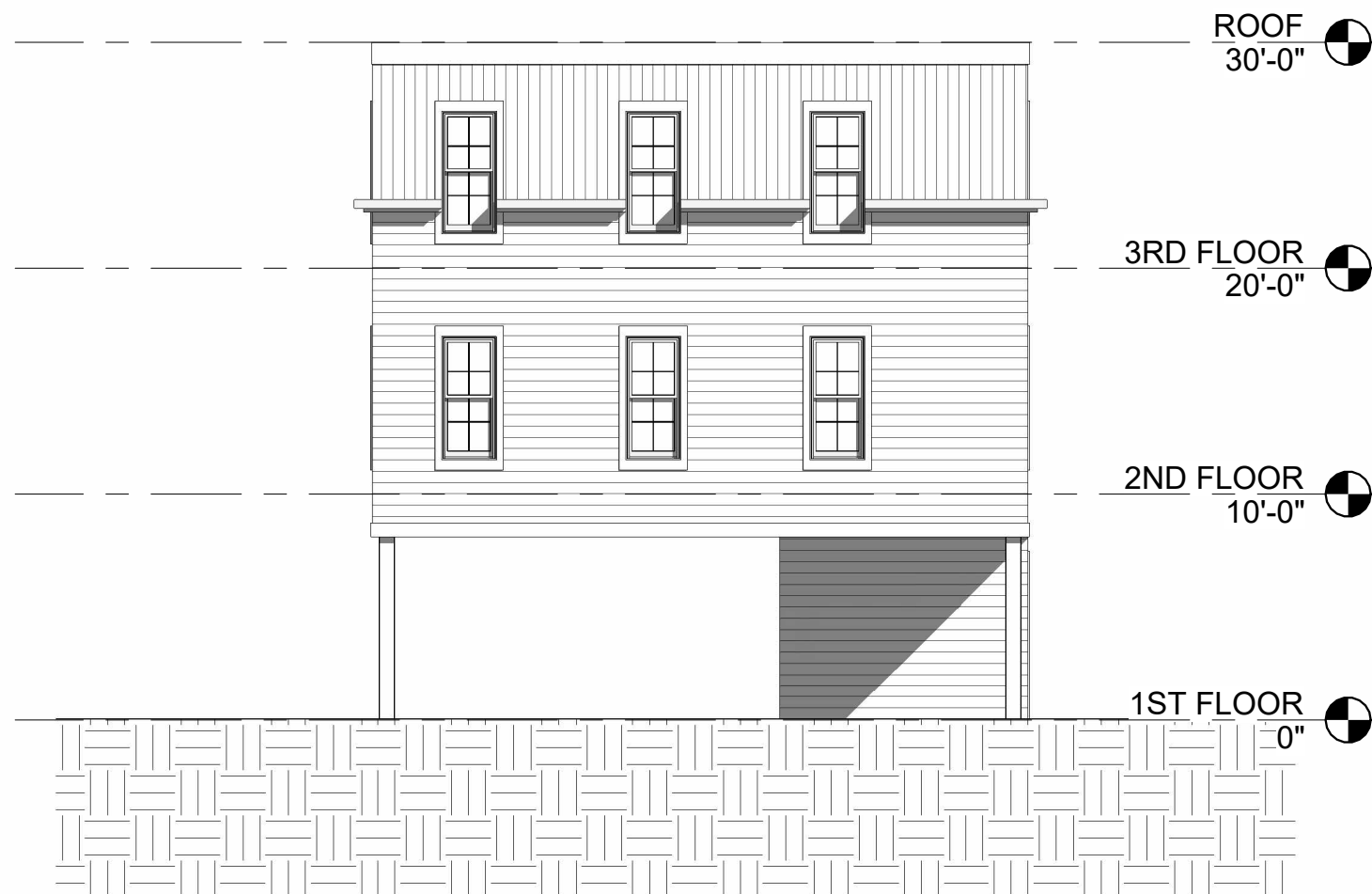
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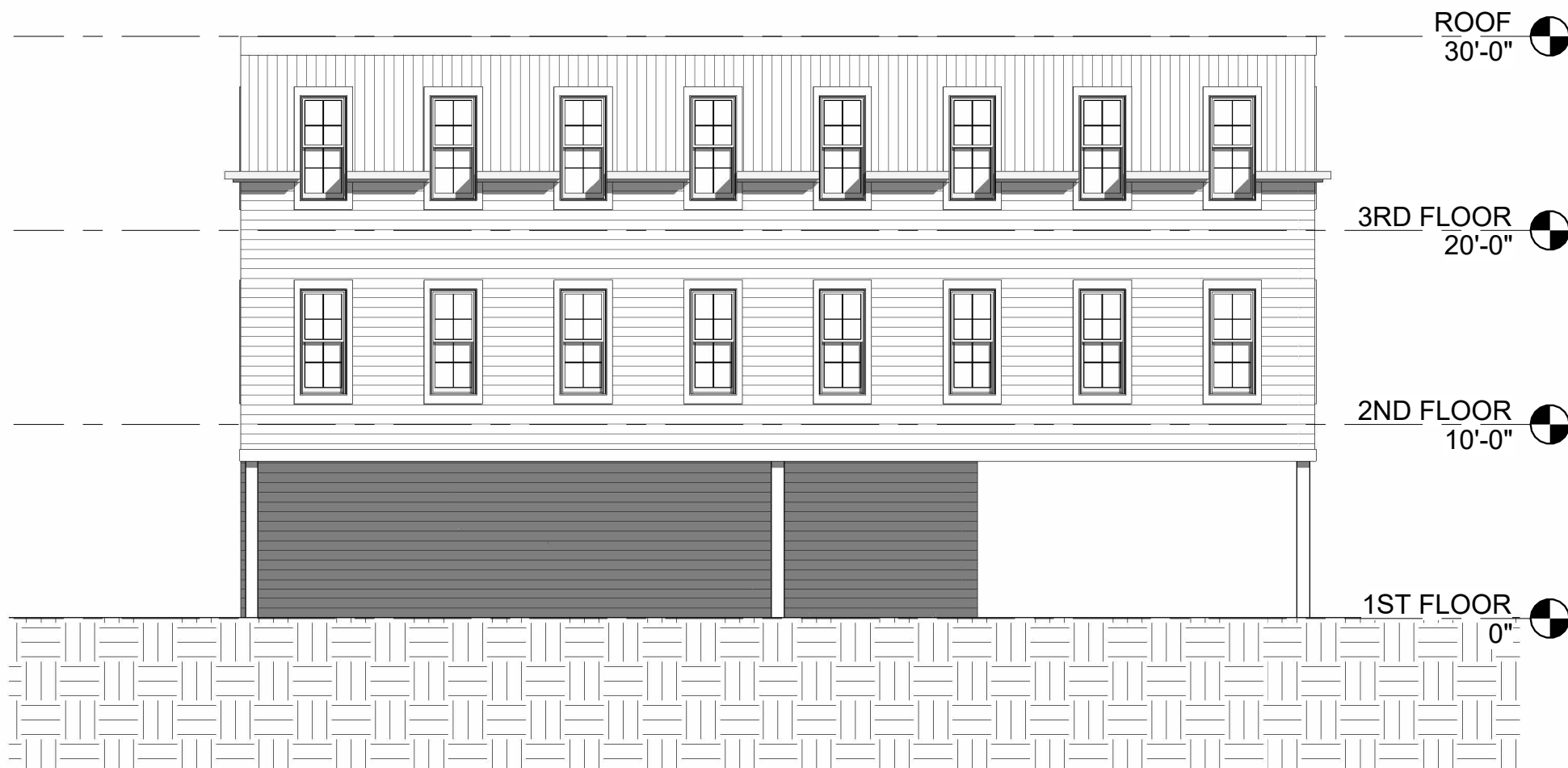
2 | FRONT ELEVATION
1/8" = 1'-0"



1 | LEFT SIDE ELEVATION
1/8" = 1'-0"



3 | REAR ELEVATION
1/8" = 1'-0"



4 | RIGHT SIDE ELEVATION
1/8" = 1'-0"

Project:
1877 CONGRESS ST

PORTLAND, ME

Owner/Client:
GREENMARS

Stamp:

Consultant:

NOT FOR CONSTRUCTION

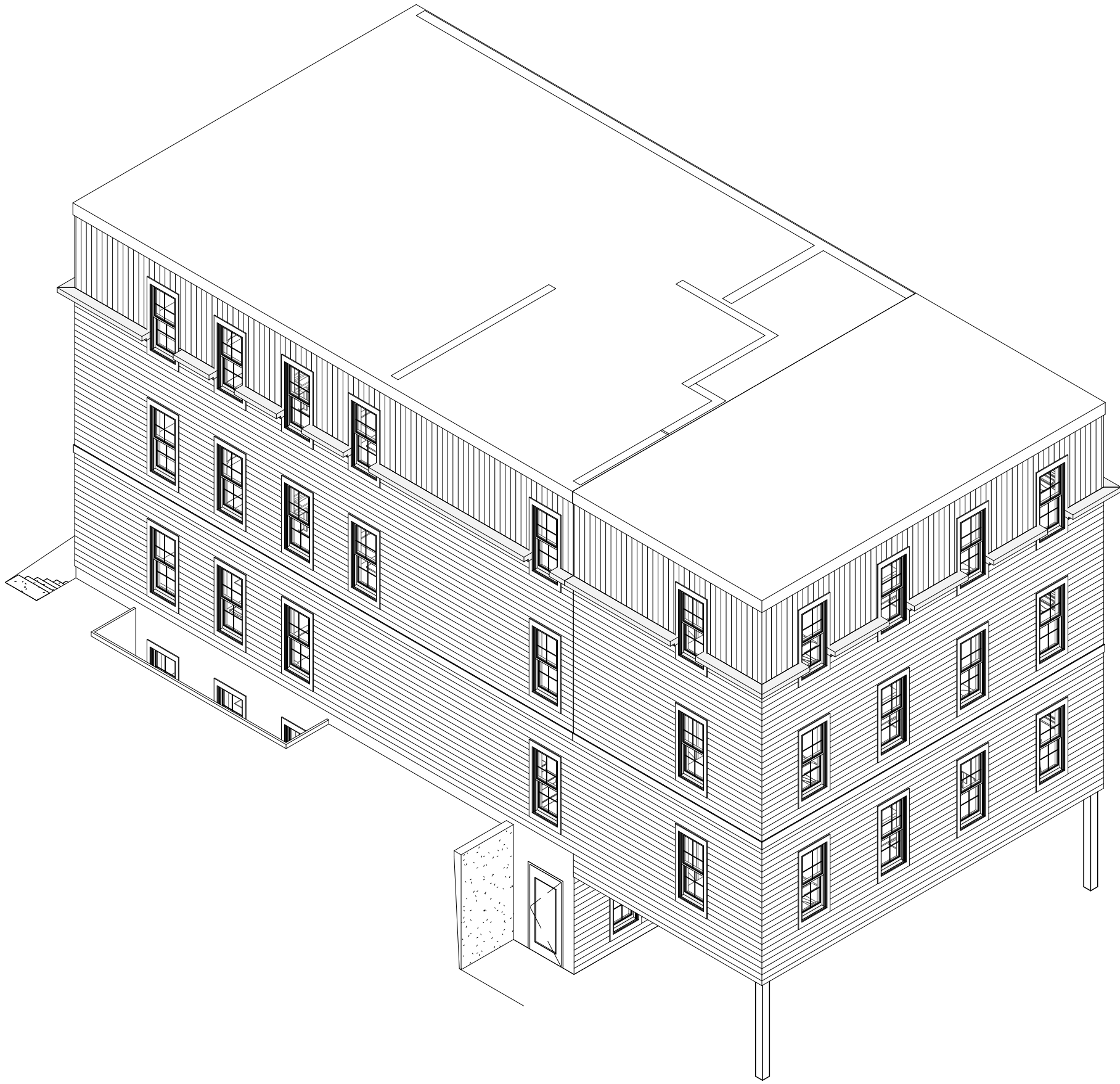
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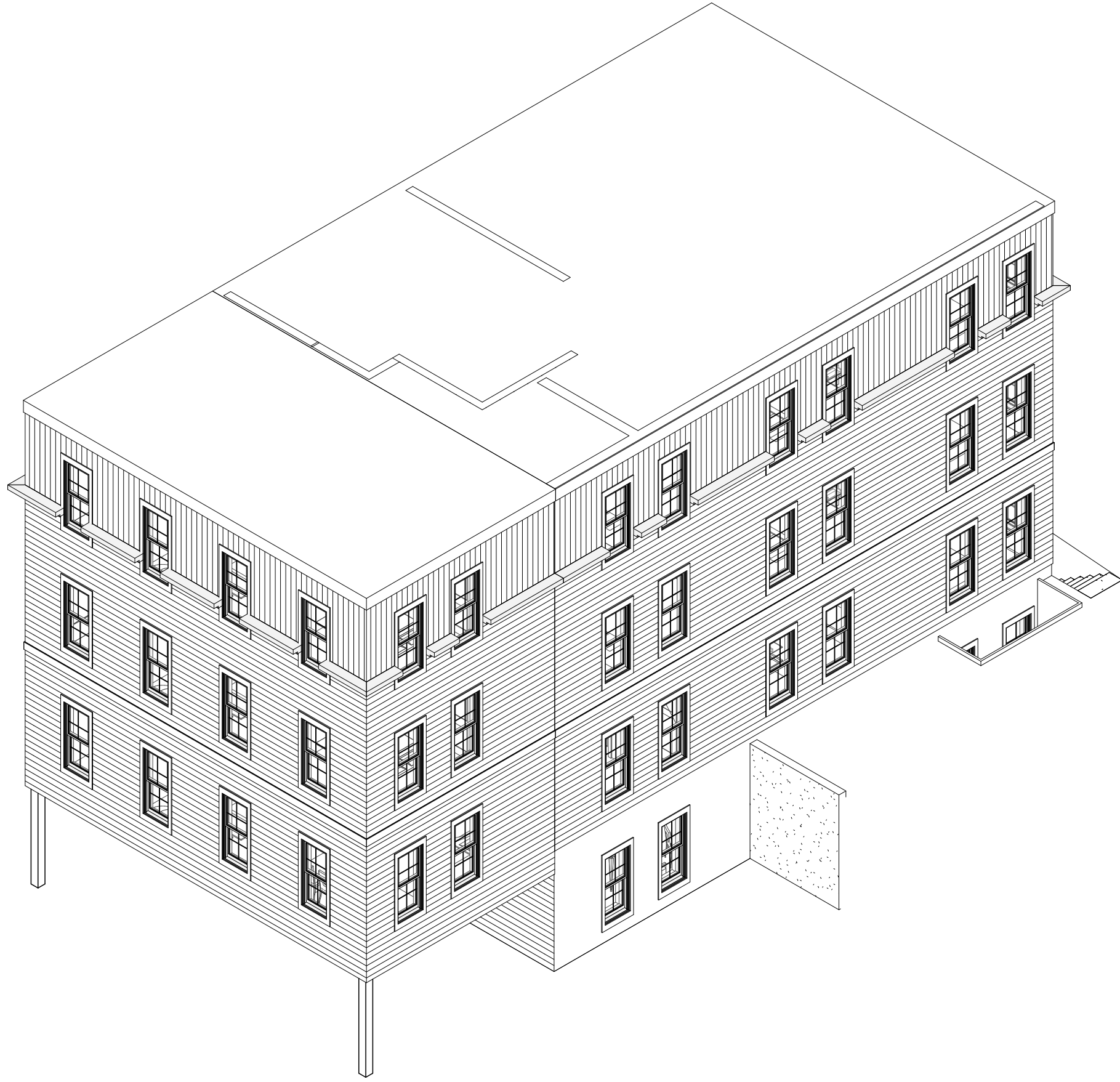
AXONOMETRIC VIEWS

Scale:
03/25/2025

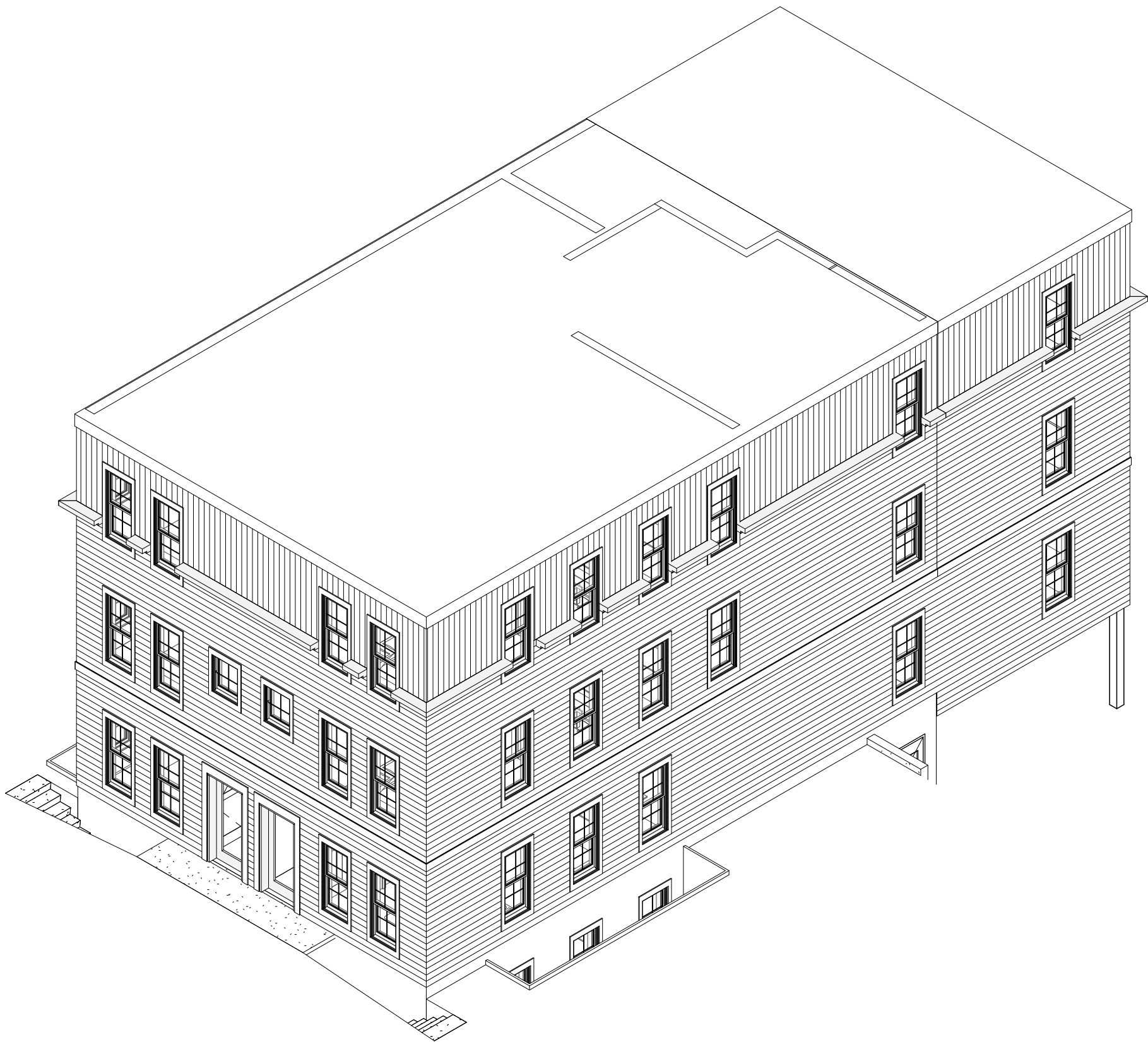
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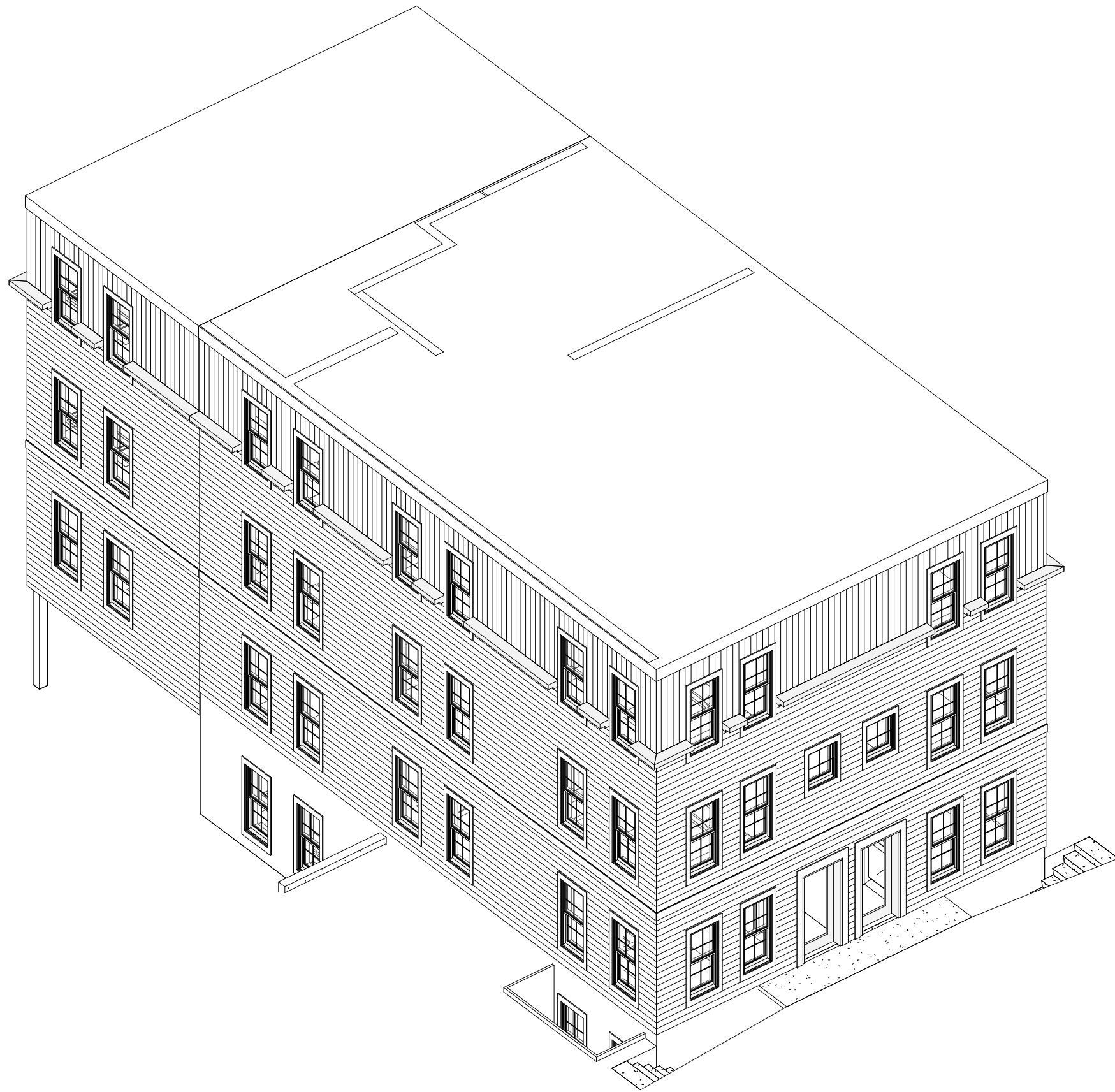
1 FRONT / LEFT AXON VIEW



2 FRONT / RIGHT AXON VIEW



3 REAR / LEFT AXON VIEW



4 REAR / RIGHT AXON VIEW

Project:
1877 CONGRESS ST

PORTLAND, ME

Owner/Client:
GREENMARS

Stamp:

Consultant:

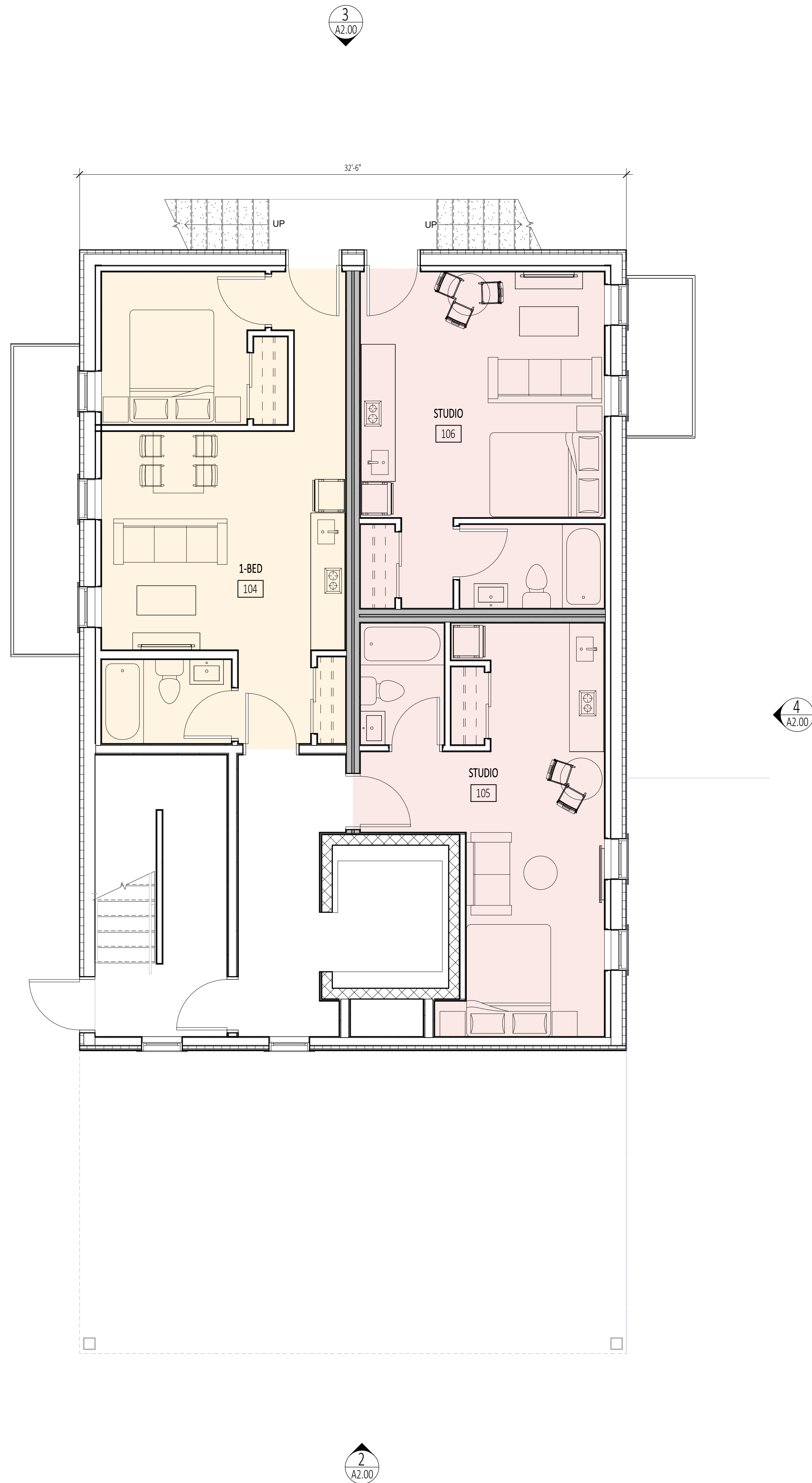
Issuance:
SCHEMATIC DESIGN

Revisions:

SEMI-BASEMENT PLAN

Scale: 1/4" = 1'-0"
04/02/2025

A1.00



Project:

1877 CONGRESS ST

PORTLAND, ME

Owner/Client:

GREENMARS

Stamp:

Consultant:

Issuance:

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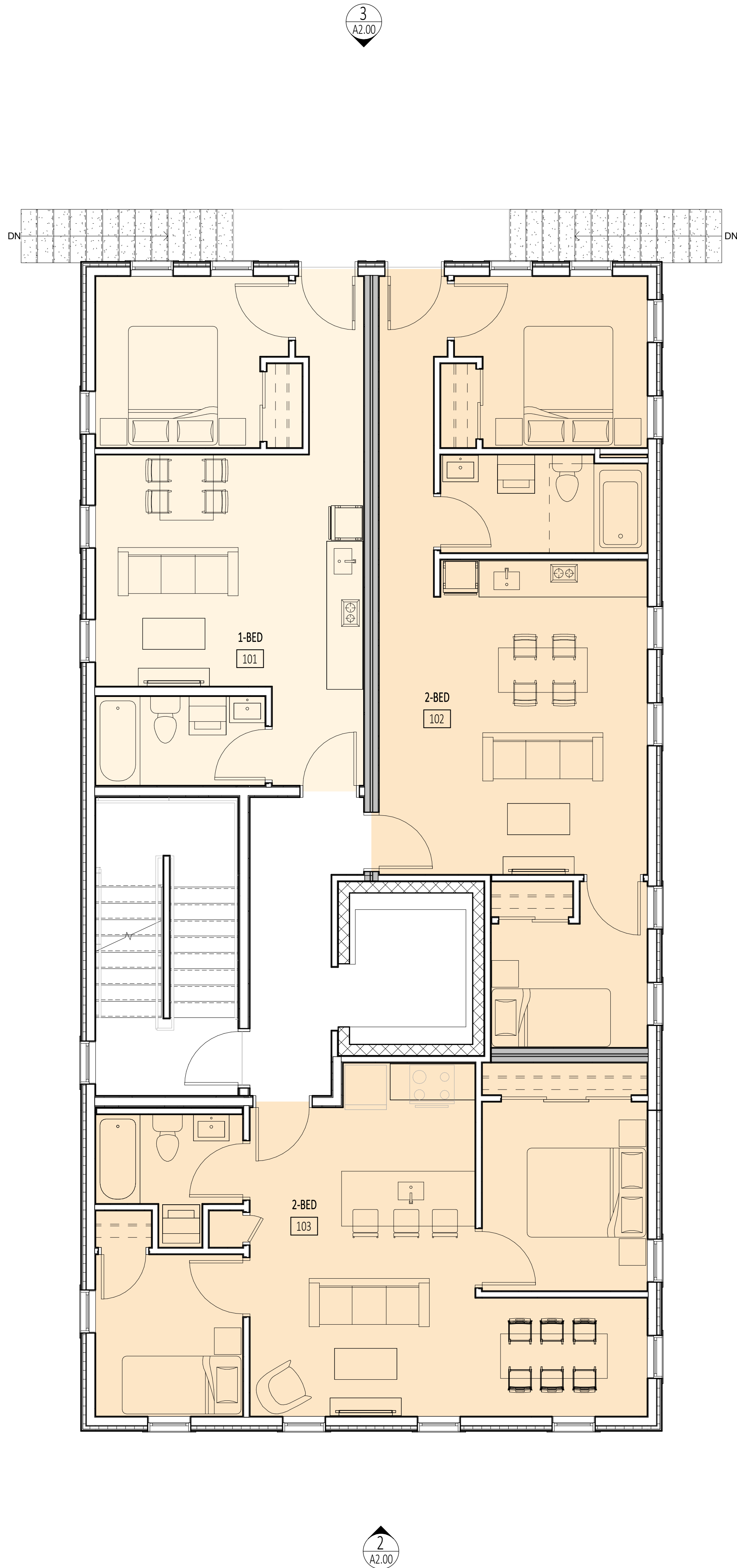
Revisions:

FIRST FLOOR PLAN

Scale: 1/4" = 1'-0"

04/02/2025

A1.01



Project:
1877 CONGRESS ST

PORTLAND, ME

Owner/Client:
GREENMARS

Stamp:

Consultant:

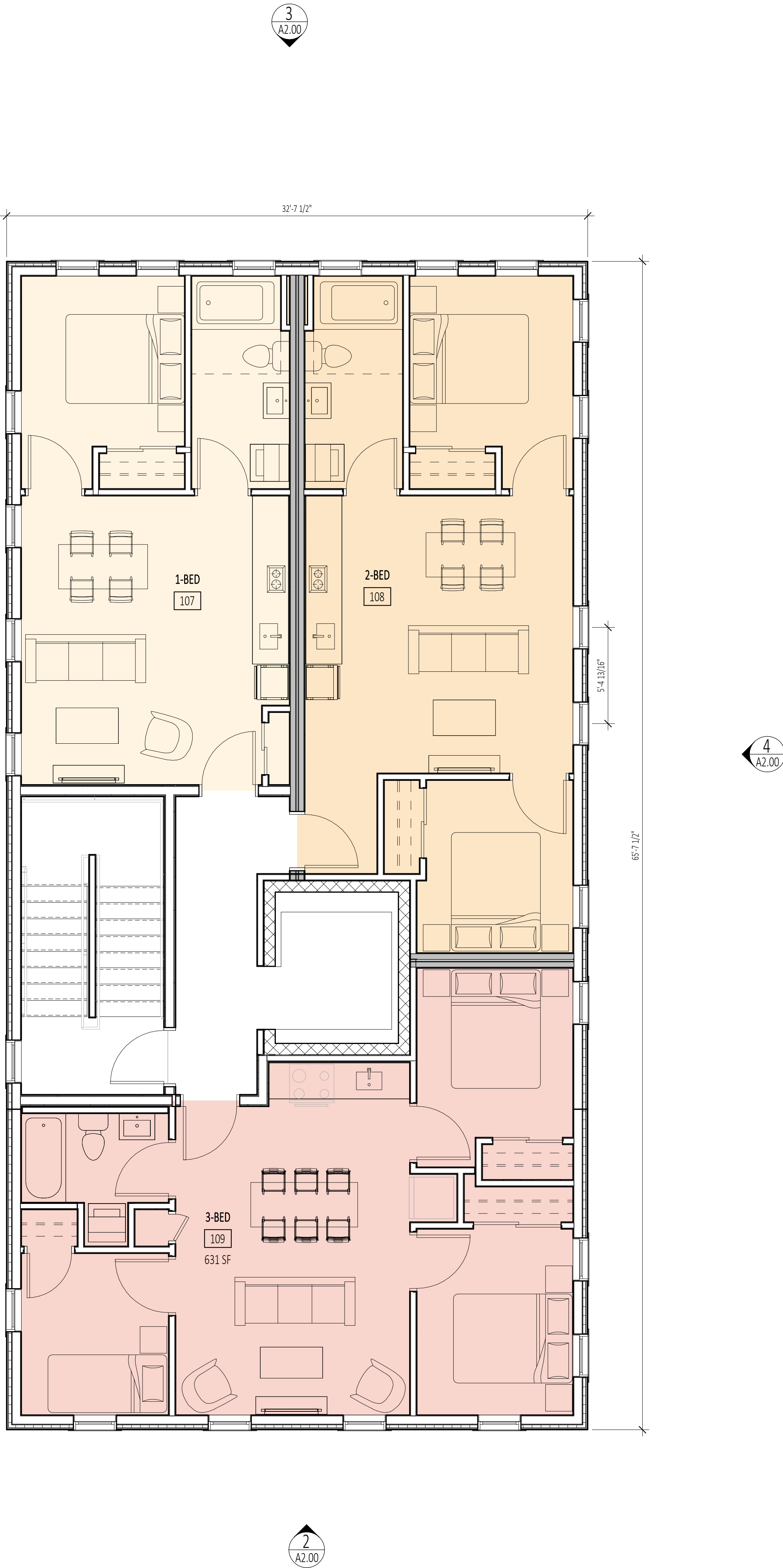
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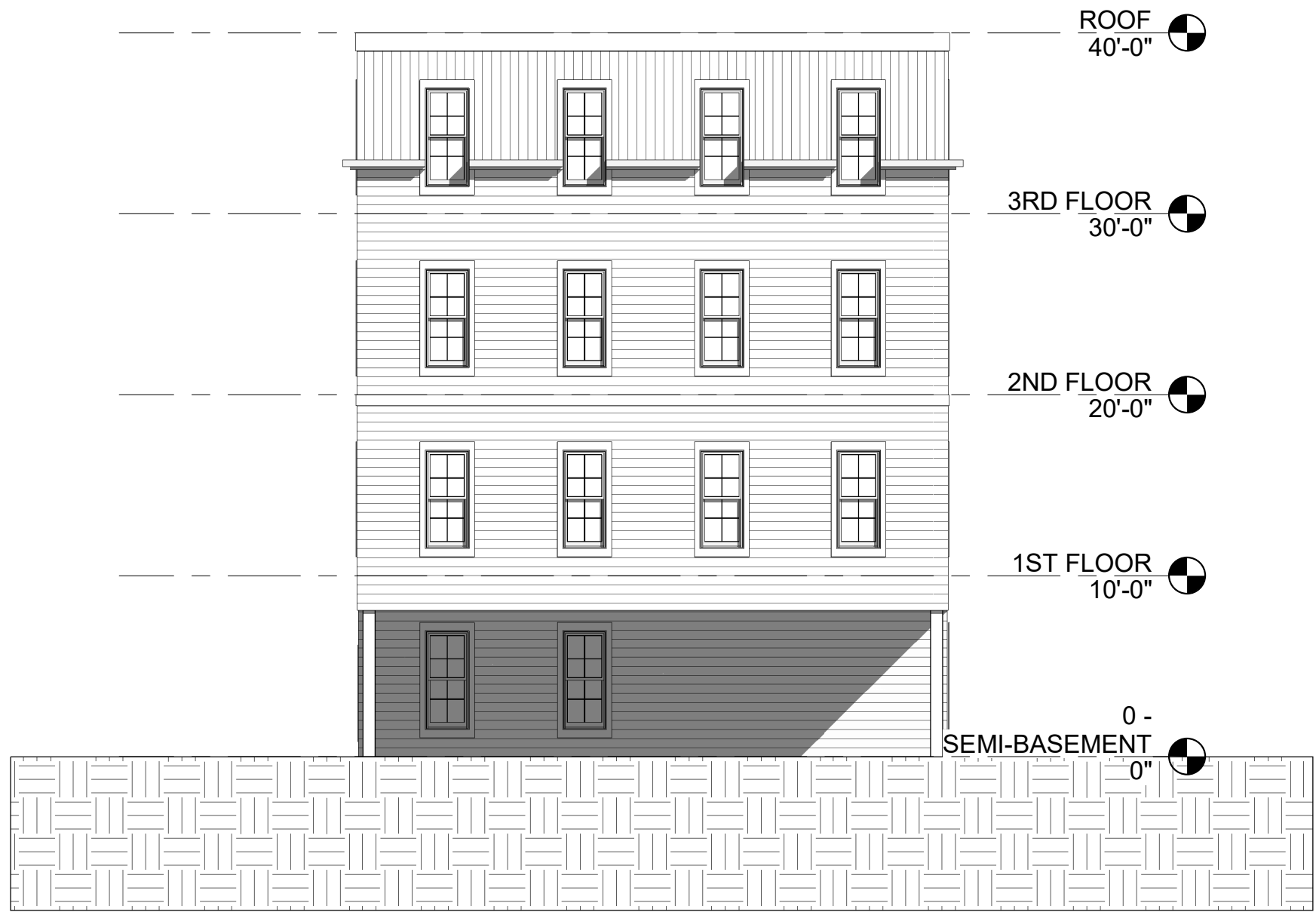
Revisions:

**SECOND & THIRD FLOOR
PLAN**

Scale: 1/4" = 1'-0"
04/02/2025

A1.02





2 FRONT ELEVATION

1/8" = 1'-0"



1 LEFT SIDE ELEVATION

1/8" = 1'-0"



3 REAR ELEVATION

1/8" = 1'-0"



4 RIGHT SIDE ELEVATION

1/8" = 1'-0"

Christian MilNeil <c.neal.milneil@gmail.com>

8:23 AM (7 minutes ago)



to planningboard@portlandmaine.gov, info@greenmars.com, PBPAC@googlegroups.com

Hi,

As an advocate for affordable, transit-accessible housing, I'd like to express my support for the proposed multifamily housing at 1877 Congress Street ("Stroudwater Commons"). Proposals like this one move us closer to creating high-quality, walkable neighborhoods in areas of the city that are currently dominated by excessive car traffic.

Public transit service typically needs at least 15 homes per acre to justify the kind of high-quality, frequent-running service that METRO and the City of Portland aspire to have. Currently, this area of outer Congress Street has roughly 1 single-family home per acre, and most of those homes are located in sprawling, 1980s-era cul-de-sac subdivisions that impose high costs on the city's services and infrastructure maintenance demands.

In addition to supporting the current proposal, the City of Portland should also begin to plan for a future when more of the surrounding parcels could support this kind of development. To do so well would require a walkable street grid of the sort you'd find in older neighborhoods.

To that end, I'd encourage the City of Portland to require that the proposed public access easements in the 1877 Congress site plan should extend all the way to the boundaries of the property, and explicitly allow for future neighborhood street connections to the surrounding parcels. As surrounding properties redevelop, those easements could allow for new parallel street connections to the Elks Lodge, Rivers Edge Drive, and the undeveloped Unum property. A new neighborhood street grid would considerably improve the new neighborhood's walkability, enhance property values, facilitate redevelopment with lower cumulative infrastructure costs, and relieve some traffic from outer Congress:

