

# CITY OF PORTLAND, MAINE

## PLANNING BOARD



Maggie Stanley, Chair  
Brandon Mazer, Vice Chair  
Justin Barker  
Marpheen Chann  
Sean Murphy  
David Silk  
Austin Smith

### AGENDA PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on **Tuesday, May 24, 2022, 4:30 p.m.** This meeting will take place remotely using Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board and as authorized under 1 M.R.S. 403-B because of the existence of an emergency or urgent issue that requires the committee to meet by remote methods. Allow your computer to install the free Zoom app to get the best meeting experience.

If you are not able to attend live, a recording will be available following the meeting. For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit \*9. You will be unmuted by the host when it is time for public comment.

For more information on how to access the meeting remotely and how to give public comment, please go to <http://www.portlandmaine.gov/remotEPUD> Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov).

Please note that the placement of each item on the agenda is subject to change. Please check the Agenda & Minutes Center prior to the meeting for the item start time.

#### ZOOM MEETING INSTRUCTIONS

You are invited to a Zoom webinar.

When: May 24, 2022 04:30 PM Eastern Time (US and Canada)

Topic: Planning Board Workshop and Public Hearing 5-24-2022

Please click the link below to join the webinar:

<https://portlandmaine-gov.zoom.us/j/87267663889>

Or One tap mobile :

US: +19292056099,,87267663889# or +13017158592,,87267663889#

Or Telephone:

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

US: +1 929 205 6099 or +1 301 715 8592 or +1 312 626 6799 or +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799

Webinar ID: 872 6766 3889

International numbers available: <https://portlandmaine-gov.zoom.us/j/kdPHi0XfYN>

#### WORKSHOP - 4:30 PM

- i. Major Site Plan; 180 Washington Avenue; David L. Harmon, Applicant. (estimated time 4:30 – 5:30 p.m.) The Planning Board will hold a remote workshop to consider the development of a four-unit, 4,288 square foot residential building at 180 Washington Avenue, along with associated site improvements. The subject property is 3,387 square feet in size and is zoned B-2b Community Business.

#### PUBLIC HEARING - 5:30 PM

1. **ROLL CALL AND DECLARATION OF QUORUM**
2. **COMMUNICATION AND REPORTS**

**3. REPORT OF ATTENDANCE AT THE MEETING HELD ON MAY 10, 2022**

Afternoon Workshop

Technical Manual Updates: Barker, Chann, Murphy, Silk, Smith, and Stanley present; Mazer absent.  
57 Douglass Street: Barker, Chann, Murphy, Silk, Smith, and Stanley present; Mazer absent.

**4. REPORTS OF DECISIONS AT THE MEETING HELD ON MAY 10, 2022**

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

**5. NEW BUSINESS**

- i. Conditional Use Permit; 11 Pomeroy Street; Chabad Lubavitch of Maine, Applicant. (estimated time 5:30 – 7:00 p.m.) The Planning Board will hold a remote public hearing to consider an after the fact conditional use permit application to facilitate the operation of a place of assembly use within a 900 square foot portion of an existing single-family home at 11 Pomeroy Street. The subject property is 73,281 square feet in size and is located in the R-3 Residential zone. A related minor site plan application, PL-000058-2018, has also been submitted and is under staff review.
- ii. Major Site Plan; 57 Douglass Street; Douglass Commons, LLC., Applicant. (estimated time 7:00 p.m.) The Planning Board will hold a remote public hearing to consider a proposal for a 120-unit affordable residential development under Planned Residential Unit Development (PRUD) standards with 112,900 square feet of floor area, along with associated improvements, at 57 (43-91) Douglass Street. The subject property is 3.34 acres in size and is zoned R-5a Residential.



**Memorandum**  
**Planning and Urban Development Department**



**To:** Chair Stanley & Members of the Planning Board  
**From:** Charles Tetelman  
**Date:** May 20, 2022  
**Re:** 180 Washington Avenue  
**Project ID:** PL-001952-2022  
**Meeting Date:** May 24, 2022

**I. INTRODUCTION**

David Harmon Architects has submitted a Major Site Plan application to facilitate the development of a three-story residential building including four single-bedroom apartment units at 180 Washington Avenue. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6.

The Planning and Urban Development Department mailed 132 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the May 13, 2022 and May 14, 2022 editions of the *Portland Press Herald*.



Figure 1: East Elevation facing Washington Avenue

**Applicant:** David Harmon, David Harmon Architects (Property Owner)  
**Applicant** David Latham, Trillium Engineering Group  
**Representatives:**

**II. REQUIRED REVIEWS**

| <i>Review</i> | <i>Applicable Standards</i>                            |
|---------------|--------------------------------------------------------|
| Site Plan     | Section 14.6                                           |
| Design Review | B-2b Design Standards<br>Multi-Family Design Standards |

**III. PROJECT DATA**

|                        |                         |
|------------------------|-------------------------|
| Existing Zoning        | B-2b Community Business |
| Property Size          | 3,387 feet              |
| Area Per Dwelling Unit | 846.75 feet             |
| Existing Use           | Vacant                  |
| Proposed Use           | Residential             |

|                         | <i>Existing</i> | <i>Proposed</i> |
|-------------------------|-----------------|-----------------|
| Building Footprint      | o               | 2,144 feet      |
| Impervious Surface Area | n/a             | 55.24%          |
| Parking Spaces          | o               | 4               |
| Bicycle Parking Spaces  | o               | o               |
| EV Charging Stations    | o               | o               |

#### IV. EXISTING CONDITIONS AND SURROUNDING AREA

180 Washington Avenue currently contains a vacant, dilapidated structure. The lot has been unused for at least five years with visible overgrowth surrounding the exterior.



Figure 2: Existing Condition of 180 Washington Avenue

The location of the proposed project is within the B-2b Community Business zone in the East Bayside neighborhood. East Bayside contains a mix of zones including B-5 Urban Commercial Business, B-7 Urban Commercial Business, R-6 Residential, and IL-b Low-Impact Industrial. 180 Washington Avenue is near the East End neighborhood, which is primarily R-6 Residential with a few sections of B-1 Neighborhood Business along Congress Street. The site is within walking distance to the offerings in both East Bayside and the East End. The surrounding B-2b zone runs along the majority of Washington Avenue which includes a variety of uses including businesses, restaurants, and breweries. Within the last five years, there has been substantial development in East Bayside which now includes breweries, coffee shops, and other businesses and services. 180 Washington Avenue is nearby a handful of parks and open spaces as well as the Eastern Promenade.

The site is directly along METRO Routes B, 9a, 9b, and 7 and within walking distance to Route 1.

#### V. PROPOSED DEVELOPMENT

The proposed Major Site Plan application will demolish the existing structure and facilitate the development of a new three-story structure (2,144 square feet building footprint) containing four apartment-style residential units (6,432 square feet total floor area). The proposed development will have a street wall

height of approximately 33 feet along Washington Avenue. Each unit will be allocated one parking spot built into the first floor of the structure (four in total). The applicant is proposing a new curb cut along Washington Avenue and a garage door that leads to the first floor parking.

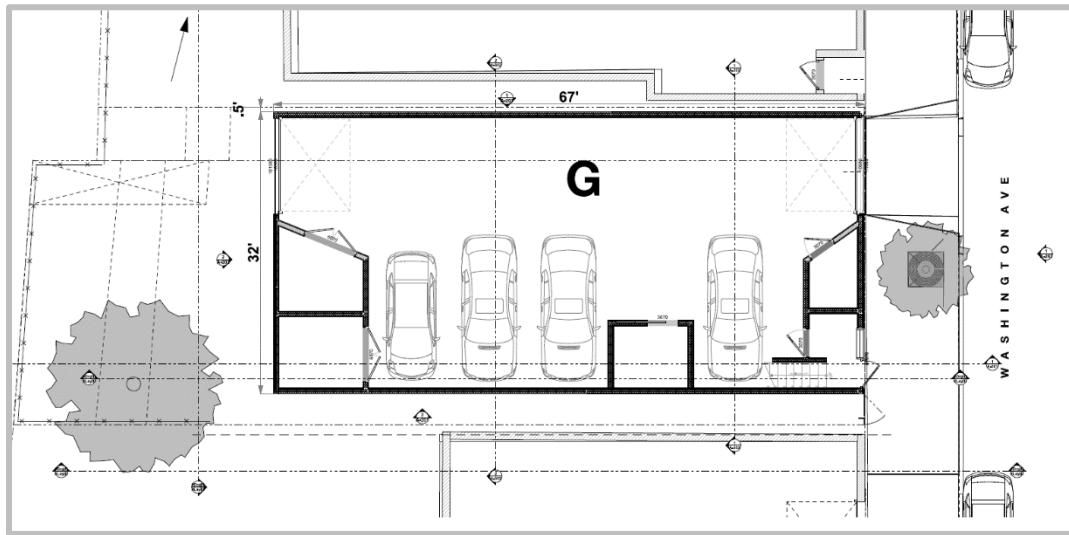


Figure 3: First Floor Plan showing Parking Layout

## VI. RIGHT, TITLE, & INTEREST

The applicant has submitted a deed dated August 3, 2015 that demonstrates that the applicant, David Harmon, has sufficient right, title, and interest to the parcel located at 180 Washington Avenue (Attachment C).

## VII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a letter dated December 30, 2021 from Partners Bank that demonstrates the applicant has financial capacity to undergo the proposed development (Attachment D).

The applicant representatives have provided a letter dated May 14, 2021 that demonstrates the experience and technical capacity of the Civil Engineer and Architect working on the proposal (Attachment I).

## VIII. ZONING ANALYSIS

The proposed project is located in the B-2b Community Business zone and the proposed use (residential) is an allowed use within the zone. The B-2b zone allows a variety of uses including residential housing, commercial retail, and restaurants. The table bellows shows the relevant dimensional standards required as described in *Table 7-E Mixed-Use Zone Dimensional Standards*:

|                           | Required    | Proposed       |
|---------------------------|-------------|----------------|
| Minimum Street Frontage   | 20 ft.      | 36.15 ft.      |
| Area Per Dwelling Unit    | 435 sq. ft. | 846.75 sq. ft. |
| Rear Yard                 | 10 ft.      | 20.32 ft.      |
| Height                    | 45 ft.      | 39.67 ft.      |
| Off Street Parking Spaces | 4           | 4              |



Figure 4: Surrounding Zoning

Additionally, the applicant had requested a waiver to reduce the Dimensional Standard for Front Setbacks in the B-2b zone from 10 feet to 0 feet. The waiver is not needed; the setback requirement is 10 feet maximum (Attachment J).

## IX. SITE PLAN STANDARDS (Section 14.6)

*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 14.6. Staff comments are below:*

### 1. Transportation Standards (Section 14.6.1)

#### A. Impact on surrounding street systems

Given the increment of four additional dwelling units, the proposed project is not expected to have a significant traffic or safety impact to Washington Avenue.

#### B. Access and circulation

The building can be accessed through the entryway along Washington Avenue as well as the garage adjacent to the door. There is also an exterior exit to the back of the site through the stairway.

#### C. Public transit access

The site is directly along METRO Routes B, 9a, 9b, and 7 and within walking distance to Route 1. The project is below 20 dwelling units and is not required to provide a transit-shelter adjacent to or within the public right-of-way.

#### D. Parking

The applicant is providing four parking spaces on site on the first floor. The applicant will need to depict the parking aisle width on the plan. Planning staff, including the Consulting Traffic Engineer, have requested detailed analysis documenting vehicle movement adequacy, including Autoturn movements. Staff are not supportive of allowing vehicles to back into Washington Avenue from the site.

The dimensions for the garage need to be provided. The Department of Public Works has also requested that the driveway details and curbing details meet Technical Manual Standards.

E. Transportation demand management (TDM)

A TDM plan is not required.

**2. Environmental Quality Standards (Section 14.6.2)**

A. Preservation of significant natural features

As an urban infill site within a densely developed on-peninsula context, there are no significant natural features on site.

B. Landscape preservation

There is one existing tree on site that will remain.

C. Site landscaping and buffers

The applicant has not yet provided a landscaping plan, but will maintain the green space along the side of the building and in the rear portion of the lot. Staff recommend incorporating some open green space into the site design for Units 2 & 4 and to consider utilizing a rooftop amenity deck, patio, or a designated landscape element.

D. Water quality/storm water management/erosion control

The Department of Public Works have asked the applicant to confirm if the existing sewer lateral will be utilized or if a new sewer lateral will be installed. The sewer that runs along the rear of the property is a private sewer line.

All projects are required to comply with Maine Department of Environmental Protection Chapter 500 and City of Portland Technical Manual Section 5 Standards for stormwater management as applicable. The proposed project will result in less than 1,000 square feet of new impervious surface, and will not be required to provide stormwater treatment or storage in accordance with the General and Flooding Standards. The applicant is providing for erosion and sedimentation controls in accordance with the Basic Standards.

**3. Public Infrastructure and Community Safety Standards (Section 14.6.3)**

A. Consistency with City Master Plans

The proposed project is in keeping with the stated goals of *Portland Plan 2030* regarding housing and the policy of creating complete neighborhoods. The project takes advantage of a mixed-used, dynamic neighborhood location near transit and walkable services.

*Livable City: Housing* – local goals met by this project:

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences, and financial capabilities of all Portland residents.

- Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.

- Pursue policies to enable people who work in Portland to have the option to live in Portland.

*A Healthy City: Environment* – local goals met by this project:

-Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation.

B. Public safety and fire prevention

The applicant has incorporated a variety of Crime Prevention through Environmental Design (CPTED) standards into the site design. There is limited public space beyond the street frontage and public right of ways. The garage provides separation from the parking area and the public right of way.

As of this writing, Life Safety has not yet submitted feedback during the Workshop review cycle.

C. Availability and capacity of public utilities

The applicant has reached out to all utility providers and requested ability to serve letters to be provided to the City once received (Attachment A).

**4. Site Design Standards (Section 14.6.4)**

A. Massing, ventilation, and wind impact

The architects provided building elevations that demonstrated the scale and texture of the building along Washington Avenue. Although the adjacent buildings are single floor structures, the proposed building reflects the scale of other buildings along Washington Avenue.

At this time, City Staff are requesting clarity on the placement of HVAC units on site.

B. Shadows

This project is not immediately adjacent to any public parks or open spaces. The height of the structure is comparable to other buildings along Washington Avenue.

C. Snow and ice loading

The applicant will need to provide additional information as to how the building design will not distribute snow and ice onto adjacent properties.

D. View corridors

The project is not located in any designated view corridors.

E. Historic resources

The project is not located in or within 100 feet of any designated historic districts.

F. Exterior lighting

The applicant has provided a photometric plan which meets the requirements of Section 12 of the Technical Manual (Attachment E).

G. Noise and vibration

The standard is not applicable to this proposal.

H. Signage and wayfinding

The standard is not applicable to this proposal.

I. Zoning-related design standards

This project is subject to a Design Review according to the City of Portland Design Manual. Planning Staff reviewed the project under the B-2 Design Standards as well as the Multi-Family Design Standards. The design memo is attached (Attachment 1). The applicant should explore articulation of the primary building entrance proposed along Washington Avenue with a canopy or recessed entry with variation in façade material. Additionally, the applicant will need to verify the VT of .7 or greater for the windows facing Washington Avenue. The applicant should also consider integrating additional open spaces for units 2 & 4 through either balconies at the front façade, rooftop amenity deck, or designated landscape element incorporated into the site plan.

## **X. NEIGHBORHOOD MEETING & PUBLIC COMMENT**

On May 19, 2022, the applicants held a neighborhood meeting with one attendee (Attachment L).

No public comments have been submitted to the Planning & Urban Development Department at this time.

## **XI. NEXT STEPS**

1. Planning Board to provide preliminary comments and questions
2. Continue to evaluate proposal against Site Plan Review standards
3. Applicant to address preliminary Staff review comments including:
  - a. Provide Ability to Serve letters
4. Prepare Final Plan Submission
5. Schedule and Hold future Planning Board meeting

## **XII. ATTACHMENTS**

### **MEMO ATTACHMENTS**

1. City Staff Design Review Memo
2. City Staff Preliminary Round Comments
3. City Staff Second Round Comments

### **APPLICANT SUBMITTAL**

- A. Ability to Serve Letters
- B. Agent Authorization Letter
- C. Deed.
- D. Financial Capacity
- E. Lighting Specs
- F. Major Site Plan Checklist
- G. Project Narrative
- H. Stormwater Narrative
- I. Technical Capacity
- J. Waiver Table
- K. Zoning Assessment Table
- L. Neighborhood Meeting Documents

### **PLANS**

- Plan 1. Survey
- Plan 2. Garage Floor Plan
- Plan 3. 2<sup>nd</sup> Floor Plan
- Plan 4. 3<sup>rd</sup> Floor Plan
- Plan 5. Roof Plan

- Plan 6. South Elevation
- Plan 7. East West Elevation
- Plan 8. East West Elevation II
- Plan 9. North Elevation
- Plan 10. Cover Sheet
- Plan 11. Existing Site Plan
- Plan 12. Proposed Grading and Drainage Plan
- Plan 13. Site Details
- Plan 14. Erosion Control Details
- Plan 15. Basement Zoning



Subject: 180 Washington Ave.  
Zone: B2b  
Date of Review: Wednesday, May 18, 2022  
Reviewer(s): Sean King (Urban Designer), Charles Tetelman (Planner), Kevin Kraft (Deputy Director)  
Project ID: PL-001952-2022

## I. INTRODUCTION

The proposed project includes demolition of existing building and development of four (4) residential units located at 180 Washington Ave.

## II. DESIGN REVIEW COMMENTS: red text denotes standards that are not met

**STANDARDS.** The project was reviewed against the **B-1 and B-1B NEIGHBORHOOD BUSINESS AND B-2 AND B-2B COMMERCIAL BUSINESS ZONE** Standards & Appendix 2 of the City of Portland Design Manual, section (d.) In addition to the **MULTIPLE-FAMILY** Standards of the City of Portland Design Manual, section (i).

### **B-2b STANDARDS**

- a. *Urban Street Wall:* Proposed building is located to preserve the urban street wall, along with the introduction of recessed architectural elements.
- b. *Mixed Uses:* Not applicable.
- c. *Building Entrances:* Building entrance is oriented towards and accessible from the Washington Ave. existing sidewalk. **The primary building entrance is proposed at Washington Avenue with a singular door and pane window, the applicant should explore articulation of the primary entry with a canopy or by a recessed entry with variation in façade material to identify shared building entrance for (4) residential units.**
- d. *Windows:* Ample windows provided along street frontage of the proposed development. **Applicant shall provide window and door schedule to verify VT of .7 or greater along Washington Ave. As garage entrance is an integral component of the building design and has street frontage at the ground level of Washington Ave, applicant shall propose a high-quality product with incorporated glazing to allow for additional natural light into the ground floor along the east elevation.**
- e. *Façade Character:* The proposed building design orients the primary entrance towards Washington Ave. to create an active presence along the sidewalk.

- f. *Building Design*: Not applicable as proposed multiple-family development is not proposed for commercial use.
- g. *Building Materials*: **Applicant to provide proposed façade material, trim detailing, window and door schedule to assist with building design integration within the neighborhood.**
- h. *Building Scale*: Not applicable in B-2b zone.
- i. *Landscaping and buffers*: The proposed building design incorporates parking within the ground floor and is screened from abutting properties.

### ***B-2b STANDARDS (Appendix 2 of the Design Manual)***

#### **1. Building Location and Form**

*Buildings shall be located near the street so as to create an urban street wall.* Proposed multiple-family development maintains urban street wall pattern which line the street in a consistent manner.

*Building Form, including height, bulk, and massing, contribute to the development of a street wall.* Proposed multiple-family development achieves building form to create street wall.

*In the B-2b zone, buildings adjacent to streets should approach 1:2 height to street width, with a minimum of 1:3.* Proposed multiple-family development includes an approximate building height to closely related to street right-of-way.

#### **2. Building Function**

*An urban street and business district requires a substantial intensity and variety of uses.* Proposed multiple-family development includes ground floor residential use and car garage door situated towards the street.

#### **3. Orientation of Buildings and their Entrances to the Street**

*Major building entries shall be designed and located to provide the primary building access oriented to the public street and sidewalk.* **Refer to B-2b standard c. Building Entrances above.**

#### **4. Windows**

*Windows shall be located in all building facades visible from the public way, especially on building facades along the major public street.* **Refer to B-2b standard d. Windows above.**

#### **5. Building Character, Detail, Scale, and Graphic Qualities**

*Building design will include various architectural and graphic amenities to provide a strong presence along a street and relate a building to its community.* **Refer to B-2b standard g. Building Material above.**

6. Signage and building entrances

*Building entrances and building signage in the B-2b zone will be designed and constructed at the pedestrian scale.* The building entrance along Washington Ave. is designed at a pedestrian scale. **Refer to B-2b standard c. Building Entrances above .**

7. Development Relationship to Street

*Building facades and site amenities shall form a cohesive wall of enclosure along a street.* Building façade create a cohesive wall of enclosure along Washington Ave.

8. Parking Lots

*Parking Lots shall be screened from view of the public way.* Not applicable

*Parking lots shall be screened from neighboring properties.* Screening integrated into ground floor building design.

*Crosswalks shall be provided within parking lots and across entrance driveways, directing pedestrians to building entrances.* Not applicable

*Street trees shall be planted along property street frontage 25ft. on center.* Not applicable

9. Transit Connections – Met

*Development proposed along established transit corridors must design uninterrupted access from the proposed development to the transit stop.* Not applicable

**MULTIPLE-FAMILY STANDARDS.** Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure, shall be designed to complement and enhance the nearest residential neighborhood.* Proposed multiple-family development is composed of a singular façade material with a fenestration pattern to clearly identify the division of floors. A flat roof with parapet extension that aids to screen elevator overrun is proposed as an appropriate roof form consistent with other multi-family within the surrounding neighborhood.
2. *The proposed development shall respect the existing relationship of buildings to public streets.* New development is integrated into the existing city fabric. The building is proposed at the street line along Washington Avenue to reinforce adjacent buildings proximity to the street.
3. *Open space on the site for all multiple-family development shall be integrated into the development site.* Proposed multiple-family development includes private open space with balconies for units 1 & 3 integrated within the building design at the rear façade. **Applicant shall integrate additional open space easily accessible for units 2 & 4 through either balconies at the front façade to not encroach into Washington Ave., rooftop amenity deck or**

designated landscape element such as green screen or other landscape feature incorporated into the building design.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principle living areas and shall also provide sufficient storage areas. Applicant shall provide additional windows with a clear pattern of fenestration at the proposed north and south elevation to provide sunlight and air / ventilation into the second and third floors. Applicant to provide window and door schedule along with window swing direction for opening.*
5. *The scale and surface area of parking and driveways and paved areas are arranged and landscape to properly screen vehicles from adjacent properties and streets. Parking lot located at the ground floor with garage door opening for vehicle access and is screened entirely by building. As garage entrance is an integral component of the building design and has street frontage at the ground level of Washington Ave, applicant shall propose a high-quality product with incorporated glazing to allow for additional natural light into the ground floor along the east elevation.*
6. *Multiple-family dwellings shall not be converted to lodging houses unless all units in building have been vacant for at least one (1) year. Not applicable*

## **GENERAL**

- Please provide updated plans that include dimensions and measurements.
- Please identify the locations for snow storage and garbage + recycling on site (note that the garbage and recycling need to be screened from ROW).
- Submit Ability to Serve letters or proof of Request for Service (or related) documents.

## **TRANSPORTATION**

- The applicant shall provide dimensions for the parking spaces, aisle width, and driveway. It appears waivers from the City's Technical Standards will be required.
- Vehicle turning template graphics shall be provided that documents vehicles can maneuver on-site to enter and exit parking spaces.
- Will the applicant be providing electric vehicle (EV) infrastructure on site?

## **WATER QUALITY, STORMWATER, & INFRASTRUCTURE**

- Concern from DPW will be to ensure that the driveway meets the standards and the sidewalk in front of the building is improved (also confirm curb cut dimensions).
- Confirm if applicant is proposing to use the existing sewer lateral or installing a new one.
- City is also trying to confirm that the City holds an easement for the sewer line that runs at the rear of the property. If the City does not have the proper easement already, we will most likely need a condition of approval stating that the appropriate easement shall be granted to the City.

## **PUBLIC SAFETY**

- Planning staff did not receive feedback from life safety. Will be needed before approval (not on applicant; just noting).

## **LANDSCAPING & ENVIRONMENTAL QUALITY**

- Please submit a landscaping plan.

## **DESIGN REVIEW**

- Project reviewed against B-2b Design Standards (City of Portland Design Manual).
- Major Primary Entries not at street level – singular building entry. Door in sliding gate not adequate.
- Windows along frontage, street side – side windows providing air + light. Consistent fenestration pattern needed.
- Please provide materiality for all aspects of the proposed project..
- Please provide a photometric plan that also includes lighting for design.
- Parking is not screened from street level.

## TRANSPORTATION

- The applicant should depict the parking aisle width on the plan. Looking at the full building width dimension, 32 feet, it would appear the parking aisle width is less than 14 feet wide. This is about 10 feet less than City standards and request detailed analysis documenting vehicle movement adequacy. I would suggest an engineering plan (not architectural) be prepared and an auto-turn analysis be performed. The vehicle type used in the analysis shall be defined. City Staff are looking to avoid vehicles backing out into Washington Avenue.
- Please provided the dimensions to the garage entrance, driveway, and curb cuts.

## WATER QUALITY, STORMWATER, & INFRASTRUCTURE

- City Staff would like the applicant to confirm if they are proposing to use the existing sewer lateral or installing a new one.
- The Applicant should review the City of Portland technical manual for standard details. Details for proposed roadway paving, curbing and tipdowns, tree grates, brick sidewalk, and driveway aprons should be provided matching all City of Portland standards for materials and dimensions.
- The Applicant is proposing a water service retirement. I believe that PWD will require that work be done at the main associated with this retirement, and the area should be included in the pavement repair. Similarly pavement repair will continue to the east of the proposed service taps to allow for the work to be completed. Additional pavement repair will also be required for curbing replacement for sidewalk installation. The final extent of pavement repair should be expanded on the plan.
- Additional detail should be provided on the grading/design required for the driveway entrance, sidewalk, curb cut, and garage.
- All projects are required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management as applicable. The project will result in less than 1,000 square feet of new impervious surface, and will not be required to provide for stormwater treatment or storage in accordance with the General and Flooding Standards. The project is providing for erosion and sedimentation controls in accordance with the Basic Standards.
- The Applicant should consider the impact of the proposed grading along the north and south property lines. As proposed, it will be challenging to grade the site as shown without impacting the neighbor's property or the existing wood fence. Similarly, excavation and grading along the building walls and the impact that will have on the adjacent properties should also be considered. The need for temporary grading easements, and the potential for impacts on the adjacent property should be accounted for.
- The location of the tree shown on the plan view is different than what is shown on the architectural elevations. I would suggest that they should the location of the building doors – both access and driveway – on the plan view to ensure that the tree is not in conflict. It appears that it may be located directly in front of the building door on the plan.

## ZONING

- Under Table 7-E, the front setback of 10 feet not a minimum. Therefore the front setback can be 0 feet and a waiver is not needed.

## LANDSCAPING & ENVIRONMENTAL QUALITY

- If the applicant looks to provide additional open space in the exterior of the building, please provide a landscape plan.

## DESIGN REVIEW

- More complete comments can be found in the Design Review Memo attached to this document.
- *Building Entrances: Building entrance is oriented towards and accessible from the Washington Ave. existing sidewalk.* The primary building entrance is proposed at Washington Avenue with a singular door and pane window, the applicant should explore articulation of the primary entry with a canopy or by a recessed entry with variation in façade material to identify shared building entrance for (4) residential units.
- *Windows: Ample windows provided along street frontage of the proposed development.* Applicant shall provide window and door schedule to verify VT of .7 or greater along Washington Ave. As garage entrance is an integral component of the building design and has street frontage at the ground level of Washington Ave, applicant shall propose a high-quality product with incorporated glazing to allow for additional natural light into the ground floor along the east elevation.
- *Building Materials:* Applicant to provide proposed façade material, trim detailing, window and door schedule to assist with building design integration within the neighborhood.
- *Open space on the site for all multiple-family development shall be integrated into the development site.* Proposed multiple-family development includes private open space with balconies for units 1 & 3 integrated within the building design at the rear façade. Applicant shall integrate additional open space easily accessible for units 2 & 4 through either balconies at the front façade to not encroach into Washington Ave., rooftop amenity deck or designated landscape element such as green screen or other landscape feature incorporated into the building design.
- *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principle living areas and shall also provide sufficient storage areas.* Applicant shall provide additional windows with a clear pattern of fenestration at the proposed north and south elevation to provide sunlight and air / ventilation into the second and third floors. Applicant to provide window and door schedule along with window swing direction for opening.
- *The scale and surface area of parking and driveways and paved areas are arranged and landscape to properly screen vehicles from adjacent properties and streets.* Parking lot located at the ground floor with garage door opening for vehicle access and is screened entirely by building. As garage entrance is an integral component of the building design and has street frontage at the ground level of Washington Ave, applicant shall propose a high-quality product with incorporated glazing to allow for additional natural light into the ground floor along the east elevation.



January 28, 2022

David Latham, P.E.  
Trillium Engineering Group  
189 Main Street, Suite 200  
Yarmouth, ME 04096

Re: 180 Washington Avenue, PO  
Ability to Serve with PWD Water

Dear Mr. Latham:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on December 9, 2021. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed 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 1.5-inch domestic service with a 1-inch meter may be installed from the water main in Washington Avenue. The service should enter through the property's frontage on Washington Avenue at least 10-feet from any side property lines. An approved non-testable dual check backflow prevention device must be installed on the service line directly after the meter prior to service activation.
- A new 4-inch fire service may be installed from the water main in Washington Avenue. The service should enter through the property's frontage on Washington Avenue at least 10-feet from any side property lines. An approved testable double check valve assembly backflow prevention device must be installed on the service line directly before the sprinkler riser prior to service activation.
- The existing building is currently served with a 3/4-inch domestic water service and 3/4-inch meter; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main. The building will be without water while the existing service is retired and the proposed service is installed. This process will take at least one day, and may take several days depending on the project.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

Prior to construction, the owner or contractor will need to 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](mailto: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. A 3/4-inch diameter copper domestic service line provides water service to the site. Please refer to the “Conditions of Service” section of this letter for requirements related to the use of this service.

### Water System Characteristics

According to District records, there is an 8-inch diameter cast iron water main in Washington Avenue and a public fire hydrant located approximately 65 feet from the site. The most recent static pressure reading was 90 psi on May 14, 2021.

### 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/Town Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

### Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

### Private Fire Protection Water Needs

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

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

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

Sincerely,  
Portland Water District

A handwritten signature in black ink, appearing to read "Robert A. Bartels".

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



189 Main Street, Suite 200  
Yarmouth, ME 04096

December 9, 2021

To Whom It May Concern:

We hereby authorize

Trillium Engineering Group  
189 Main Street  
Yarmouth, ME 04096

As our agent to act on our behalf in all matter relating to all processes required in the proposed building work located at 180 Washington Ave in Portland, Maine.

This certification commences on the date of signing and is valid for two years from December 9, 2021 to December 9, 2023.

This certificate will become null and void unless it is agreed between both parties to make an extension.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Latham', with a stylized flourish at the end.

David Latham, P.E.  
Trillium Engineering Group

A handwritten signature in black ink, appearing to read 'David L. Harmon', with a stylized flourish at the end.

Signature of Owner  
David Harmon

A handwritten signature in black ink, appearing to read 'David Latham', with a stylized flourish at the end.

Signature of Agent  
David Latham, P.E.

DLN: 1001540004106

**WARRANTY DEED**  
Maine Statutory Short Form

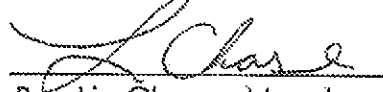
MAINE REAL ESTATE TAX-Paid

**KNOW ALL PERSONS BY THESE PRESENTS**, That **Sunny Time Solar, LLC**, a Maine limited liability company with a principal place of business in Portland, County of Cumberland and State of Maine, for consideration paid, grants to **David L. Harmon**, an individual having a mailing address of 389 Harvard Street, Cambridge, Massachusetts 02446, with **WARRANTY COVENANTS**, the real property situated in the City of Portland, County of Cumberland and State of Maine more particularly described in Exhibit A attached hereto and incorporated herein by reference.

**IN WITNESS WHEREOF**, **Sunny Time Solar, LLC** has caused this instrument to be signed by Liv Chase, its Member, thereunto duly authorized, this 3<sup>rd</sup> day of August, 2015.

  
\_\_\_\_\_  
Witness

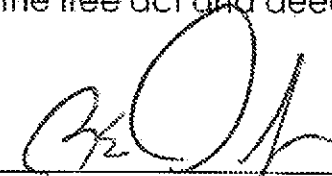
Sunny Time Solar, LLC

  
\_\_\_\_\_  
By: Liv Chase, Member

State of Maine  
County of Cumberland

August 3, 2015

Personally appeared before me the above named Liv Chase, as Member of Sunny Time Solar, LLC and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said limited liability company.

  
\_\_\_\_\_  
Robert E. Danielson  
Attorney at Law

### Exhibit A

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

Beginning at a point on said westerly side of Washington Avenue, which said point is sixty-one and eighty-three hundredths (61.83) feet northerly along said Washington Avenue from the northeasterly corner of land conveyed by said Rita H. Orlando and Aladino A. Orlando to George St. Pierre at al by deed duly recorded in Cumberland County Registry of Deeds; thence running northerly along said Washington Avenue twenty-nine and ninety-two hundredths (29.92) feet to land now or formerly of the Charles Loring Post No. 25 AMVETS; thence running westerly by said AMVETS' land ninety-five (95) feet to an iron driven into the ground; thence running southerly thirty (30) feet to a point; thence running easterly ninety-seven and eight tenths (97.8) feet to the point of beginning.

Charles Loring Post No. 25 AMVETS reserves the rights to utilize a portion of the rear yard for the following events: Field Day held in August, Appreciation Day held in September, and the occasional Horseshoe Tournament. The rights to this portion of the rear yard will terminate upon the sale of the Amvets Post #25 Club building.

The portion of the rear yard is more specifically described as being the northwesterly corner of land of said parcel. Beginning at the northwesterly corner of said parcel, thence running twenty feet east, thence five feet south, thence twenty feet west, thence five feet north to the point of beginning. Containing a total of one hundred square feet and representing the area in which the existing horseshoe pit is built.

The said Charles Loring Post No. 25 AMVETS agrees that the use of said portion of rear yard will be at its own risk. The said Charles Loring Post No. 25 AMVETS agrees to waive all liability and to assume all responsibility in the event of injury or loss.

The said Charles Loring Post No. 25 AMVETS agrees to permit the Grantee two undesignated parking spaces at the Northern Burner Lot, in which the said AMVETS currently have the right to park vehicles. Such parking rights will be terminated, if said AMVETS rights are revoked by the owner of the Northern Burner parking lot.

Meaning and intending to convey and hereby conveying the same premises as set forth in deed from Charles Loring Post No. 25 AMVETS to Sunny Time Solar LLC and Federal Street Phoenix LLC dated April 15, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31446, Page 280; as affected by deed from Federal Street Phoenix LLC to Sunny Time Solar LLC dated April 23, 2015 and recorded in Book 32240, Page 292.



December 30, 2021

David Harmon  
Harmon Architects  
8 Chases Lane  
Saco, Maine 04072

Dear David:

Thank you for your application to Partners Bank for commercial construction financing. We are very much looking forward to working with you on the 180 Washington Avenue, Portland Maine project. Although this is not a commitment to lend, we do anticipate issuing a loan commitment upon receipt and underwriting of your full loan application package.

Please don't hesitate to call me at (207) 432-1102 if I may be of further assistance. Thank you!

Sincerely,

DocuSigned by:

A handwritten signature in black ink that reads "Ellen Neweolner". The signature is written in a cursive style with a large initial "E".

Ellen Neweolner

VP, Commercial Banker



## 4" ROUND DEEP DOWNLIGHT WILDLIFE FRIENDLY

### UNIVERSAL HOUSINGS WITH INTERCHANGEABLE TRIMS

Spectrum's Enduro 4" recessed round downlight series features a trim and variety of options for accent and general illumination.

| LUMENS AND WATTAGE CHART |        |                            |                               |              |     |
|--------------------------|--------|----------------------------|-------------------------------|--------------|-----|
| PART NUMBER              | LUMENS | SOURCE LUMENS <sup>1</sup> | DELIVERED LUMENS <sup>2</sup> | SYSTEM WATTS | LPW |
| RDD4F                    | TA5L   | 500                        | 390                           | 16           | 25  |
| RDD4F                    | TD10L  | 1000                       | 803                           | 16           | 51  |

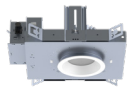
PROJECT: \_\_\_\_\_

TYPE: \_\_\_\_\_



### AVAILABLE HOUSING TYPES

**SR4MO** - New Construction



**SR4MR** - Remodel Construction



### FIXTURE HOUSING SPECIFICATION

| SERIES                            | LUMENS <sup>1</sup>                                            | DRIVER / DIMMING / VOLTAGE | OPTIONS                               | MOUNTING                                                     |
|-----------------------------------|----------------------------------------------------------------|----------------------------|---------------------------------------|--------------------------------------------------------------|
| <b>SR4MO</b> New Construction     | <b>AMBER ONLY<sup>3</sup></b>                                  | <b>DO10</b> 1%, 0-10V      | <b>EB</b> Black Housing               | <b>H12<sup>6</sup></b> 12" - 24" Expandable Bars             |
| <b>SR4MR</b> Remodel Construction | <b>TA5L</b> 500 Lm<br>Amber Only                               |                            | <b>PR<sup>5</sup></b> Consult Factory | <b>BH27</b> 27" Solid Bars<br><b>CB24</b> 24" C-Channel Bars |
|                                   | <b>DUAL CIRCUIT<sup>4</sup></b>                                | <b>DS2W</b> ELV/MLV, 120V  |                                       |                                                              |
|                                   | <b>TD10L</b> CIR 1 1000 Lm at 3000K<br>CIR 2 500 Lm Amber Only |                            |                                       |                                                              |

- Full Shielding.
- Die-cast aluminum trim with a wide variety of options.
- Deep regressed trim.
- Universal housing accepts all trim types, including N-Line trimless.
- 5 year warranty on fixture and electronics.
- Sustainable fixture.

### AVAILABLE TRIM / MODULE TYPES

RDD4F



### TRIM / MODULE SPECIFICATION

| TRIM                   | CCT                               | FINISH                             | FLANGE FINISH             | LENS <sup>9</sup>                               | OPTIONS                               |
|------------------------|-----------------------------------|------------------------------------|---------------------------|-------------------------------------------------|---------------------------------------|
| <b>RDD4F</b> Downlight | <b>AMBER ONLY<sup>3</sup></b>     | <b>MW<sup>7</sup></b> Matte White  | <b>WF</b> White Flange    | <b>SO<sup>10</sup></b> Micro Prism Solite™ Lens | <b>PR<sup>5</sup></b> Consult Factory |
|                        | <b>AMB</b> 500 Lm<br>Amber Only   | <b>MB</b> Matte Black              | <b>MF</b> Matching Flange | <b>GL</b> Clear Glass Lens                      |                                       |
|                        |                                   | <b>PT</b> Platinum Silver          |                           | <b>FG</b> Frosted Glass Lens                    |                                       |
|                        |                                   | <b>BZ</b> Bronze                   |                           |                                                 |                                       |
|                        |                                   | <b>CH</b> Charcoal                 |                           |                                                 |                                       |
|                        |                                   | <b>OB</b> Oil Rubbed Bronze        |                           |                                                 |                                       |
|                        |                                   | <b>AS</b> Sapphire                 |                           |                                                 |                                       |
|                        | <b>DUAL CIRCUIT<sup>4</sup></b>   | <b>AM</b> Malachite                |                           |                                                 |                                       |
|                        | <b>30K</b> CIR 1 1000 Lm at 3000K | <b>SN</b> Sun Gold                 |                           |                                                 |                                       |
|                        | CIR 2 500 Lm Amber Only           | <b>CO</b> Copper Metallic          |                           |                                                 |                                       |
|                        |                                   | <b>GH</b> Graphite                 |                           |                                                 |                                       |
|                        |                                   | <b>CC<sup>8</sup></b> Custom Color |                           |                                                 |                                       |

EXAMPLE: SR4MOTA5LDS2W1/H12/RDD4FAMBCHWFSO

EXAMPLE: SR4MOTD10LDS2W1/H12/RDD4F30KCHWFSO

**NOTES:**  
<sup>1</sup> Nominal Source Lumens <sup>2</sup> Nominal Delivered Lumens <sup>3</sup> Specify with TA Only <sup>4</sup> Specify with TD Only, TD/Dual Circuit Option Requires Dedicated on Site Controls by Others, Controls by Others Are Not to Allow Both Circuits to be Energized Simultaneously, Consult Factory for More Information <sup>5</sup> Consult Factory <sup>6</sup> Standard Bar Hangers <sup>7</sup> Standard Finish <sup>8</sup> Consult Factory for Special Finishes  
<sup>9</sup> Lens is Required <sup>10</sup> Standard Lens

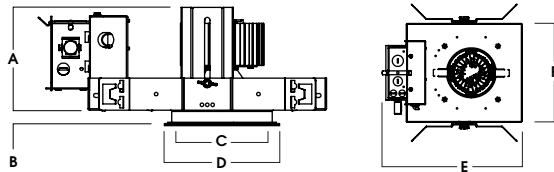
Dimensions and values shown are nominal. Spectrum Lighting continually works to improve products and reserves the right to make changes which may alter the performance or appearance of products.



## HOUSING DIMENSIONS

### SR4MO - NEW CONSTRUCTION

Non-IC rated, thermally protected frame-in kit for new construction. Non-IC designation requires insulation must be minimum of 3" from housing.



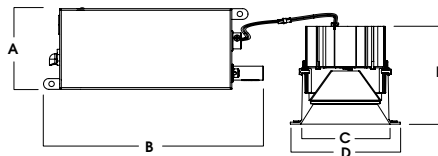
| A        | B       | C        | D        | E        | F        |
|----------|---------|----------|----------|----------|----------|
| 4.8      | .625    | 4.4      | 5.4      | 13.1     | 9.5      |
| 121.9 mm | 15.2 mm | 111.8 mm | 137.2 mm | 332.7 mm | 241.3 mm |

Fixture Weight: 7 lbs

Ceiling Cutout: Ø 5"

### SR4MR - REMODEL CONSTRUCTION

Non-IC rated frame-in kit for existing construction. Non-IC designation requires insulation must be minimum of 3" from housing.



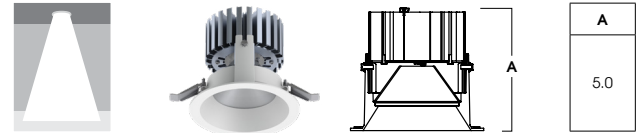
| A       | B        | C        | D        | E        |
|---------|----------|----------|----------|----------|
| 3.8     | 10.2     | 4.4      | 5.4      | 5.0      |
| 96.5 mm | 259.1 mm | 111.8 mm | 137.2 mm | 127.0 mm |

Fixture Weight: 5 lbs

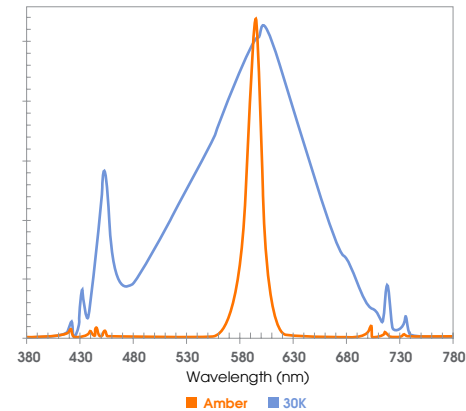
Ceiling Cutout: Ø 5"

## TRIM / MODULE DATA

### RDD4F - DOWNLIGHT MODULE



## SPECTRAL POWER DISTRIBUTION COMPARISON



## FEATURES

### FRAME-IN KIT

Precision Die-formed 20 gauge galvanized steel housing and integral junction box with (3) 5/8", (3) 7/8" and (2) 1 1/8" knockouts. Junction box capacity: 8 12AWG rated for 90 °C. Tool-less driver and junction box access for ease of maintenance. Post-loc trim retention springs for 5/8"-1" ceiling thickness.

### MOUNTING

A variety of mounting bars are available (excluding remodel). Ceiling materials must be rigid to support luminaire frame.

### TRIM

Self-flanged, one-piece, die-cast aluminum finished in a variety of powdercoat options. Designed for wet location. Specify finish and flange finish. For trimless options see N-Line.

### REMODEL

Features tethered power supply and junction box with sheathed wire.

### ELECTRONICS

Full shielding. Single circuit, amber only option is available. Amber LEDs are monochromatic, narrow spectral bandwidth that only emit long wavelengths >560 nm and <625 nm. Proprietary 2-circuit LED system: Circuit 1 is 3000K at 1000 lumens, Circuit 2 is Amber only at 500 lumens. 3000K white light is 3-step MacAdam Ellipse binning, with 80+ CRI.

### EMERGENCY

Contact Factory.

### COLOR VARIATION

Standard CRI (80) within 3-step MacAdam Ellipse.

### LISTINGS

ETL Certified to meet US and Canadian Standards. Manufactured and tested to UL standard No. 1598/8750. BAA compliant. Suitable for wet locations. International Dark-Sky Association approved fixture.

### WARRANTY

Fixtures, LEDs and drivers carry 5 year Spectrum warranty, as well as individual OEM warranty. Warranty is 5 years from date of manufacturing. LED system rated for operation in an ambient temperatures up to 25 °C.



# PHOTOMETRIC DATA - 4" ROUND DEEP DOWNLIGHT

SR4MOTA5 LE1 RDD4x AMB MWxSO

| CANDLEPOWER CURVE<br>TEST SP-00789_2 | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |  |  |  |  |  |  |  |  |  |
|--------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
|                                      | 0.00°                              | 0° - 10°     | 24                                                                         | 6%                                                                                                     |  |  |  |  |  |  |  |  |  |
|                                      | 0.00° 250                          | 0° - 20°     | 93                                                                         | 24%                                                                                                    |  |  |  |  |  |  |  |  |  |
|                                      | 5.00° 250                          | 0° - 30°     | 194                                                                        | 50%                                                                                                    |  |  |  |  |  |  |  |  |  |
|                                      | 10.00° 250                         | 0° - 40°     | 285                                                                        | 73%                                                                                                    |  |  |  |  |  |  |  |  |  |
|                                      | 15.00° 245                         | 0° - 60°     | 367                                                                        | 94%                                                                                                    |  |  |  |  |  |  |  |  |  |
|                                      | 20.00° 236                         | 0° - 80°     | 388                                                                        | 100%                                                                                                   |  |  |  |  |  |  |  |  |  |
|                                      | 30.00° 184                         | 0° - 90°     | 390                                                                        | 100%                                                                                                   |  |  |  |  |  |  |  |  |  |
|                                      | 40.00° 96                          | Total        | 390                                                                        | 100%                                                                                                   |  |  |  |  |  |  |  |  |  |
|                                      | 50.00° 42                          |              |                                                                            |                                                                                                        |  |  |  |  |  |  |  |  |  |
|                                      | 60.00° 21                          |              |                                                                            |                                                                                                        |  |  |  |  |  |  |  |  |  |
|                                      | 70.00° 9                           |              |                                                                            |                                                                                                        |  |  |  |  |  |  |  |  |  |
|                                      | 80.00° 2                           |              |                                                                            |                                                                                                        |  |  |  |  |  |  |  |  |  |
|                                      | 90.00° 1                           |              |                                                                            |                                                                                                        |  |  |  |  |  |  |  |  |  |

Delivered Lumens: **390**  
Luminaire Watts: **15.8**  
LER: **24.68**

CP at 0deg (Nadir): **250**  
CRI: **N/A**

Beam Angle: **74.9**  
Spacing Ratio: **1.12**

Lumen Multiplier: **N/A**  
CCT Multiplier: **N/A**

SR4MOTD 10LE1 RDD4x 30K MWxSO

| CANDLEPOWER CURVE<br>TEST SP-00790_2 | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                     |                       |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|--------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|---------------------|------|-------|--|--|--|
|                                      | 0.00°                              | 0° - 10°     | 52                                                                         | 6%                                                                                                     | Mounting Height AFF | FC at Center on Floor | Beam Diameter                                                                                                                                                                                                       | FC at Beam Edge | Ceiling Height      | Fixture Spacing | RCR 2               |      | RCR 4 |  |  |  |
|                                      | 0.00° 531                          | 0° - 20°     | 199                                                                        | 25%                                                                                                    | 5.5' - 18 fc        | 8.2' - 8 fc           | 9'                                                                                                                                                                                                                  | 6'              | 19                  | 0.38            | 23                  | 0.54 |       |  |  |  |
|                                      | 5.00° 529                          | 0° - 30°     | 412                                                                        | 51%                                                                                                    | 6.5' - 13 fc        | 9.7' - 6 fc           | 12'                                                                                                                                                                                                                 | 8'              | 13                  | 0.25            | 11                  | 0.25 |       |  |  |  |
|                                      | 10.00° 531                         | 0° - 40°     | 604                                                                        | 75%                                                                                                    | 7.5' - 9 fc         | 11.2' - 5 fc          | 16'                                                                                                                                                                                                                 | 12'             | 4                   | 0.09            | 5                   | 0.13 |       |  |  |  |
|                                      | 15.00° 525                         | 0° - 60°     | 768                                                                        | 96%                                                                                                    | 8.5' - 7 fc         | 12.7' - 4 fc          | Delivered Illuminance Rating: (DIR)                                                                                                                                                                                 |                 | 50 FC per W/Sq. Ft. |                 | 42 FC per W/Sq. Ft. |      |       |  |  |  |
|                                      | 20.00° 504                         | 0° - 80°     | 802                                                                        | 100%                                                                                                   | 10.0' - 5 fc        | 15.0' - 3 fc          |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 30.00° 400                         | 0° - 90°     | 803                                                                        | 100%                                                                                                   | 12.0' - 4 fc        | 18.0' - 2 fc          | Recessed Mounting<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. -2.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. -2.5' x 2.50<br>+ Average Footcandles at 2.5' Above Floor |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 40.00° 211                         | Total        | 803                                                                        | 100%                                                                                                   | 14.0' - 3 fc        | 21.0' - 1 fc          |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 50.00° 89                          |              |                                                                            |                                                                                                        | 16.0' - 2 fc        | 24.0' - 1 fc          |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 60.00° 41                          |              |                                                                            |                                                                                                        |                     |                       |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 70.00° 14                          |              |                                                                            |                                                                                                        |                     |                       |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 80.00° 3                           |              |                                                                            |                                                                                                        |                     |                       |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |
|                                      | 90.00° 1                           |              |                                                                            |                                                                                                        |                     |                       |                                                                                                                                                                                                                     |                 |                     |                 |                     |      |       |  |  |  |

Delivered Lumens: **803**  
Luminaire Watts: **15.9**  
LER: **50.50**

CP at 0deg (Nadir): **531**  
CRI: **80**

Beam Angle: **74.34**  
Spacing Ratio: **1.13**

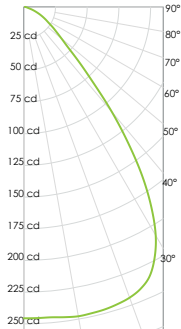
Lumen Multiplier: **only 10K available**  
CCT Multiplier: **only 30K available**





# PHOTOMETRIC DATA - 4" ROUND DEEP DOWNLIGHT

SR4MOTA5 LE1 RDD4x AMB MWxGL

| CANDLEPOWER CURVE<br>TEST SP-00789_1                                              | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE |      |                     |                       | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT                                                                                                                                                               |                 |                |                 |       |  |       |  |
|-----------------------------------------------------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|------|---------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|-----------------|-------|--|-------|--|
|  | 0.00°                              | 0° - 10°     | 24                                                                         | 6%   | Mounting Height AFF | FC at Center on Floor | Beam Diameter                                                                                                                                                                                                                                                        | FC at Beam Edge | Ceiling Height | Fixture Spacing | RCR 2 |  | RCR 4 |  |
|                                                                                   | 0.00° 246                          | 0° - 20°     | 94                                                                         | 24%  | 5.5 ' 8 fc          | 8.8 ' 4 fc            | 9' 6'                                                                                                                                                                                                                                                                | 9               | 0.37           | 11              | 0.54  |  |       |  |
|                                                                                   | 5.00° 246                          | 0° - 30°     | 200                                                                        | 51%  | 6.5 ' 6 fc          | 10.4 ' 3 fc           | 12' 8'                                                                                                                                                                                                                                                               | 6               | 0.25           | 5               | 0.25  |  |       |  |
|                                                                                   | 10.00° 248                         | 0° - 40°     | 300                                                                        | 76%  | 7.5 ' 4 fc          | 11.9 ' 2 fc           | 16' 12'                                                                                                                                                                                                                                                              | 2               | 0.09           | 3               | 0.12  |  |       |  |
|                                                                                   | 15.00° 247                         | 0° - 60°     | 375                                                                        | 95%  | 8.5 ' 3 fc          | 13.5 ' 2 fc           | <div>Recessed Mounting</div> <div>Square rooms used for multiple units:</div> <div>- RCR 2: Length &amp; Width = Ceiling Ht. -2.5' x 5.00</div> <div>- RCR 4: Length &amp; Width = Ceiling Ht. -2.5' x 2.50</div> <div>Average Footcandles at 2.5' Above Floor</div> |                 |                |                 |       |  |       |  |
|                                                                                   | 20.00° 244                         | 0° - 80°     | 394                                                                        | 100% | 10.0 ' 2 fc         | 15.9 ' 1 fc           |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 30.00° 208                         | 0° - 90°     | 396                                                                        | 100% | 12.0 ' 2 fc         | 19.1 ' 1 fc           |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 40.00° 108                         | Total        | 396                                                                        | 100% | 14.0 ' 1 fc         | 22.3 ' 1 fc           |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 50.00° 39                          |              |                                                                            |      | 16.0 ' 1 fc         | 25.5 ' 0 fc           |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 60.00° 20                          |              |                                                                            |      |                     |                       |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 70.00° 9                           |              |                                                                            |      |                     |                       |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 80.00° 3                           |              |                                                                            |      |                     |                       |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |
|                                                                                   | 90.00° 1                           |              |                                                                            |      |                     |                       |                                                                                                                                                                                                                                                                      |                 |                |                 |       |  |       |  |

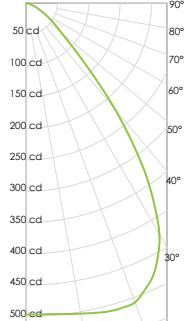
Delivered Lumens: **396**  
Luminaire Watts: **15.8**  
LER: **25.06**

CP at 0deg (Nadir): **246**  
CRI: **N/A**

Beam Angle: **77.08**  
Spacing Ratio: **1.21**

Lumen Multiplier: **N/A**  
CCT Multiplier: **N/A**

SR4MOTD 10LE1 RDD4x 30K MWxGL

| CANDLEPOWER CURVE<br>TEST SP-00790_1                                               | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                           |                             |                                           |                       |                   |                    |       |                     |       |                     |  |
|------------------------------------------------------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------|-------------------------------------------|-----------------------|-------------------|--------------------|-------|---------------------|-------|---------------------|--|
|  | 0.00°                              | 0° - 10°     | 48                                                                         | 6%                                                                                                     | Mounting<br>Height<br>AFF | FC at<br>Center<br>on Floor | Beam<br>Diameter                          | FC at<br>Beam<br>Edge | Ceiling<br>Height | Fixture<br>Spacing | RCR 2 |                     | RCR 4 |                     |  |
|                                                                                    | 0.00° 496                          | 0° - 20°     | 192                                                                        | 24%                                                                                                    | 5.5 ' 16 fc               | 8.7 ' 8 fc                  | 9' 6'                                     | 18                    | 0.38              | 22                 | 0.54  |                     |       |                     |  |
|                                                                                    | 5.00° 498                          | 0° - 30°     | 410                                                                        | 52%                                                                                                    | 6.5 ' 12 fc               | 10.3 ' 6 fc                 | 12' 8'                                    | 12                    | 0.25              | 10                 | 0.25  |                     |       |                     |  |
|                                                                                    | 10.00° 503                         | 0° - 40°     | 613                                                                        | 78%                                                                                                    | 7.5 ' 9 fc                | 11.9 ' 4 fc                 | 16' 12'                                   | 4                     | 0.09              | 5                  | 0.13  |                     |       |                     |  |
|                                                                                    | 15.00° 509                         | 0° - 60°     | 760                                                                        | 96%                                                                                                    | 8.5 ' 7 fc                | 13.5 ' 3 fc                 | Delivered<br>Illuminance<br>Rating: (DIR) |                       |                   |                    |       | 49 FC per W/Sq. Ft. |       | 41 FC per W/Sq. Ft. |  |
|                                                                                    | 20.00° 508                         | 0° - 80°     | 788                                                                        | 100%                                                                                                   | 10.0 ' 5 fc               | 15.9 ' 2 fc                 |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 30.00° 425                         | 0° - 90°     | 790                                                                        | 100%                                                                                                   | 12.0 ' 3 fc               | 19.0 ' 2 fc                 |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 40.00° 220                         | Total        | 790                                                                        | 100%                                                                                                   | 14.0 ' 3 fc               | 22.2 ' 1 fc                 |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 50.00° 74                          |              |                                                                            |                                                                                                        | 16.0 ' 2 fc               | 25.4 ' 1 fc                 |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 60.00° 34                          |              |                                                                            |                                                                                                        |                           |                             |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 70.00° 12                          |              |                                                                            |                                                                                                        |                           |                             |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 80.00° 2                           |              |                                                                            |                                                                                                        |                           |                             |                                           |                       |                   |                    |       |                     |       |                     |  |
|                                                                                    | 90.00° 0                           |              |                                                                            |                                                                                                        |                           |                             |                                           |                       |                   |                    |       |                     |       |                     |  |

Delivered Lumens: **790**  
Luminaire Watts: **15.9**  
LER: **49.69**

CP at 0deg (Nadir): **496**  
CRI: **80**

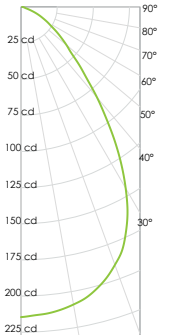
Beam Angle: **76.84**  
Spacing Ratio: **1.21**

Lumen Multiplier: **only 10L available**  
CCT Multiplier: **only 30K available**



# PHOTOMETRIC DATA - 4" ROUND DEEP DOWNLIGHT

SR4MOTA 5LE1 RDD4x AMB MWxFG

| CANDLEPOWER CURVE<br>TEST SP-00789                                                | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE |      |                     |                       | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                 |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|-----------------------------------------------------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|------|---------------------|-----------------------|--------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------|---------------------|-----------|--|
|  | 0.00°                              | 0° - 10°     | 21                                                                         | 6%   | Mounting Height AFF | FC at Center on Floor | Beam Diameter                                                                                          | FC at Beam Edge | Ceiling Height                                                                                                                                                                                                    | Fixture Spacing | RCR 2               |           | RCR 4               |           |  |
|                                                                                   | 0.00° 215                          | 0° - 20°     | 78                                                                         | 24%  | 5.5'                | 7 fc                  | 7.9'                                                                                                   | 3 fc            | 9'                                                                                                                                                                                                                | 6'              | FC *                | W/Sq. Ft. | FC *                | W/Sq. Ft. |  |
|                                                                                   | 5.00° 213                          | 0° - 30°     | 157                                                                        | 48%  | 6.5'                | 5 fc                  | 9.3'                                                                                                   | 2 fc            | 12'                                                                                                                                                                                                               | 8'              | 5                   | 0.25      | 4                   | 0.25      |  |
|                                                                                   | 10.00° 209                         | 0° - 40°     | 229                                                                        | 70%  | 7.5'                | 4 fc                  | 10.7'                                                                                                  | 2 fc            | 16'                                                                                                                                                                                                               | 12'             | 3                   | 0.12      | 2                   | 0.12      |  |
|                                                                                   | 15.00° 202                         | 0° - 60°     | 305                                                                        | 93%  | 8.5'                | 3 fc                  | 12.1'                                                                                                  | 1 fc            | Delivered Illuminance Rating: (DIR)                                                                                                                                                                               |                 | 20 FC per W/Sq. Ft. |           | 17 FC per W/Sq. Ft. |           |  |
|                                                                                   | 20.00° 190                         | 0° - 80°     | 325                                                                        | 99%  | 10.0'               | 2 fc                  | 14.3'                                                                                                  | 1 fc            |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 30.00° 145                         | 0° - 90°     | 326                                                                        | 100% | 12.0'               | 1 fc                  | 17.1'                                                                                                  | 1 fc            | Recessed Mounting<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. -2.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. -2.5' x 2.50<br>Average Footcandles at 2.5' Above Floor |                 |                     |           |                     |           |  |
|                                                                                   | 40.00° 82                          | Total        | 326                                                                        | 100% | 14.0'               | 1 fc                  | 20.0'                                                                                                  | 1 fc            |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 50.00° 41                          |              |                                                                            |      | 16.0'               | 1 fc                  | 22.8'                                                                                                  | 0 fc            |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 60.00° 21                          |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 70.00° 8                           |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 80.00° 2                           |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |
|                                                                                   | 90.00° 1                           |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                   |                 |                     |           |                     |           |  |

Delivered Lumens: 326

Luminaire Watts: 15.8

LER: 20.63

CP at 0deg (Nadir): 215

CRI: N/A, Amber Light

Beam Angle: 73.17

Spacing Ratio: 1.06

Lumen Multiplier: N/A

CCT Multiplier: N/A

SR4MOTD 10LE1 RDD4x 30K MWxFG

| CANDLEPOWER CURVE<br>TEST SP-00790 | INTENSITY<br>CANDELA<br>0° AZIMUTH | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE |      |                     |                       | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                 |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|------------------------------------|------------------------------------|--------------|----------------------------------------------------------------------------|------|---------------------|-----------------------|--------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------|---------------------|-----------|--|
|                                    | 0.00°                              | 0° - 10°     | 44                                                                         | 6%   | Mounting Height AFF | FC at Center on Floor | Beam Diameter                                                                                          | FC at Beam Edge | Ceiling Height                                                                                                                                                                                                      | Fixture Spacing | RCR 2               |           | RCR 4               |           |  |
|                                    | 0.00° 463                          | 0° - 20°     | 168                                                                        | 24%  | 5.5' ±              | 15 fc                 | 7.6' ±                                                                                                 | 7 fc            | 9'                                                                                                                                                                                                                  | 6'              | FC ±                | W/Sq. Ft. | FC ±                | W/Sq. Ft. |  |
|                                    | 5.00° 459                          | 0° - 30°     | 338                                                                        | 49%  | 6.5' ±              | 11 fc                 | 8.9' ±                                                                                                 | 5 fc            | 12'                                                                                                                                                                                                                 | 8'              | 11                  | 0.25      | 9                   | 0.25      |  |
|                                    | 10.00° 452                         | 0° - 40°     | 493                                                                        | 72%  | 7.5' ±              | 8 fc                  | 10.3' ±                                                                                                | 4 fc            | 16'                                                                                                                                                                                                                 | 12'             | 5                   | 0.13      | 4                   | 0.13      |  |
|                                    | 15.00° 434                         | 0° - 60°     | 651                                                                        | 95%  | 8.5' ±              | 6 fc                  | 11.7' ±                                                                                                | 3 fc            | Delivered Illuminance Rating: (DIR)                                                                                                                                                                                 |                 | 42 FC per W/Sq. Ft. |           | 35 FC per W/Sq. Ft. |           |  |
|                                    | 20.00° 404                         | 0° - 80°     | 685                                                                        | 100% | 10.0' ±             | 5 fc                  | 13.8' ±                                                                                                | 2 fc            |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 30.00° 301                         | 0° - 90°     | 687                                                                        | 100% | 12.0' ±             | 3 fc                  | 16.5' ±                                                                                                | 2 fc            | Recessed Mounting<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. -2.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. -2.5' x 2.50<br>* Average Footcandles at 2.5' Above Floor |                 |                     |           |                     |           |  |
|                                    | 40.00° 164                         | Total        | 687                                                                        | 100% | 14.0' ±             | 2 fc                  | 19.3' ±                                                                                                | 1 fc            |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 50.00° 82                          |              |                                                                            |      | 16.0' ±             | 2 fc                  | 22.0' ±                                                                                                | 1 fc            |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 60.00° 38                          |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 70.00° 10                          |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 80.00° 2                           |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |
|                                    | 90.00° 1                           |              |                                                                            |      |                     |                       |                                                                                                        |                 |                                                                                                                                                                                                                     |                 |                     |           |                     |           |  |

Delivered Lumens: 687

Luminaire Watts: 15.9

LER: 43.21

CP at 0deg (Nadir): 463

CRI: 80

Beam Angle: 72.69

Spacing Ratio: 1.04

Lumen Multiplier: only 10L available

CCT Multiplier: only 30K available





## 6" ROUND DIRECT WILDLIFE FRIENDLY



### CW0606 - WALL MOUNT

#### APPLICATION

6" round x 6" high cylinder luminaire for general illumination. Meets Florida Fish and Wildlife Conservation Commission's Certified Wildlife Lighting. International Dark-Sky Association approved fixture.

#### FEATURES

Full shielding and option for Static Amber 560 NM or Dual Circuit 3000K 560 NM. Rugged design with a variety of options. Two stage optical system design delivers smooth general illumination.

#### FINISH

Durable powder-coat paint over aluminum fixture to resist corrosion.

#### ELECTRONICS

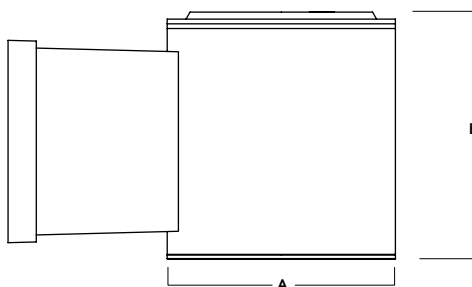
Single circuit, amber only option is available. Amber LEDs are monochromatic, narrow spectral bandwidth that only emit long wavelengths >560 nm and <625 nm. Proprietary 2-circuit LED system: Circuit 1 is 3000K at 1000 lumens, Circuit 2 is Amber only at 500 lumens. 3000K white light is 3-step MacAdam Ellipse binning, with 80+ CRI.

#### CONSTRUCTION

Extruded seamless aluminum fixture housing. Stainless steel hardware with galvanized steel brackets to resist corrosion. One piece reflector trim and finished to specification.

#### CODE COMPLIANCE

BAA compliant. ETL certified to meet US and Canadian standards. Suitable for wet locations. Manufactured and tested to UL standards No. 1598/8750.



| A               | B               |
|-----------------|-----------------|
| 6.1<br>154.9 mm | 6.6<br>167.6 mm |

| LUMENS / WATTAGE DATA |                            |                               |              |     |
|-----------------------|----------------------------|-------------------------------|--------------|-----|
| PART NUMBER           | SOURCE LUMENS <sup>1</sup> | DELIVERED LUMENS <sup>2</sup> | SYSTEM WATTS | LPW |
| CW0606TA5L            | 500                        | 305                           | 15           | 20  |
| CW0606TD10L           | 1000                       | 801                           | 16           | 50  |

| SERIES                    | LUMENS <sup>1</sup>                                         | CCT         | DRIVER / DIMMING <sup>4</sup> |                                         | TRIM                                                                        | MOUNTING                |                 | FINISH <sup>5</sup> |                 |             |
|---------------------------|-------------------------------------------------------------|-------------|-------------------------------|-----------------------------------------|-----------------------------------------------------------------------------|-------------------------|-----------------|---------------------|-----------------|-------------|
| CW0606                    | AMBER ONLY                                                  |             | DX<br>DS2W1                   | 1%, 0-10V, 120V/277V<br>ELV / MLV, 120V | LENS                                                                        |                         | WALL MOUNT      |                     | MW <sup>6</sup> | Matte White |
|                           | TA5L 500 Lm<br>Amber Only                                   | AMB >560 NM |                               |                                         | SO Micro Prism Solite™ Lens<br>GL Clear Glass Lens<br>FG Frosted Glass Lens | WM Wall Mount Extension | MB <sup>6</sup> | Matte Black         |                 |             |
|                           |                                                             |             |                               |                                         |                                                                             |                         | PT <sup>6</sup> | Platinum Silver     |                 |             |
|                           |                                                             |             |                               |                                         |                                                                             |                         | CC              | Custom Color        |                 |             |
| DUAL CIRCUIT <sup>3</sup> |                                                             |             |                               |                                         |                                                                             |                         |                 |                     |                 |             |
| TD10L                     | CIR 1 1000 Lm<br>at 3000K<br><br>CIR 2 500 Lm<br>Amber Only | 30K 3000K   |                               |                                         |                                                                             |                         |                 |                     |                 |             |

EXAMPLE: CW0606TA5LAMBDX/GL/WM/MW

EXAMPLE: CW0606TD10L30KDX/GL/WM/MW

#### NOTES:

1 Nominal Source Lumens 2 Nominal Delivered Lumens at DX GL MW 3 TD/Dual Circuit Option Requires Dedicated on Site Controls by Others, Controls by Others Are Not to Allow Both Circuits to be Energized Simultaneously, Consult Factory for More Information 4 Contact Factory for Additional Options 5 See Color Page for More Options/Consult Factory for Special Finishes 6 Standard Finishes



PROJECT: \_\_\_\_\_

TYPE: \_\_\_\_\_



Dimensions and values shown are nominal. Spectrum Lighting continually works to improve products and reserves the right to make changes which may alter the performance or appearance of products.

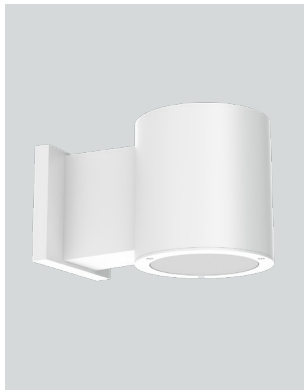
6" ROUND DIRECT

WILDLIFE FRIENDLY / FIXTURE OPTIONS



STANDARD FINISHES

MW  
MATTE WHITE



MB  
MATTE BLACK

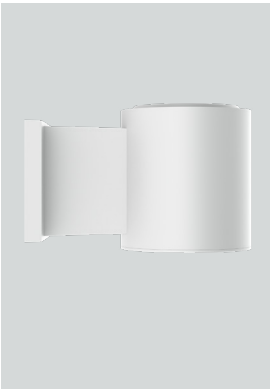


PT  
PLATINUM SILVER

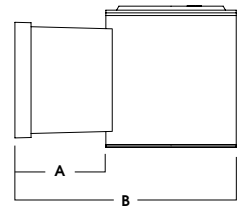


WALL MOUNT DETAIL

WM  
WALL MOUNT EXTENSION

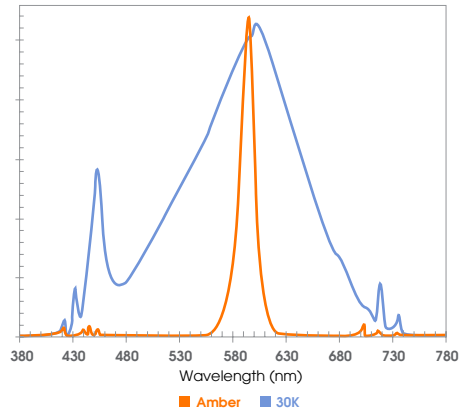


SIDE VIEW



| A        | B        |
|----------|----------|
| 4.2      | 10.3     |
| 106.7 mm | 261.6 mm |

SPECTRAL POWER DISTRIBUTION COMPARISON



# 6" ROUND DIRECT

## WILDLIFE FRIENDLY / PHOTOMETRIC DATA



CW0606TA-05L-AMB-EX-SO-MW

| CANDLEPOWER CURVE     | INTENSITY             | ZONAL LUMENS            | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|-----------------------|-----------------------|-------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|-----------------|-------|--|-------|--|
|                       | 0.00° 148             | 0° - 10° 14 5%          | Mounting Height AFF                                                        | FC at Center on Floor                                                                                  | Beam Diameter                                                                                                                                                                                                            | FC at Beam Edge | Ceiling Height                          | Fixture Spacing | RCR 2 |  | RCR 4 |  |
|                       | 5.00° 147             | 0° - 20° 54 19%         | 6.50 ' 4 fc                                                                | 12.1 ' 2 fc                                                                                            | 9' 6'                                                                                                                                                                                                                    | 6 0.32          | 5 0.32                                  |                 |       |  |       |  |
|                       | 10.00° 144            | 0° - 30° 118 41%        | 7.50 ' 3 fc                                                                | 14.0 ' 1 fc                                                                                            | 12' 8'                                                                                                                                                                                                                   | 4 0.21          | 2 0.14                                  |                 |       |  |       |  |
|                       | 15.00° 141            | 0° - 40° 190 66%        | 8.50 ' 2 fc                                                                | 15.8 ' 1 fc                                                                                            | 16' 10'                                                                                                                                                                                                                  | 3 0.14          | 2 0.14                                  |                 |       |  |       |  |
|                       | 20.00° 140            | 0° - 60° 267 93%        | 10.00 ' 1 fc                                                               | 18.6 ' 1 fc                                                                                            | Delivered Illuminance Rating: (DIR)                                                                                                                                                                                      |                 | 18 FC per W/Sq. Ft. 15 FC per W/Sq. Ft. |                 |       |  |       |  |
|                       | 30.00° 134            | 0° - 80° 286 99%        | 12.00 ' 1 fc                                                               | 22.4 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | 40.00° 91             | 0° - 90° 287 100%       | 14.00 ' 1 fc                                                               | 26.1 ' 0 fc                                                                                            | 1' Suspension Length<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50<br>+ Average Footcandles at 2.5' Above Floor |                 |                                         |                 |       |  |       |  |
|                       | 50.00° 43             | Total 288 100%          | 16.00 ' 1 fc                                                               | 29.8 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | 60.00° 21             |                         | 20.00 ' 0 fc                                                               | 37.3 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | 70.00° 8              |                         |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | 80.00° 2              |                         |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | 90.00° 1              |                         |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
|                       | Delivered Lumens: 288 | CP at 0deg (Nadir): 148 | Beam Angle: 85.93                                                          | Lumen Multiplier: N/A                                                                                  |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
| Luminaire Watts: 15.3 | CRI: N/A, Amber Light | Spacing Ratio: 1.29     | CCT Multiplier: N/A                                                        |                                                                                                        |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |
| LER: 18.82            |                       |                         |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                                         |                 |       |  |       |  |

CW606TD-10L-30K-EX-SO-MW

| CANDLEPOWER CURVE                                                                 | INTENSITY                                        | ZONAL LUMENS                                           | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE               | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|-----------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------|-----------------------|---------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------|---------------------|-----------|--|--|--|--|
|                                                                                   | 0.00°                                            | 0° - 10°                                               | 35                                                                                       | 5%                                                                                                     | Mounting Height AFF | FC at Center on Floor | Beam Diameter | FC at Beam Edge | Ceiling Height                                                                                                                                                                                                           | Fixture Spacing | RCR 2               |           | RCR 4               |           |  |  |  |  |
|                                                                                   | 0.00° 365                                        | 0° - 20°                                               | 134                                                                                      | 20%                                                                                                    | 6.50 '              | 9 fc                  | 11.9 '        | 4 fc            | 9'                                                                                                                                                                                                                       | 6'              | FC +                | W/Sq. Ft. | FC +                | W/Sq. Ft. |  |  |  |  |
|                                                                                   | 5.00° 363                                        | 0° - 30°                                               | 291                                                                                      | 43%                                                                                                    | 7.50 '              | 6 fc                  | 13.8 '        | 3 fc            | 12'                                                                                                                                                                                                                      | 8'              | 22                  | 0.53      | 11                  | 0.34      |  |  |  |  |
|                                                                                   | 10.00° 357                                       | 0° - 40°                                               | 466                                                                                      | 68%                                                                                                    | 8.50 '              | 5 fc                  | 15.6 '        | 2 fc            | 16'                                                                                                                                                                                                                      | 10'             | 9                   | 0.22      | 5                   | 0.14      |  |  |  |  |
|                                                                                   | 15.00° 352                                       | 0° - 60°                                               | 645                                                                                      | 94%                                                                                                    | 10.00 '             | 4 fc                  | 18.4 '        | 2 fc            | Delivered Illuminance Rating: (DIR)                                                                                                                                                                                      |                 | 41 FC per W/Sq. Ft. |           | 34 FC per W/Sq. Ft. |           |  |  |  |  |
|                                                                                   | 20.00° 347                                       | 0° - 80°                                               | 682                                                                                      | 100%                                                                                                   | 12.00 '             | 3 fc                  | 22.1 '        | 1 fc            |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 30.00° 328                                       | 0° - 90°                                               | 683                                                                                      | 100%                                                                                                   | 14.00 '             | 2 fc                  | 25.7 '        | 1 fc            | 1' Suspension Length<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50<br>+ Average Footcandles at 2.5' Above Floor |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 40.00° 219                                       | Total                                                  | 683                                                                                      | 100%                                                                                                   | 16.00 '             | 1 fc                  | 29.4 '        | 1 fc            |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 50.00° 99                                        |                                                        |                                                                                          |                                                                                                        | 20.00 '             | 1 fc                  | 36.8 '        | 0 fc            |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 60.00° 45                                        |                                                        |                                                                                          |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 70.00° 15                                        |                                                        |                                                                                          |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 80.00° 3                                         |                                                        |                                                                                          |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   | 90.00° 1                                         |                                                        |                                                                                          |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
|                                                                                   |                                                  |                                                        |                                                                                          |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |
| Delivered Lumens: <b>683</b><br>Luminaire Watts: <b>15.9</b><br>LER: <b>42.96</b> | CP at 0deg (Nadir): <b>365</b><br>CRI: <b>80</b> | Beam Angle: <b>85.18</b><br>Spacing Ratio: <b>1.27</b> | Lumen Multiplier: <b>only 10L available</b><br>CCT Multiplier: <b>only 30K available</b> |                                                                                                        |                     |                       |               |                 |                                                                                                                                                                                                                          |                 |                     |           |                     |           |  |  |  |  |

# 6" ROUND DIRECT

## WILDLIFE FRIENDLY / PHOTOMETRIC DATA



CW0606TA-05L-AMB-EX-GL-MW

| CANDLEPOWER CURVE     | INTENSITY               | ZONAL LUMENS        | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |
|-----------------------|-------------------------|---------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                       | 0.00°                   |                     |                                                                            |                                                                                                        |
|                       | 0.00° 151               | 0° - 10° 14 5%      | Mounting Height AFF                                                        | FC at Center on Floor                                                                                  |
|                       | 5.00° 149               | 0° - 20° 54 18%     | Beam Diameter                                                              | FC at Beam Edge                                                                                        |
|                       | 10.00° 144              | 0° - 30° 117 38%    | 6.50' 4 fc                                                                 | 12.5' 2 fc                                                                                             |
|                       | 15.00° 139              | 0° - 40° 191 63%    | 7.50' 3 fc                                                                 | 14.5' 1 fc                                                                                             |
|                       | 20.00° 137              | 0° - 60° 275 90%    | 8.50' 2 fc                                                                 | 16.4' 1 fc                                                                                             |
|                       | 30.00° 133              | 0° - 80° 303 99%    | 10.00' 2 fc                                                                | 19.3' 1 fc                                                                                             |
|                       | 40.00° 99               | 0° - 90° 305 100%   | 12.00' 1 fc                                                                | 23.1' 0 fc                                                                                             |
|                       | 50.00° 46               | Total 305 100%      | 14.00' 1 fc                                                                | 27.0' 0 fc                                                                                             |
|                       | 60.00° 26               |                     | 16.00' 1 fc                                                                | 30.9' 0 fc                                                                                             |
|                       | 70.00° 13               |                     | 20.00' 0 fc                                                                | 38.6' 0 fc                                                                                             |
|                       | 80.00° 4                |                     |                                                                            |                                                                                                        |
|                       | 90.00° 0                |                     |                                                                            |                                                                                                        |
| Delivered Lumens: 305 | CP at 0deg (Nadir): 151 | Beam Angle: 87.92   | Lumen Multiplier: N/A                                                      |                                                                                                        |
| Luminaire Watts: 15.3 | CRI: N/A, Amber Light   | Spacing Ratio: 1.27 | CCT Multiplier: N/A                                                        |                                                                                                        |
| LER: 19.93            |                         |                     |                                                                            |                                                                                                        |

CW0606TD-10L-30K-EX-GL-MW

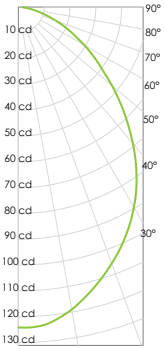
| CANDLEPOWER CURVE     | INTENSITY               | ZONAL LUMENS       | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |
|-----------------------|-------------------------|--------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                       | 0.00°                   |                    |                                                                            |                                                                                                        |
|                       | 0.00° 394               | 0° - 10° 38 5%     | Mounting Height AFF                                                        | FC at Center on Floor                                                                                  |
|                       | 5.00° 392               | 0° - 20° 143 18%   | Beam Diameter                                                              | FC at Beam Edge                                                                                        |
|                       | 10.00° 381              | 0° - 30° 309 39%   | 6.50' 9 fc                                                                 | 12.9' 4 fc                                                                                             |
|                       | 15.00° 369              | 0° - 40° 507 63%   | 7.50' 7 fc                                                                 | 14.8' 3 fc                                                                                             |
|                       | 20.00° 366              | 0° - 60° 733 92%   | 8.50' 5 fc                                                                 | 16.8' 2 fc                                                                                             |
|                       | 30.00° 348              | 0° - 80° 798 100%  | 10.00' 4 fc                                                                | 19.8' 2 fc                                                                                             |
|                       | 40.00° 268              | 0° - 90° 801 100%  | 12.00' 3 fc                                                                | 23.8' 1 fc                                                                                             |
|                       | 50.00° 124              | Total 801 100%     | 14.00' 2 fc                                                                | 27.7' 1 fc                                                                                             |
|                       | 60.00° 65               |                    | 16.00' 2 fc                                                                | 31.7' 1 fc                                                                                             |
|                       | 70.00° 31               |                    | 20.00' 1 fc                                                                | 39.6' 0 fc                                                                                             |
|                       | 80.00° 6                |                    |                                                                            |                                                                                                        |
|                       | 90.00° 1                |                    |                                                                            |                                                                                                        |
| Delivered Lumens: 801 | CP at 0deg (Nadir): 394 | Beam Angle: 89.41  | Lumen Multiplier: only 10L available                                       |                                                                                                        |
| Luminaire Watts: 15.9 | CRI: 80                 | Spacing Ratio: 1.3 | CCT Multiplier: only 30K available                                         |                                                                                                        |
| LER: 50.38            |                         |                    |                                                                            |                                                                                                        |

# 6" ROUND DIRECT

## WILDLIFE FRIENDLY / PHOTOMETRIC DATA



CW606TA-05L-AMB-EX-FG-MW

| CANDLEPOWER CURVE                                                                 | INTENSITY  | ZONAL LUMENS      | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|-----------------------------------------------------------------------------------|------------|-------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|---------------------|--|-------|--|--|--|
|  | 0.00° 124  | 0° - 10° 12 5%    | Mounting Height AFF                                                        | FC at Center on Floor                                                                                  | Beam Diameter                                                                                                                                                                                                            | FC at Beam Edge | Ceiling Height      | Fixture Spacing | RCR 2               |  | RCR 4 |  |  |  |
|                                                                                   | 5.00° 123  | 0° - 20° 43 17%   | 6.50 ' 3 fc                                                                | 12.2 ' 1 fc                                                                                            | 9' 6'                                                                                                                                                                                                                    | 8 0.51          | 4 0.32              |                 |                     |  |       |  |  |  |
|                                                                                   | 10.00° 119 | 0° - 30° 89 35%   | 7.50 ' 2 fc                                                                | 14.0 ' 1 fc                                                                                            | 12' 8'                                                                                                                                                                                                                   | 3 0.21          | 4 0.30              |                 |                     |  |       |  |  |  |
|                                                                                   | 15.00° 113 | 0° - 40° 138 55%  | 8.50 ' 2 fc                                                                | 15.9 ' 1 fc                                                                                            | 16' 10'                                                                                                                                                                                                                  | 2 0.14          | 2 0.14              |                 |                     |  |       |  |  |  |
|                                                                                   | 20.00° 106 | 0° - 60° 217 86%  | 10.00 ' 1 fc                                                               | 18.7 ' 1 fc                                                                                            | Delivered Illuminance Rating: (DIR)                                                                                                                                                                                      |                 | 15 FC per W/Sq. Ft. |                 | 12 FC per W/Sq. Ft. |  |       |  |  |  |
|                                                                                   | 30.00° 90  | 0° - 80° 249 99%  | 12.00 ' 1 fc                                                               | 22.5 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 40.00° 69  | 0° - 90° 252 100% | 14.00 ' 1 fc                                                               | 26.2 ' 0 fc                                                                                            | 1' Suspension Length<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50<br>+ Average Footcandles at 2.5' Above Floor |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 50.00° 47  | Total 253 100%    | 16.00 ' 0 fc                                                               | 30.0 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 60.00° 29  |                   | 20.00 ' 0 fc                                                               | 37.5 ' 0 fc                                                                                            |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 70.00° 15  |                   |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 80.00° 5   |                   |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |
|                                                                                   | 90.00° 2   |                   |                                                                            |                                                                                                        |                                                                                                                                                                                                                          |                 |                     |                 |                     |  |       |  |  |  |

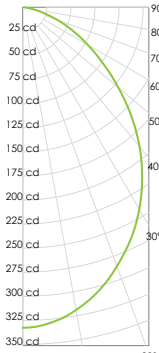
Delivered Lumens: 253  
Luminaire Watts: 15.3  
LER: 16.54

CP at 0deg (Nadir): 124  
CRI: N/A, Amber Light

Beam Angle: 86.25  
Spacing Ratio: 1.09

Lumen Multiplier: N/A  
CCT Multiplier: N/A

CW606TD-10L-30K-EX-FG-MW

| CANDLEPOWER CURVE                                                                   | INTENSITY  | ZONAL LUMENS | SINGLE UNIT: PERFORMANCE<br>INITIAL FOOTCANDLES<br>BASED ON IES BEAM ANGLE | MULTIPLE UNITS: PERFORMANCE<br>80/50/20% REFLECTANCES<br>INITIAL FOOTCANDLES AND WATTS PER SQUARE FOOT |                        |                          |                  |                    |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|-------------------------------------------------------------------------------------|------------|--------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------|--------------------------|------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|-----------|---------------------|-----------|--|--|--|--|
|  | 0.00°      | 0° - 10°     | 32                                                                         | 5%                                                                                                     | Mounting Height<br>AFF | FC at Center<br>on Floor | Beam<br>Diameter | FC at Beam<br>Edge | Ceiling<br>Height                                                                                                                                                                                                        | Fixture<br>Spacing | RCR 2               |           | RCR 4               |           |  |  |  |  |
|                                                                                     | 0.00° 333  | 0° - 20°     | 117                                                                        | 17%                                                                                                    | 6.50 '                 | 8 fc                     | 12.5 '           | 4 fc               | 9'                                                                                                                                                                                                                       | 6'                 | FC +                | W/Sq. Ft. | FC +                | W/Sq. Ft. |  |  |  |  |
|                                                                                     | 5.00° 329  | 0° - 30°     | 239                                                                        | 36%                                                                                                    | 7.50 '                 | 6 fc                     | 14.4 '           | 3 fc               | 12'                                                                                                                                                                                                                      | 8'                 | 21                  | 0.53      | 11                  | 0.34      |  |  |  |  |
|                                                                                     | 10.00° 319 | 0° - 40°     | 374                                                                        | 56%                                                                                                    | 8.50 '                 | 5 fc                     | 16.3 '           | 2 fc               | 16'                                                                                                                                                                                                                      | 10'                | 9                   | 0.22      | 10                  | 0.32      |  |  |  |  |
|                                                                                     | 15.00° 305 | 0° - 60°     | 588                                                                        | 87%                                                                                                    | 10.00 '                | 3 fc                     | 19.2 '           | 1 fc               | Delivered<br>Illuminance<br>Rating: (DIR)                                                                                                                                                                                |                    | 39 FC per W/Sq. Ft. |           | 32 FC per W/Sq. Ft. |           |  |  |  |  |
|                                                                                     | 20.00° 286 | 0° - 80°     | 668                                                                        | 99%                                                                                                    | 12.00 '                | 2 fc                     | 23.0 '           | 1 fc               |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 30.00° 242 | 0° - 90°     | 672                                                                        | 100%                                                                                                   | 14.00 '                | 2 fc                     | 26.9 '           | 1 fc               | 1' Suspension Length<br>Square rooms used for multiple units:<br>- RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00<br>- RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50<br>+ Average Footcandles at 2.5' Above Floor |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 40.00° 189 | Total        | 672                                                                        | 100%                                                                                                   | 16.00 '                | 1 fc                     | 30.7 '           | 1 fc               |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 50.00° 129 |              |                                                                            |                                                                                                        | 20.00 '                | 1 fc                     | 38.4 '           | 0 fc               |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 60.00° 78  |              |                                                                            |                                                                                                        |                        |                          |                  |                    |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 70.00° 38  |              |                                                                            |                                                                                                        |                        |                          |                  |                    |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 80.00° 10  |              |                                                                            |                                                                                                        |                        |                          |                  |                    |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |
|                                                                                     | 90.00° 2   |              |                                                                            |                                                                                                        |                        |                          |                  |                    |                                                                                                                                                                                                                          |                    |                     |           |                     |           |  |  |  |  |

Delivered Lumens: 672  
Luminaire Watts: 15.9  
LER: 42.26

CP at 0deg (Nadir): 333  
CRI: 80

Beam Angle: 87.62  
Spacing Ratio: 1.1

Lumen Multiplier: only 10L available  
CCT Multiplier: only 30K available

# COLOR OPTIONS - POWDER COAT PAINT FINISHES

NOTE: NO PRINTED IMAGE CAN EQUAL THE EXACT COLOR OF FINISH ON METAL.  
SEE INDIVIDUAL SPECIFICATION SHEETS OR CONSULT FACTORY FOR ADDITIONAL INFORMATION.



## STANDARD CORD / STEM / CANOPY FINISHES

| FIXTURE COLOR               | STANDARD CORD COLOR | STANDARD CANOPY / STEM COLOR |
|-----------------------------|---------------------|------------------------------|
| Matte White, Textured White | Matte White         | Matte White                  |
| Gloss White                 | Matte White         | Gloss White                  |
| Matte Black, Textured Black | Matte Black         | Matte Black                  |
| All Others                  | Matte Black         | Same Color as Fixture        |
| Custom Color                | Contact Factory     | Contact Factory              |

## PAINT TIMES

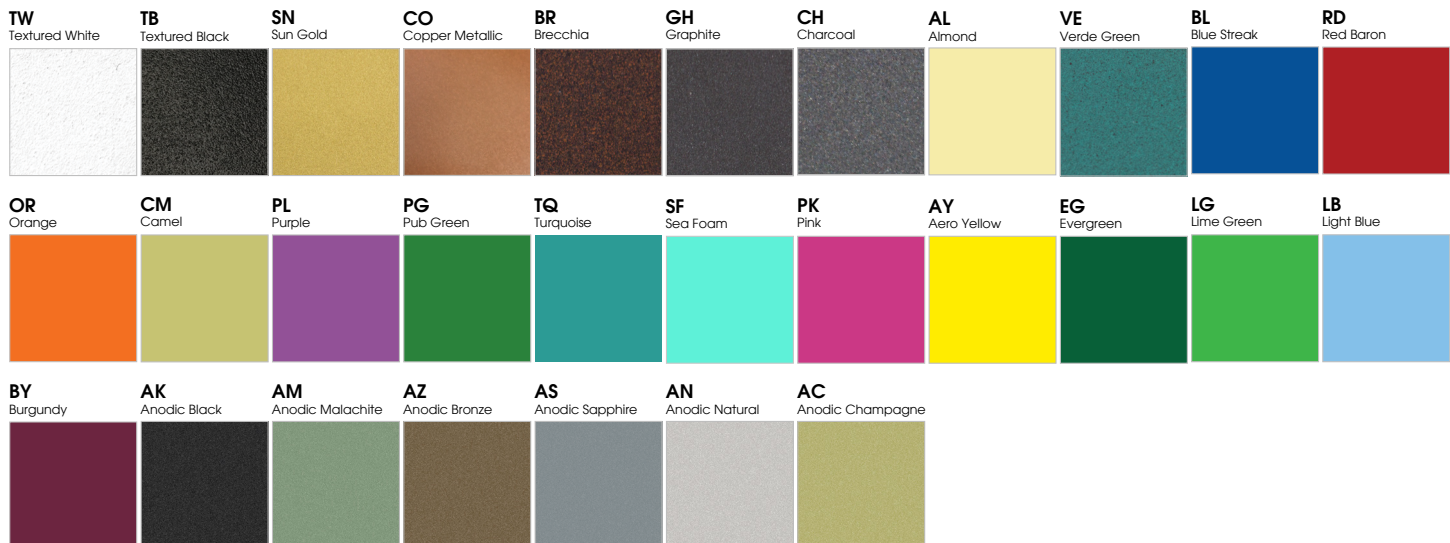
| TIER                       | COST            | AVERAGE PAINT TIME* |
|----------------------------|-----------------|---------------------|
| Tier 1 - Standard Finishes | \$              | ①                   |
| Tier 2 - Typical Finishes  | \$\$            | ①①                  |
| Custom Color               | Contact Factory | Contact Factory     |

\*CONTACT FACTORY FOR SPECIFIC PRODUCT LEAD TIMES

## TIER 1 - STANDARD FINISHES



## TIER 2 - TYPICAL FINISHES



## CUSTOM COLOR FINISHES

CONTACT FACTORY

CC  
Custom Color



\*UNAVAILABLE FOR WET LOCATION



**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**

|                                      |                                     |                                                                                                                                                                                                                                        |
|--------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Project Description</b> <ul style="list-style-type: none"> <li>Cover letter with detailed project description</li> </ul>                                                                                                            |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Completed Checklist</b> (this document)                                                                                                                                                                                             |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Evidence of Right, Title, and Interest</b> <ul style="list-style-type: none"> <li>Deeds, leases, or purchase and sales agreements</li> </ul>                                                                                        |
| <input type="radio"/> Yes            | <input checked="" type="radio"/> NA | <b>Evidence of State or Federal Approvals</b> <ul style="list-style-type: none"> <li>Permits or letters of non-jurisdiction, if applicable</li> </ul>                                                                                  |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Zoning Assessment</b> (see <a href="#">Zoning Assessment Table</a> )<br>Summary of compliance with use and dimensional standards of the land use code                                                                               |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Site Plan Standards Assessment</b> (see Section 14.6 of the land use code) <ul style="list-style-type: none"> <li>Summary of project compliance with site plan standards of the land use code</li> </ul>                            |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Summary of Existing and/or Proposed Easements or Covenants, applicable.</b> <ul style="list-style-type: none"> <li>Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way</li> </ul> |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Waiver Requests</b> (see <a href="#">Waiver Table</a> ) <ul style="list-style-type: none"> <li>Written request for waiver describing request and compliance with applicable waiver standards</li> </ul>                             |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Financial Capability</b> <ul style="list-style-type: none"> <li>Letter or evidence from a financial institution or third party verifying financial capacity to undertake project</li> </ul>                                         |
| <input checked="" type="radio"/> Yes | <input type="radio"/> NA            | <b>Technical Capability</b> <ul style="list-style-type: none"> <li>Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects</li> </ul>                                                 |

## 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 <b>NA</b>  | <b>Impact on Surrounding Street Systems (14-14.6.1(A))</b> <ul style="list-style-type: none"> <li>Describe incremental volume of traffic impacts and mitigation measures. If needed</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Yes</b> NA  | <b>Access and Circulation (14-14.6.1(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Site access and internal circulation, including ADA access</li> <li>Drive-up features, if applicable</li> <li>Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable</li> <li>Sidewalks and condition along street frontages and internal walkways</li> <li>Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)</li> </ul> |
| Yes <b>NA</b>  | <b>Public Transit (14-14.6.1(C)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| <b>Yes</b> NA  | <b>Off-Street Parking (14-14.6.1(D)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code</li> <li>Curb cut separation and parking layout (Technical Manual, Section 1)</li> <li>Construction details for bicycle racks</li> <li>Management plan for snow storage and removal</li> </ul>                                                                                                             |
| Yes <b>NA</b>  | <b>Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable</b> <ul style="list-style-type: none"> <li>Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |

| ENVIRONMENTAL |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes <b>NA</b> | <b>Preservation of Significant Natural Features (14-14.6.2(A)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• High and moderate value waterfowl and wading habitat</li> <li>• Aquifers (for Casco Bay Islands)</li> <li>• Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)</li> <li>• Proposed preservation areas and protection measures</li> <li>• Documentation from environmental compliance consultants and determinations from applicable state and federal agencies</li> </ul> |
| <b>Yes</b> NA | <b>Landscape Preservation (14-14.6.2(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4)</li> <li>• Measures to protect existing vegetation during construction</li> </ul>                                                                                                                                                                                                                                                                |
| <b>Yes</b> NA | <b>Site Landscaping and Buffers (14-14.6.2(C))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Overall landscaping approach and consistency with standards</li> <li>• The use of screening and buffering of service areas and between non-residential and residential uses</li> <li>• Existing Heritage or Feature Trees on site and measures to preserve</li> <li>• Compliance with street tree requirements</li> </ul>                                                                                                                      |
| <b>Yes</b> NA | <b>Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Erosion and sedimentation control plan and measures</li> <li>• Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable</li> <li>• Subsurface sanitary sewage disposal and groundwater protection measures</li> </ul>                                                                                                                                |

| PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes                                        | NA | <b>Consistency with City Master Plans (14-14.6.3(A))</b> <ul style="list-style-type: none"> <li>Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable</li> </ul>                                                                                                                                                                                                                    |
| Yes                                        | NA | <b>Public Safety and Fire Prevention (14-14.6.3(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3)</li> <li>Emergency vehicle access</li> <li>Consistency with public safety standards (Technical Manual, Section 3)</li> </ul>                                                                        |
| Yes                                        | NA | <b>Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 &amp; 9)</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Electrical services, including providing underground services</li> <li>Existing and proposed connections for public utilities and required public utility upgrades</li> <li>Sewer line connections</li> </ul>                                                     |
| SITE DESIGN                                |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Yes                                        | NA | <b>Massing, Ventilations and Wind Impact (14-14.6.4(A))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable</li> <li>Bulk, location, or height impacts on adjoining structures</li> </ul>                                                                                                            |
| Yes                                        | NA | <b>Shadows (14-14.6.4(B)), if applicable</b> <ul style="list-style-type: none"> <li>Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)</li> </ul>                                                                                                                                                                                                                                                          |
| Yes                                        | NA | <b>Snow and Ice Loading (14-14.6.4(C))</b> <ul style="list-style-type: none"> <li>Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways</li> </ul>                                                                                                                                                                                                                                      |
| Yes                                        | NA | <b>View Corridors (14-14.6.4(D)), if applicable</b> <ul style="list-style-type: none"> <li>Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)</li> </ul>                                                                                                                                                                                                                                                            |
| Yes                                        | NA | <b>Historic Resources (14-14.6.4(E)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>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</li> <li>Compliance with standards for preservation and documentation of archaeological resources</li> </ul> |

|     |    |                                                                                                                                                                                                                                                                                                        |
|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes | NA | <b>Exterior Lighting (14-14.6.4(F))</b> <ul style="list-style-type: none"> <li>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</li> </ul>                     |
| Yes | NA | <b>Noise and Vibration (14-14.6.4(G))</b> <ul style="list-style-type: none"> <li>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</li> </ul>   |
| Yes | NA | <b>Signage and Wayfinding (14-14.6.4(H)), if applicable</b> <ul style="list-style-type: none"> <li>Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs</li> <li>Provide drawings of all commercial and directional signage on site</li> </ul> |
| Yes | NA | <b>Zone-Related Design Standards (14-14.6.4(I))</b> <ul style="list-style-type: none"> <li>Address any applicable design review standards by zone, including compliance with Design Manual</li> </ul>                                                                                                  |

## 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Location of solid waste management receptacles</li> <li>• Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable</li> <li>• Location of proposed easements and rights-of-way, including dimensions</li> <li>• Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed</li> </ul> |
| <b>UTILITY PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• Proposed electrical infrastructure</li> <li>• Location, sizing and directional flows of all proposed sewer and stormwater infrastructure</li> <li>• Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site</li> <li>• Electric utility infrastructure</li> </ul>                                                                                               |
| <b>GRADING AND DRAINAGE PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Proposed grades</li> <li>• Proposed stormwater management measures meeting Technical Manual (Section 5) standards</li> <li>• Any proposed alteration of a watercourse or wetlands</li> <li>• Any groundwater protection measures</li> <li>• Proposed buffers and preservation measures for wetlands or significant natural features</li> </ul>                                                                |
| <b>LANDSCAPE PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• Existing vegetation to be preserved and preservation measures</li> <li>• Proposed landscaping, screening, and street trees, including caliper widths for trees</li> <li>• Planting schedule, including street trees</li> </ul>                                                                                                                                                                                |
| <b>ARCHITECTURAL PLANS AND RENDERINGS including:</b>                                                                                                                                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• Exterior building elevations, color renderings, illustrations of all sides</li> <li>• Axonometric and street-level views for structures greater than three stories in height</li> <li>• Provide context drawings, if applicable (Design Manual, page 1)</li> <li>• Floor plans</li> </ul>                                                                                                                     |
| <b>CONSTRUCTION MANAGEMENT PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting</li> <li>• Include a drawing and written narrative</li> </ul>                                                                                                                                                                                                                                                                          |
| <b>OTHER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• Details and cross-sections, as necessary</li> </ul>                                                                                                                                                                                                                                                                                                                                                           |

March 4, 2022  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: 180 Washington Ave – Proposed Building  
Site Plan Application

Dear Planning:

Trillium Engineering Group is providing this project narrative for the proposed building to be constructed at 180 Washington Avenue. This development proposes the demolition of an existing abandoned building to provide a new four-unit residential building (Parcel ID 010 F011001).

The existing site currently features a 717± square foot building and deck area along with a shed and paved walking areas. There also exists an adjacent parcel which will be conveyed to the owner prior to the beginning of this project. The existing hilly terrain slopes downward in a general westerly direction.

The existing building, shed, and paved areas shall be removed and replaced with a new 32'-0"x67'-0" building footprint. The building is to feature ground floor parking to allow for (4) spaces as illustrated on the architectural plans. The access drive aligns with the parking access point, so there shall be no need for any additional on-site paved impervious area that is not covered by the building footprint.

The rear of the site shall be re-graded to allow for a backyard area while allowing the two existing maple trees to remain. This project will require the partial removal of existing retaining wall, and the proposed foundation wall shall also serve as a retaining wall to support the proposing grading. This project will ultimately result in a net gain of 991 square feet of impervious area. Please see the attached stormwater narrative for further analysis.

Please see the plans, application, and below responses to the City of Portland Major Site Plan Application Checklist for further information.

*1. Project Description*

Response: A project description has been provided above.

*2. Completed checklist*

Response: A completed checklist has been provided, see attached documents.

*3. Evidence of Right, Title, and Interest*

Response: A deed to the property has been provided, see attached documents

*4. Evidence of State or Federal Approvals*

Response: This section is non-applicable, as the project will not require state or federal approval.

*5. Zoning Assessment*

Response: The zoning assessment table has been included in the application.

*6. Site Plan Standards Assessment*

Response: This project meets all the relevant standards outlined in Section 14.6 of the City of Portland Land Use Code. Due to the small nature of the work in question, this project will not have a notable effect on the surrounding transportation, public transit access, or environmental quality. This site meets the necessary off-street parking, public infrastructure, and site design requirements.



*7. Summary of existing and/or proposed easements or covenants*

Response: All existing easements and covenants have been shown on Sheets C100 and C101.

*8. Waiver requests*

Response: Trillium Engineering Group is requesting a waiver to reduce the front setback. Please see the attached waiver request for additional information.

*9. Evidence of financial and technical capacity*

Response: Letters of financial and technical capacity have been included in this application, see attached.

Transportation

Response: Vehicle access to the site shall be provided via a proposed access drive as shown on Sheet C101. From there, cars shall park in designated spaces as shown on the attached architectural plans. Due to the small scope of this project, this development will not have an impact on the surrounding traffic pattern.

Environmental

Response: Site landscaping has been provided as shown on Sheet C101. Portland Water District regulations state that street trees are not permitted within 10' of new water lines. This only leaves room for (1) honeylocust street tree in front of the proposed site.

City of Portland regulations also require one shade tree or six plantings per 30 linear feet of all frontages as measured along the property line. The two existing maple trees meet this requirement along the rear property line.

There are no significant natural features on this site. Please see the attached stormwater narrative for drainage information.

Public Infrastructure and Safety

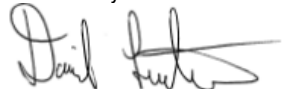
Response: This project is consistent with the City's Master Plan. Trillium Engineering Group has spoken with George Carhart of the Portland Department of Public Works to confirm the location of the existing sewer main and to coordinate the proposed connection. Trillium Engineering Group has also received an Ability to Serve letter from the Portland Water District and has included it with this application.

Site Design

Response: Exterior lighting information has been included in the attached documents, and the location of the exterior lights have been shown on the architectural plans. All other portions of the site design checklist are not applicable.

Thank you for taking the time to review this. Should you have any further questions or require any additional information, please do not hesitate to ask.

Sincerely,



David Latham, P.E.  
Trillium Engineering Group

March 4, 2022

City of Portland  
389 Congress Street  
Portland, ME 04101

Re: 180 Washington Ave – Proposed Building  
Basic Stormwater Management Narrative

Dear Planning:

Trillium Engineering Group is providing this basic stormwater management narrative for the proposed building to be constructed at 180 Washington Avenue. This development proposed the demolition of an existing abandoned building to provide a new four-unit residential building (Parcel ID 010 F011001).

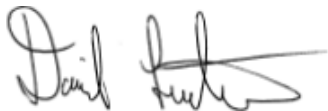
Even though this site proposed an increase in on-site impervious area, it is our professional opinion that this project will not have an adverse effect on the quality or quantity of the stormwater runoff. In the existing state, stormwater runs in a general westerly direction before discharging off-site via the rear property line.

While this project does propose slight re-grading behind the proposed building, the work to be performed will not have a significant impact on the existing flow path, as runoff will still flow in a westerly direction off-site. Additionally, most of the proposed building shall be built over existing impervious surfaces, meaning that the project will only lead to an increase of 991 square feet. By inspection, this minimal change to the existing site will not have a notable impact on the quality or quantity of the existing stormwater runoff.

During the construction process, silt fences are to be installed to ensure that stormwater runoff will not notably impact the surrounding environment.

Thank you for taking the time to review this. Should you have any further questions or require any additional information, please do not hesitate to ask.

Sincerely,



David Latham, P.E.  
Trillium Engineering Group



189 Main Street, Suite 200  
Yarmouth, ME 04096

May 14, 2021

City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Warren Mechanical  
Letter of Technical Capacity

Dear City of Portland:

The Applicant has assembled a team of qualified professionals for the design and permitting of the project. Each team member has extensive experience in the design and permitting of projects throughout the state of Maine. The consultant team consists of the following members:

Civil Engineer: David Latham, PE.  
Trillium Engineering Group  
189 Main Street  
Yarmouth, Maine 04096

Architect: David Harmon  
David Harmon Architecture  
389 Harvard Street  
Brookline, MA 02446

| <b>Standard to be Waived:</b><br>Cite Ordinance or Technical Manual Standard               | <b>Cite Standard Language:</b><br>Cite specific language of applicable Ordinance or Technical Manual Standard | <b>Waiver Being Sought:</b><br>Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet. | <b>Justification for Waiver:</b><br>Address specific waiver criteria, if applicable, and document reasons for the waiver request.                                                                                                                         |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Front setback in the B-2B zone as shown on Table 7-E in the City of Portland Land Use Code | Table shows min. 10' front setback                                                                            | Trillium Engineering Group is requesting that the 10' front setback requirement be reduced to 0'-0"                                       | The existing house is 1.68' feet off of the property line, and the adjacent houses actually exceed their respective property lines. Moving the house back would not match the existing neighborhood aesthetic and would reduce the project scope          |
| Minimum driveway width in parking garage                                                   | Standards dictate min. 22' width                                                                              | Trillium Engineering Group is requesting the 22' width be reduced to 12'-6"                                                               | The existing site is too narrow to feasibly include a 22' travel aisle with associated parking. This area shall only service (4) cars in an area with heavy foot traffic, so we do not anticipate this reduced driveway leading to notable travel issues. |
|                                                                                            |                                                                                                               |                                                                                                                                           |                                                                                                                                                                                                                                                           |



**ZONING ANALYSIS** Relevant Zone(s) B-2B

**All Projects:**

|                           | Required       | Proposed       |
|---------------------------|----------------|----------------|
| Lot Size                  | --             | 3,387          |
| Area Per Dwelling Unit    | 435            | 846.75         |
| Minimum Street Frontage   | 20'            | 36.15          |
| Front Yard Minimum        | 1.65' (Exist.) | 0.00' (waiver) |
| Front Yard Maximum        | --             | --             |
| Rear Yard                 | 10'            | 27.32'         |
| Yard Right                | --             | 3.65'          |
| Yard Left                 | --             | 0.50'          |
| Side Street Setback       | --             | --             |
| Step Back                 | --             | --             |
| Maximum Lot Coverage      | --             | 63.30%         |
| Minimum Lot Coverage      | --             | --             |
| Maximum Height            | 45'            | 42'            |
| Open Space                | --             | --             |
| Maximum Impervious Area   | --             | 63.30%         |
| Pavement Setback          | --             | --             |
| Floor Area Ratio          | --             | --             |
| Off Street Parking Spaces | 4              | 4              |
| Loading Bays              | --             | --             |
| Other 1                   |                |                |
| Other 2                   |                |                |
| Other 3                   |                |                |

### Planned Residential Unit Developments (PRUD) Requirements

|                                   | Required | Proposed |
|-----------------------------------|----------|----------|
| Minimum Lot Size                  |          |          |
| Minimum Lot Area per Dwelling     |          |          |
| Maximum # Units per Building      |          |          |
| Maximum Building Length           |          |          |
| Maximum Accessory Building Length |          |          |
| Minimum Setbacks                  |          |          |
| Minimum Building Separation       |          |          |
| Minimum Open Space                |          |          |

### Affordable Housing Density Bonuses (if applicable)

|                                   | Bonus Increase or Decrease | Maximum Allowable With Bonus | Proposed |
|-----------------------------------|----------------------------|------------------------------|----------|
| Density                           |                            |                              |          |
| Height                            |                            |                              |          |
| Setback Reduction                 |                            |                              |          |
| Recreation Space                  |                            |                              |          |
| Maximum Accessory Building Length |                            |                              |          |
| Minimum Setbacks                  |                            |                              |          |
| Minimum Building Separation       |                            |                              |          |
| Minimum Open Space                |                            |                              |          |
|                                   |                            |                              |          |
| Explanatory Text 1 (optional):    |                            |                              |          |
| Explanatory Text 2 (optional):    |                            |                              |          |
| Explanatory Text 3 (optional):    |                            |                              |          |

**Neighborhood Meeting Certification**

I, David Latham, hereby certify that a neighborhood meeting was held on May 19, 2022 via Microsoft Teams at 6:30 PM for the proposed project located at 180 Washington Ave in Portland, Maine.

I also certify that on May 10, 2022, notices 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 (1,000 feet for subdivisions within an industrial zone or industrial zone changes).
2. Residents on the "interested parties" list

Signed,



David Latham, P.E.  
Trillium Engineering Group

**Attachments:**

1. Copy of the notice sent
2. Sign-in sheet
3. Record of feedback

May 9, 2022

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a proposed residential building with (4) units located at 180 Washington Ave in Portland, Maine. Due to COVID-19, this meeting will be held virtually via Microsoft Teams. If you are interested in joining, please email me at [davidl@trilliumeg.com](mailto:davidl@trilliumeg.com) and I will send you a link to the meeting.

Meeting Date: May 19, 2022

Meeting Time: 6:30 PM

The Land Use Code requires that neighboring property owners and residents on an "interested parties list" be invited to participate in this neighborhood meeting. A sign-in sheet will be created and a record of the meeting will be taken. Both the sign-in sheet and record will be submitted to the Planning Board.

If you have any questions, please call 207-307-0872

Sincerely,



David Latham, P.E.  
Trillium Engineering Group

*Note:*

*Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov) or by mail to the Planning and Urban Development Department, Planning Division, 4<sup>th</sup> Floor, Congress Street, Portland, ME 04101*



Neighborhood Meeting Sign-In Sheet

Date of Meeting: January 13, 2022

Location of Meeting: Microsoft Teams

Proposed Project Name and Address: 26 Oxford Street – Proposed Residential Building

Members of the Public in Attendance:

| <i><b>Name</b></i> | <i><b>Email</b></i>                                            |
|--------------------|----------------------------------------------------------------|
| James Hobbs        | <a href="mailto:Jhobbsn242@gmail.com">Jhobbsn242@gmail.com</a> |
|                    |                                                                |
|                    |                                                                |
|                    |                                                                |
|                    |                                                                |
|                    |                                                                |

Developer and Consultant Team in Attendance:

| <i><b>Name</b></i> | <i><b>Email</b></i>                                                                      |
|--------------------|------------------------------------------------------------------------------------------|
| David Latham       | <a href="mailto:davidl@trilliumeg.com">davidl@trilliumeg.com</a>                         |
| David Harmon       | <a href="mailto:davidharmonarchitecture@gmail.com">davidharmonarchitecture@gmail.com</a> |
|                    |                                                                                          |

Neighborhood Meeting Minutes

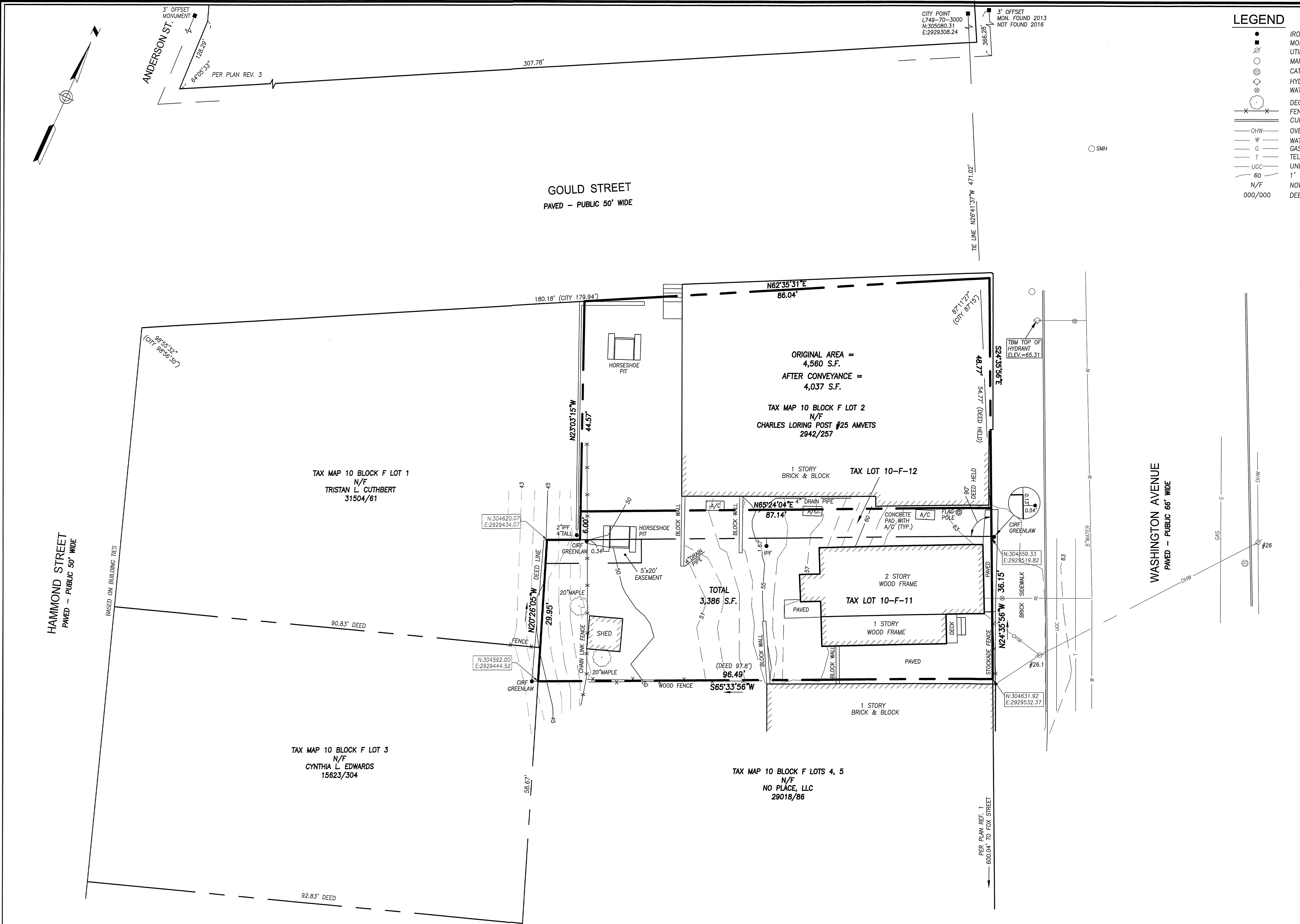
Date of Meeting: May 19, 2022

Location of Meeting: Microsoft Teams

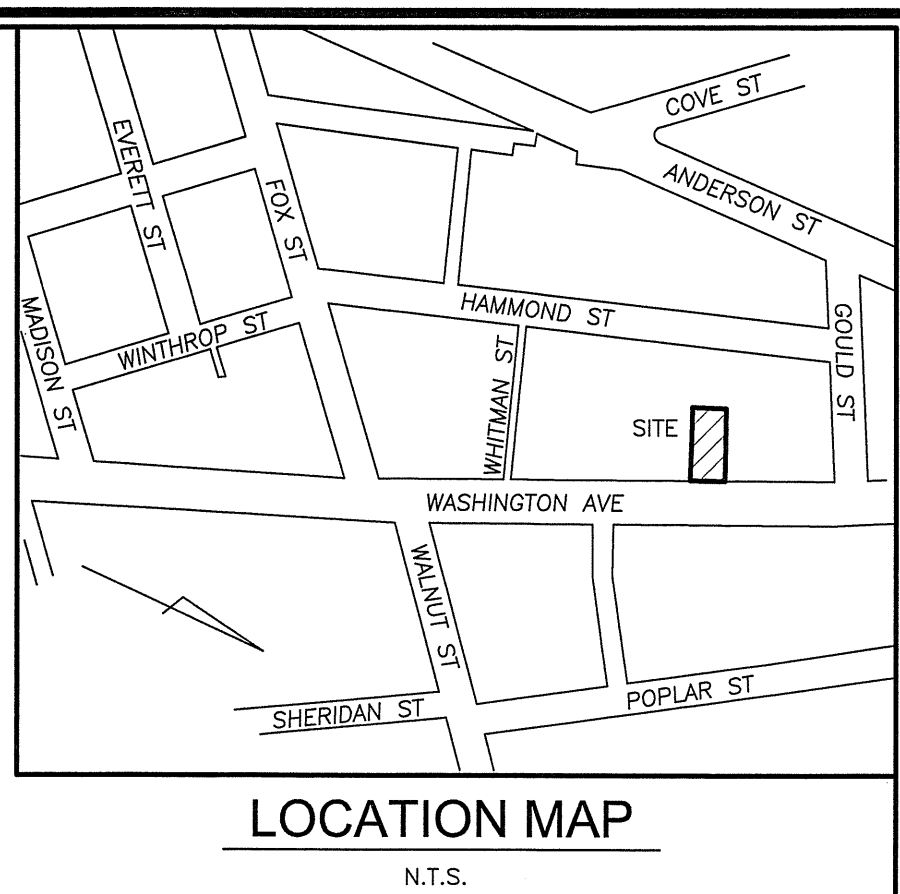
Proposed Project Name and Address: 180 Washington Ave – Proposed Residential Building  
See attached Sign-In Sheet for attendance information.

6:30 PM: Meeting Begins

- David Latham explains scope of project
- Jake asks about how far building goes
  - David Harmon explains there is yard in the back, references site plan
- Jake asks about parking
  - David Latham explains parking is accessible from Washington
- Jake mentions concern re: grade changes and affecting loads on adjacent properties
  - David Latham explains that foundation wall will double as retaining wall, abutters won't worry about load from grading
- Jake asks about timeframe
  - Harmon: construction in the fall, no units sold yet but optimal plan is nine-month construction plan, mid 2023 occupancy
- Jake asks about existing trees in back yard
  - One of the existing trees was safety hazard and has already been removed
  - The one that's still there is very large – concerned about hitting someone's house if they fall
  - Suggests replacing it with tree that doesn't grow as tall
  - David Harmon and David Latham will bring concerns up with Planning Board workshop



- LEGEND**
- IRON PIPE OR ROD FOUND
  - MONUMENT FOUND
  - UTILITY POLE
  - MANHOLE
  - CATCH BASIN
  - HYDRANT
  - WATER VALVE OR SHUTOFF
  - DECIDUOUS TREE
  - FENCE
  - CURB
  - OVERHEAD WIRES
  - WATER LINE
  - GAS LINE
  - TELEPHONE LINE
  - UGC
  - UNDERGROUND COMM. LINE
  - 1' CONTOUR
  - N/F
  - 000/000
  - NOW OR FORMERLY
  - DEED BOOK AND PAGE



- PLAN REFERENCES**
- "BOUNDARY & TOPOGRAPHIC SURVEY AT 134 WASHINGTON AVENUE, PORTLAND, MAINE MADE FOR AVESTA HOUSING DEVELOPMENT CORP. Feb. 13, 2014 OWEN HASKELL, INC. JOB NO. 2014-008P"
  - "AS-BUILT SURVEY ON 56 & 58 HAMMOND STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD STEVEN & ROBERTA COPE JUNE 30, 2013 OWEN HASKELL, INC. JOB NO. 2012-014P"
  - "BOUNDARY SURVEY AT 207 ANDERSON STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD ROCKINGHAM LLC MARCH 25, 2013 OWEN HASKELL, INC. JOB NO. 2013-029P"
  - LITTLE, WEEKS AND MOODY PLAN OF MARCH 1802 RECORDED IN DEED BOOK 36, PAGE 247.
  - "STREET LINE RETRACEMENT AND EXISTING MONUMENTATION PLAN ANDERSON ST. / FOX ST. / GOULD ST. / PLOWMAN ST. CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION FEB. 27, 2015"
  - CITY OF PORTLAND ENGINEERING DIVISION STREET LINE DRAWINGS
  - "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR CHARLES J. LORING POST 25 AMVETS 12-20-65 H.I. & E.C. JORDAN - SURVEYORS"
  - "EXISTING CONDITIONS / SITE PLAN AT 180 WASHINGTON AVE PORTLAND, MAINE FOR: SUNNY TIME SOLAR LLC & FEDERAL STREET PHOENIX LLC 04/30/2014 PREPARED BY: ROBERT T. GREENLAW PLS SURVEYING"
  - "BOUNDARY SURVEY 178 WASHINGTON AVENUE PORTLAND, MAINE LAND OWNED BY: NO PLACE LLC NOVEMBER 3, 2011 R.W. EASTON ASSOCIATES"

- GENERAL NOTES**
- OWNER OF RECORD: DAVID L. HARMON, 8 CHASES LANE, SACO, ME; CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 32486, PAGE 29 AND MAINE MODERN DEVELOPMENT, INC. BOOK 34842, PAGE 265. THE NAME MAINE MODERN DEVELOPMENT, INC HAS BEEN CHANGED TO DAVID HARMON, THE PRINCIPAL.
  - LOCUS IS SHOWN AS LOT 11 (HARMON) AND 12 (MAINE MODERN) IN BLOCK F ON PORTLAND PROPERTY MAP 10.
  - BEARINGS ARE BASED ON THE MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD 83 PER CITY POINTS T102-77-02 N:303502.357, E:2929187.900 & L749-76-3000 N:305080.309, E:2929308.241.
  - ELEVATIONS ARE BASED ON NGVD 1929 PER PK IN POLE # 11, CORNER OF ANDERSON STREET AND EVERETT STREET, ELEVATION 12.42 PER CITY LEVEL BOOK 737, PAGE 77.
  - STREET LINE ESTABLISHED FROM MARKERS AND TIES ON CITY RECORDS AND AS SHOWN ON PLAN REFERENCES 1, 2, 3, AND 5.
  - SIDELINES OF LOT BASED ON DEED DIMENSIONS. SUBJECT DEED CALLS FOR 29.92 FROM THE LAND NOW OF NO PLACE LLC TO AMVETS. HOWEVER THE DIMENSIONS IN THOSE DEEDS LEAVES 30.15 FEET. LINE ALONG AMVETS IS PERPENDICULAR TO WASHINGTON AVENUE. PER THEIR DEED, WHICH IS SENIOR. LINE ALONG NO PLACE LLC IS CREATED FROM DIMENSIONS IN SUBJECT DEED, WHICH PROPERTY IS SENIOR TO NO PLACE LLC.
  - THE REAR LINE OF THIS PROPERTY IS SHOWN BASED ON THE DIMENSIONS IN THE EDWARDS DEED, THE NORTHERLY SIDELINE OF WHICH IS BASED ON THE FENCE BETWEEN EDWARDS AND CUTHBERT. THIS LINE CAN BE TRACED BACK TO PLAN REFERENCE 4, WHICH HAS NO DIMENSIONS OR ANGLES AND IS IMPOSSIBLE TO ACCURATELY RECREATE. A BOUNDARY AGREEMENT IS RECOMMENDED WITH EDWARDS AND CUTHBERT.

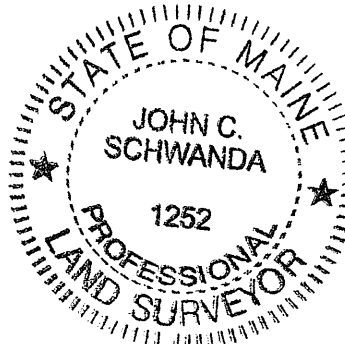
**UTILITY NOTE**

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

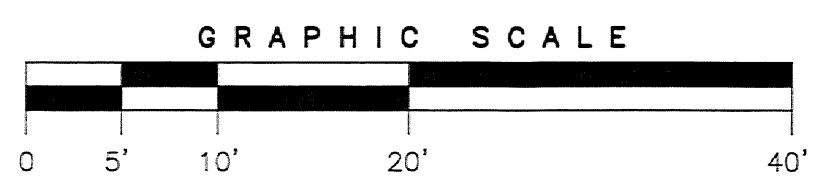
**CERTIFICATE**

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

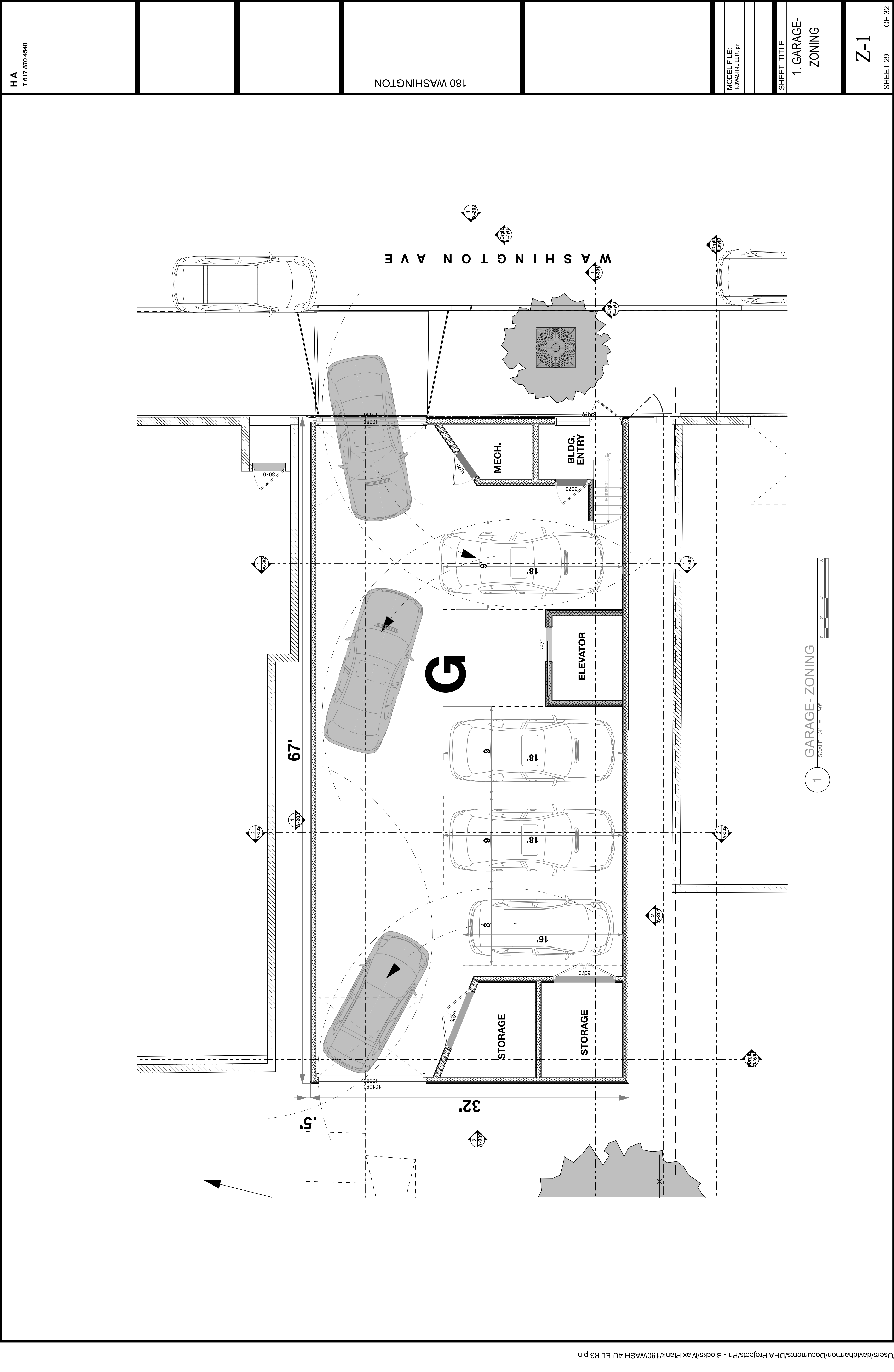
3-30-2022 *John C. Schwanda*  
DATE JOHN C. SCHWANDA, PLS NO. 1252



|                                                                                                                                                                 |               |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------|
| REV. 2                                                                                                                                                          | 03/30/22      | UPDATE OWNERS, NO FIELD UPDATE |
| REV. 1                                                                                                                                                          | 06/21/17      | ADDED AMVETS PARCEL            |
| <b>BOUNDARY &amp; TOPOGRAPHIC SURVEY</b><br>AT<br>180 WASHINGTON AVENUE, PORTLAND, MAINE<br>MADE FOR RECORD OWNER<br>DAVID HARMON<br>8 CHASES LANE, SACO, MAINE |               |                                |
| <b>OWEN HASKELL, INC.</b><br>PROFESSIONAL LAND SURVEYORS<br>390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424                                               |               |                                |
| Drawn By JCS                                                                                                                                                    | Date          | Job No.                        |
| Trace By JLW                                                                                                                                                    | JULY 22, 2016 | 2016-188P                      |
| Check By JCS                                                                                                                                                    | Scale         | Drwg. No.                      |
| Book No. 1147                                                                                                                                                   | 1" = 10'      | 1                              |







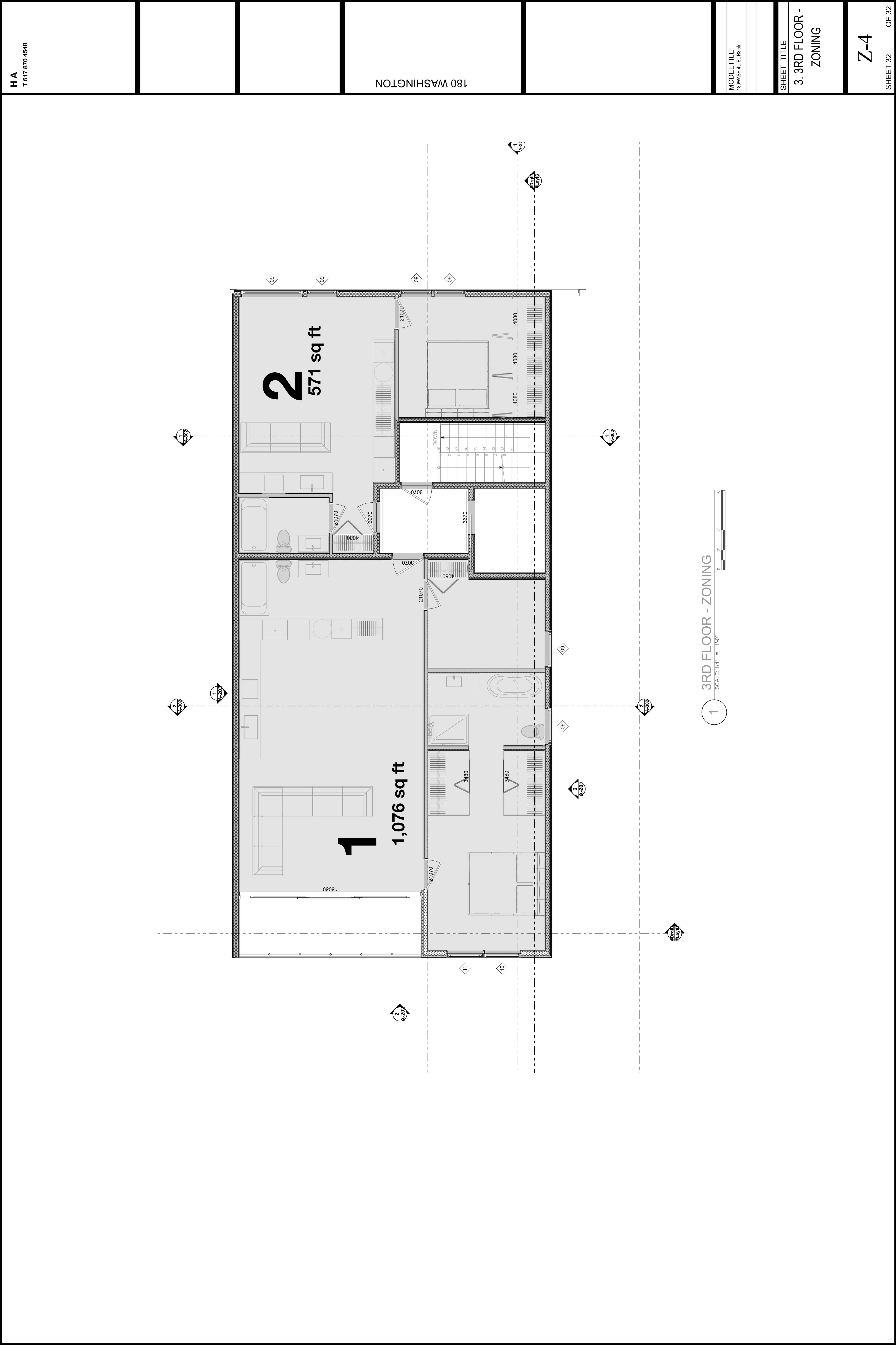
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|-------------------------------------|------------------|--|
| MODEL FILE:<br>180WASH 4U EL R3.pln | SHEET TITLE      |  |
|                                     | 1. GARAGE-ZONING |  |
|                                     | Z-1              |  |
|                                     | SHEET 29 OF 32   |  |

|                |  |
|----------------|--|
| 180 WASHINGTON |  |
| H A            |  |
| T 617 870 4548 |  |





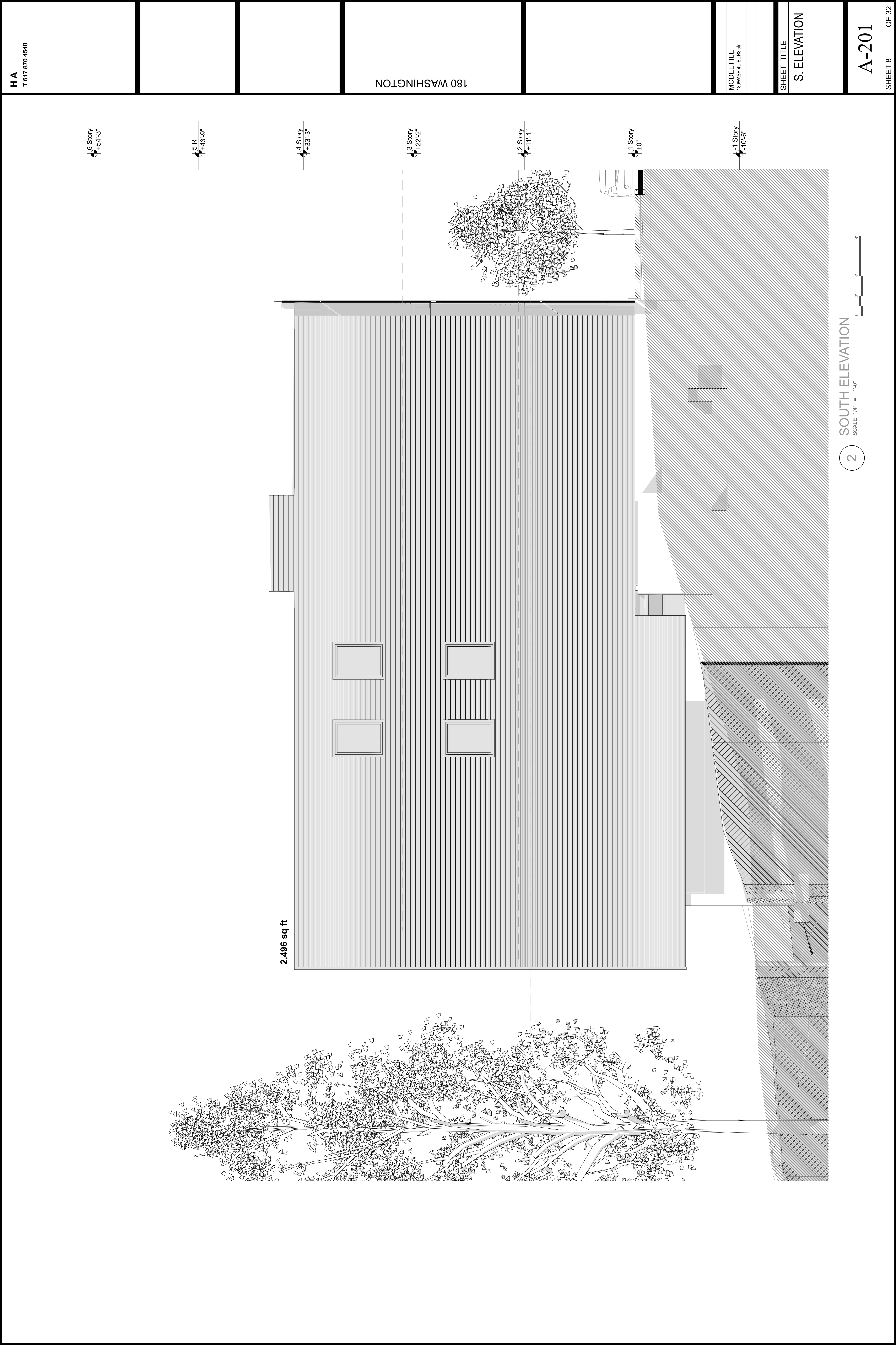












2,496 sq ft

2 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

0 2' 4' 8'





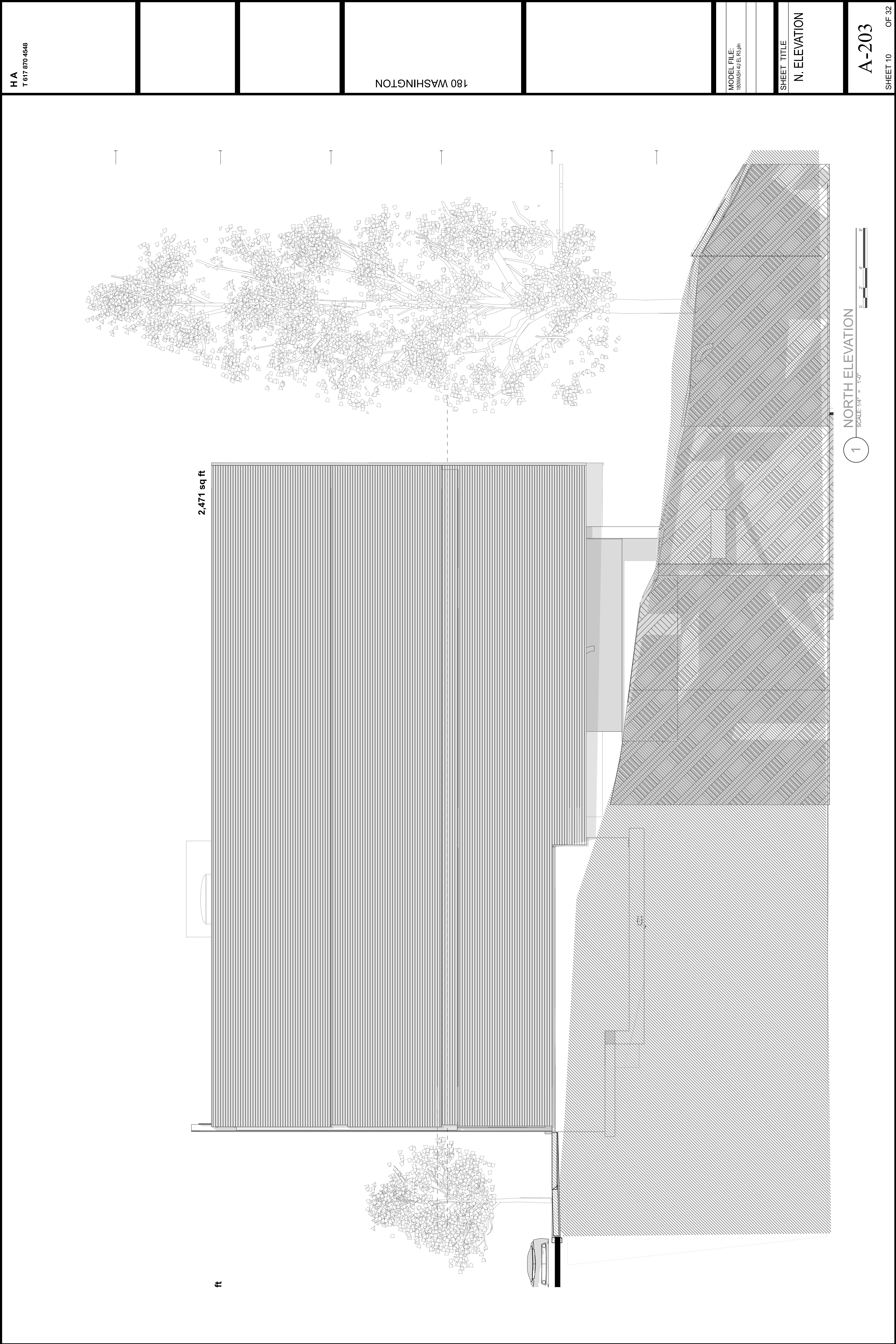
|                       |  |  |                |  |                                     |                              |                         |
|-----------------------|--|--|----------------|--|-------------------------------------|------------------------------|-------------------------|
| H A<br>T 617 870 4548 |  |  | 180 WASHINGTON |  | MODEL FILE:<br>180WASH 4U EL R2.pln | SHEET TITLE<br>EW ELEVATIONS | A-202<br>SHEET 14 OF 27 |
|-----------------------|--|--|----------------|--|-------------------------------------|------------------------------|-------------------------|



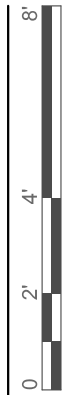


|                       |  |  |                |  |                                     |  |  |                              |       |         |       |
|-----------------------|--|--|----------------|--|-------------------------------------|--|--|------------------------------|-------|---------|-------|
| H A<br>T 617 870 4548 |  |  | 180 WASHINGTON |  | MODEL FILE:<br>180WASH 4U EL R3.dgn |  |  | SHEET TITLE<br>EW ELEVATIONS | A-202 | SHEET 9 | OF 32 |
|                       |  |  |                |  |                                     |  |  |                              |       |         |       |
|                       |  |  |                |  |                                     |  |  |                              |       |         |       |
|                       |  |  |                |  |                                     |  |  |                              |       |         |       |





1 NORTH ELEVATION  
SCALE: 1/4" = 1'-0"



N. ELEVATION

SHEET TITLE

MODEL FILE:  
180WASH 4U EL R3.dgn

180 WASHINGTON

H A  
T 617 870 4548

A-203

SHEET 10 OF 32

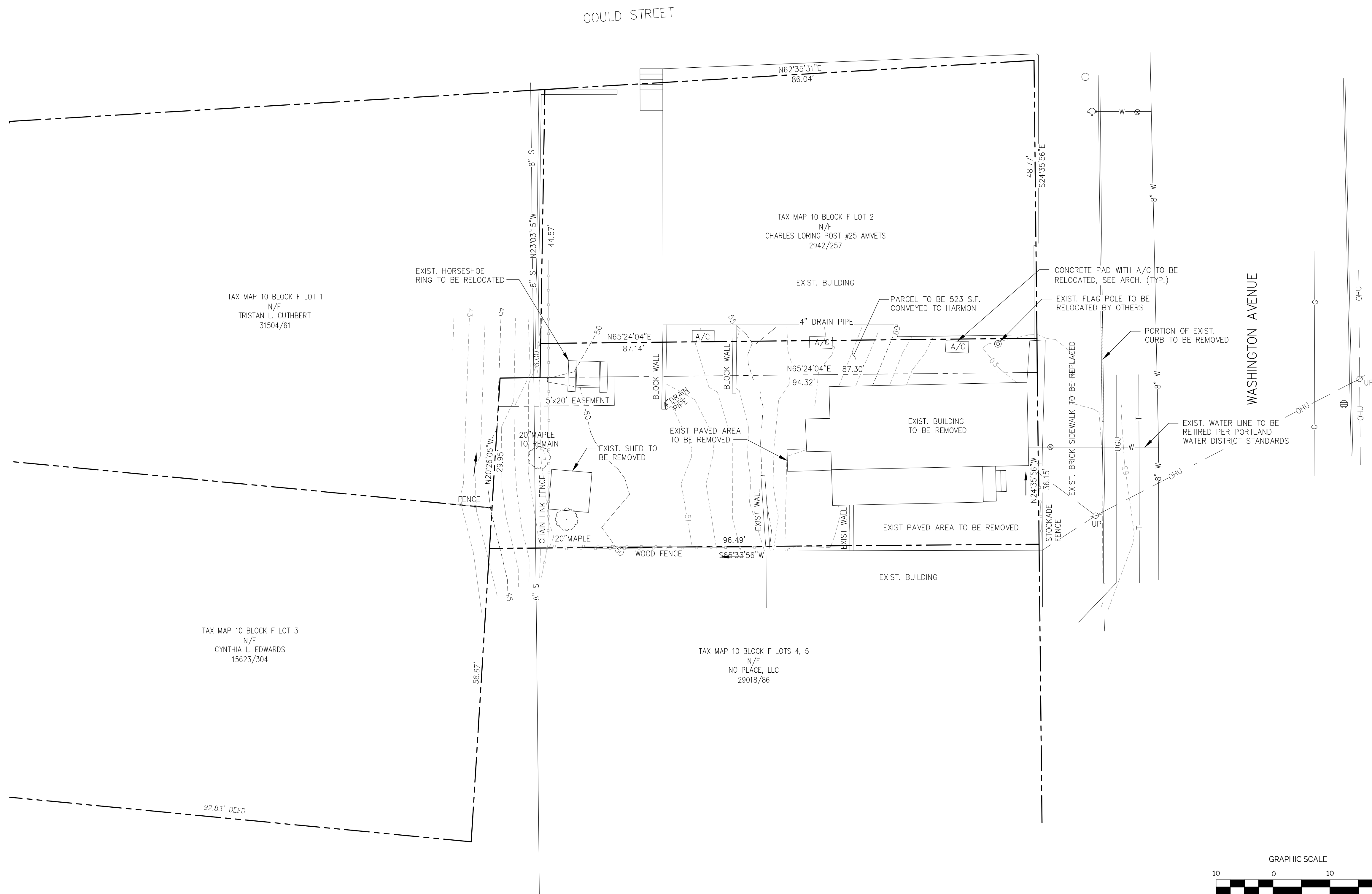








## EXISTING SITE PLAN



SCALE: 1" = 10'-0"

## GENERAL NOTES

- (1) BOUNDARY AND TOPOGRAPHY INFO. TAKEN FROM "BOUNDARY AND TOPOGRAPHIC SURVEY AT 1900 WASHINGTON AVENUE, PORTLAND, MAINE," BY OWEN HASKELL DATED JULY 22, 2016.
- (2) THE CONTRACT WORK TO BE PERFORMED ON THIS PROJECT CONSISTS OF FURNISHING ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, IMPLEMENTS, PARTS AND SUPPLIES NECESSARY FOR OR IN CONNECTION WITH THE INSTALLATION OF THE ABOVE DESCRIBED UTILITIES IN ACCORDANCE WITH THESE DRAWINGS AND AS FURTHER ELABORATED IN ANY ACCOMPANYING SPECIFICATIONS.
- (3) THE WORK SHALL BE PERFORMED IN A THOROUGH WORKMANLIKE MANNER. ALL CONTRACTORS TO CONFORM TO ALL APPLICABLE OSHA STANDARDS. ANY REFERENCE TO A SPECIFICATION OR DESIGNATION OF THE AMERICAN SOCIETY FOR TESTING MATERIALS, FEDERAL SPECIFICATIONS, OR OTHER STANDARDS, CODES OR ORDERS, REFERS TO THE MOST RECENT OR LATEST SPECIFICATION OR DESIGNATION.
- (4) ALL CONSTRUCTION WITHIN THE TOWN RIGHT OF WAY SHALL COMPLY WITH TOWN PUBLIC WORKS STANDARDS. ALL CONSTRUCTION WITHIN A STATE RIGHT OF WAY SHALL COMPLY WITH MAINE D.O. STANDARDS. ALL UTILITY CONSTRUCTION SHALL CONFORM TO RESPECTIVE UTILITY STANDARDS.
- (5) THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS REQUIRED BY THE TOWN PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE TOWN BEFORE HE CAN BEGIN TO PERFORM ALL THE WORK (STREET OPENINGS, BUILDING PERMIT, ETC.). THE CONTRACTOR SHALL POST ALL BONDS AS REQUIRED, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- (6) PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR IS TO INFORM ALL AREA UTILITY COMPANIES AND AVOID ANY DAMAGE TO EXISTING UTILITIES. THE SITE CONTRACTOR IS REQUIRED TO CONTACT DIG-SAFE (1-800-225-4977) AT LEAST 3 BUSINESS DAYS PRIOR TO ANY EXCAVATION TO VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS.
- (7) THE PROJECT DRAWINGS ARE GENERALLY SCHEMATIC AND INDICATE THE POSSIBLE LOCATION OF EXISTING UNDERGROUND UTILITIES. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION FROM ALL UTILITY COMPANY MAPS, MUNICIPAL RECORD MAPS, AND FIELD SURVEY. IT IS NOT GUARANTEED TO BE CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IDENTIFYING ACTUAL UTILITIES AND CHANGING THE UTILITIES WHEN THEY ARE FOUND. WHEN THOSE SERVICES ARE TO BE LEFT IN PLACE, THE CONTRACTOR IS TO PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING THE EXCAVATING AND BACKFILLING OPERATIONS. SHOULD ANY UTILITIES BE DAMAGED OR DISRUPTED, THE CONTRACTOR SHALL NOTIFY THE CONTRACTOR THAT THE DESIGN ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH THE WORK IN THIS AREA.
- (8) OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN FEET OF ANY ELECTRICAL POWER LINE. IF THE CONTRACTOR MUST OPERATE CLOSER THAN TO THE CONTRACTOR MUST CONTACT THE POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS BEFORE ENCRANCHING ON THIS REQUIREMENT.
- (9) IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLANS, APPROVALS, AND DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL THE SITE CONDITIONS IN THE FIELD AND REPORT TO THE DESIGN ENGINEER ANY DISCREPANCIES. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT AN APPROPRIATE REVISION CAN BE MADE PRIOR TO BIDDING.
- (10) THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF THE BUILDING AREA. BUILDING AND DRIVEWAYS SHOWN ARE TO REMAIN. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. THE FACE OF CURBS, OUTSIDE FACE OF WALLS, OR EDGE OF PAVING UNLESS OTHERWISE NOTED.
- (11) ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED IN WRITING BY THE OWNER, DESIGN ENGINEER, AND APPROPRIATE GOVERNMENTAL AGENCY PRIOR TO INSTALLATION.
- (12) THE CONTRACTOR SHALL RESTORE ALL UTILITY STRUCTURES, PIPE, UTILITIES, PAVEMENT, CURBS, SIDEWALKS, AND LANDSCAPED AREAS DISTURBED BY CONSTRUCTION TO AS GOOD AS BEFORE BEING COMPLETED. ANY DELAYED OR DEFICIENT REPAIRS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- (13) ALL EXCAVATION SHALL BE BACKFILLED TO EXISTING GRADE BEFORE THE END OF THE DAY OR ADEQUATELY PROTECTED FROM DANGER TO HUMANS AND ANIMALS.
- (14) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE OWNER WILL PROVIDE A BENCH MARK AT THE CONSTRUCTION SITE FROM WHICH TO BEGIN LAYOUT.
- (15) THE CONTRACTOR SHALL GUARANTEE THE FAITHFUL REMEDY OF ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKSMANSHIP AND GUARANTEES PAYMENT FOR ANY RESULTING DAMAGE WHICH SHALL OCCUR WITHIN A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBstantial COMPLETION OF THE PROJECT.
- (16) THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
- (17) A PRE-CONSTRUCTION CONFERENCE WITH THE OWNER, DESIGNERS, TOWN OFFICIALS AND CONTRACTOR SHALL BE REQUIRED BEFORE ANY CONSTRUCTION OCCURS ON THE PROJECT. DURING CONSTRUCTION THERE SHALL BE WEEKLY PROGRESS MEETINGS WITH THE OWNER (ON SITE OR TELECONFERENCE) UNTIL PROJECT COMPLETION.
- (18) PROPER IMPLEMENTATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE OF PARAMOUNT IMPORTANCE FOR THE PROTECTION OF THE ENVIRONMENT. THE CONTRACTOR SHALL FOLLOW THE EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER, THEIR REPRESENTATIVES, OR STATE/LOCAL/FEDERAL INSPECTORS AT NO ADDITIONAL COST TO THE OWNER.

| LEGEND          |                                 |                 |
|-----------------|---------------------------------|-----------------|
| EXISTING        | DESCRIPTION                     | PROPOSED        |
|                 | GRANITE MONUMENT - 3' OFFSET    |                 |
|                 | IRON PIN FOUND/SET              |                 |
|                 | IRON ROD FOUND                  |                 |
|                 | CAPPED IRON ROD FOUND           |                 |
|                 | DRILL HOLE FOUND                |                 |
|                 | GRANITE MONUMENT FOUND          |                 |
| ---             | STREET LINE                     | ---             |
| ---             | LOT SETBACKS                    | ---             |
| ---             | PROPERTY LINE                   | ---             |
| ---             | ABUTTOR LINE                    | ---             |
| ---             | "NO CUT" BUFFER                 |                 |
|                 | WETLANDS                        |                 |
|                 | EDGE OF ROAD/TRAVELLED WAY      |                 |
|                 | SOIL TEST PIT                   |                 |
| ---             | CONTOUR                         | ---             |
| 327x650 x 327.6 | SPOT GRADE                      | 327x650 x 327.6 |
|                 | GAS SHUT-OFF                    |                 |
|                 | UTILITY POLE                    |                 |
| ---             | OVERHEAD ELECTRICAL             | ---             |
| ---             | UNDERGROUND ELECTRICAL          | ---             |
|                 | ELECTRICAL TRANSFORMER          |                 |
|                 | FIRE HYDRANT                    |                 |
| 8'-W 8'-W       | WATER LINE                      | 8'-W 8'-W       |
|                 | WATER GATE                      |                 |
| 12'-S           | SEWER LINE                      | 12'-S           |
|                 | SEWER MANHOLE                   |                 |
|                 | DRAINAGE MANHOLE                |                 |
|                 | CATCH BASIN                     |                 |
| UD/SD           | UNDERDRAIN/STORMDRAIN           | UD/SD           |
| UD              | UNDERDRAIN                      | UD              |
| SF              | SILT FENCE                      | SF              |
|                 | TEMP. STONE CHECK DAM           |                 |
|                 | GRADING AND FLOW DIRECTION      |                 |
|                 | HAY BALES                       |                 |
|                 | EROSION CONTROL BLANKET         |                 |
|                 | STORMWATER BOUNDARY             |                 |
|                 | STORMWATER FLOW (Tc)            |                 |
|                 | FACE OF LEDGE OUTCROP           |                 |
|                 | BROCK                           |                 |
|                 | MAPLE                           |                 |
|                 | TREE LINE                       |                 |
|                 | SITE LIGHTING (BAYSIDE FIXTURE) |                 |
|                 | STONE WALL                      |                 |



**TRILLIUM**  
ENGINEERING GROUP  
189 MAIN STREET SUITE 200  
YARMOUTH, ME 04096

CLIENT:

DAVID HARMON  
ARCHITECTURE

8 CHASES LANE  
SACO, ME 04072

PRELIMINARY  
NOT FOR CONSTRUCTION

MAINE

180 WASHINGTON AVENUE

## PROPOSED BUILDING

[illegible]

SHEET TITLE:

## EXISTING SITE PLAN

|                 |          |
|-----------------|----------|
| DESIGNED:       | DL       |
| DRAWN:          | DL       |
| DATE:           | 03-04-22 |
| PROJECT NUMBER: | 21-312   |

# C100





SCALE: 1" = 5'-0"

PRELIMINARY  
NOT FOR CONSTRUCTION

MAINE

180 WASHINGTON AVENUE

# PROPOSED BUILDING

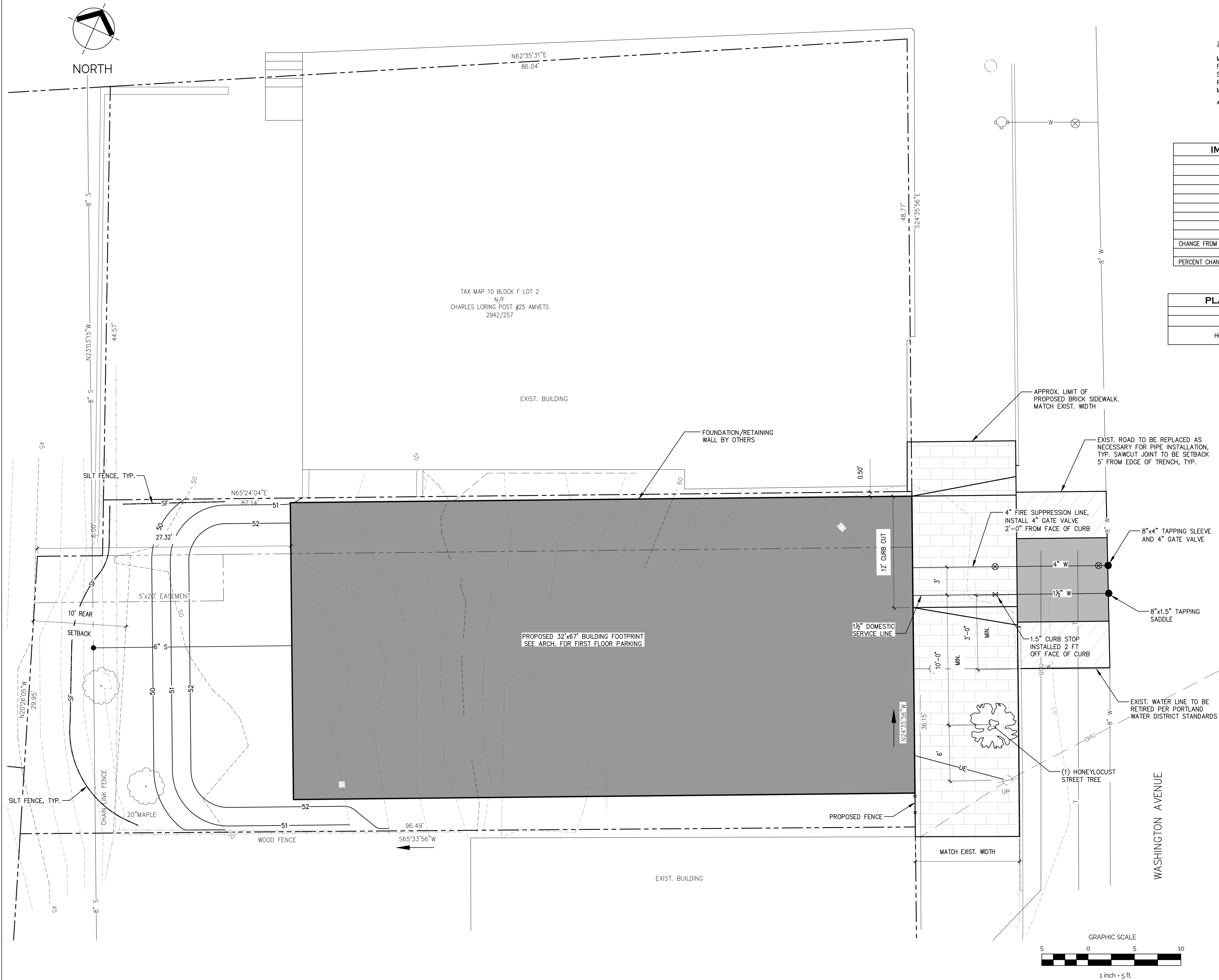
[illegible]

SHEET TITLE:

# PROPOSED GRADING AND DRAINAGE PLAN

|                 |          |
|-----------------|----------|
| DESIGNED:       | DL       |
| DRAWN:          | DL       |
| DATE:           | 03-04-22 |
| PROJECT NUMBER: | 21-312   |

C101



|                                                  |                    |                 |
|--------------------------------------------------|--------------------|-----------------|
| ZONE: B-2B                                       |                    |                 |
|                                                  | <u>REQUIRED</u>    | <u>PROPOSED</u> |
| MIN. LOT AREA PER UNIT                           | 435 SF             | 846.75 SF       |
| FRONT SETBACK                                    | 1.68' <sup>A</sup> | 0.00'           |
| SIDE SETBACK                                     | NONE               | 0.50'           |
| REAR SETBACK                                     | 10'                | 27.32'          |
| MAX. IMPERVIOUS RATIO                            | NONE               | 63.30%          |
| <sup>A</sup> GRANDFATHERED BY EXISTING CONDITION |                    |                 |

| IMPERVIOUS AREA TABLE      |                         |                         |
|----------------------------|-------------------------|-------------------------|
| TYPE OF COVER              | EXISTING IMP. AREA (SF) | PROPOSED IMP. AREA (SF) |
| BUILDING                   | 767                     | 2,144                   |
| PAVEMENT                   | 386                     | 0                       |
| TOTAL                      | 1,153                   | 2,144                   |
| CHANGE FROM EXISTING (+/-) |                         | 991                     |
| PERCENT CHANGE (+/-)       |                         | 29.26%                  |

| PLANTING SCHEDULE |             |          |
|-------------------|-------------|----------|
| TYPE              | SIZE        | QUANTITY |
| HONEYLOCUST       | 2-2.5" CAL. | 1        |

| LEGEND   |                                 |          |
|----------|---------------------------------|----------|
| EXISTING | DESCRIPTION                     | PROPOSED |
|          | GRANITE MONUMENT - 3' OFFSET    |          |
|          | IRON PIN FOUND/SET              |          |
|          | IRON ROD FOUND                  |          |
|          | CAPED IRON ROD FOUND            |          |
|          | DRILL HOLE FOUND                |          |
|          | GRANITE MONUMENT FOUND          |          |
|          | STREET LINE                     |          |
|          | LOT SETBACKS                    |          |
|          | PROPERTY LINE                   |          |
|          | ABUTION LINE                    |          |
|          | "NO CUT" BUFFER                 |          |
|          | WETLANDS                        |          |
|          | EDGE OF ROAD/TRAVELLED WAY      |          |
|          | SOIL TEST PIT                   |          |
|          | CONTOUR                         |          |
|          | SPOT GRADE                      |          |
|          | GAS SHUT-OFF                    |          |
|          | UTILITY POLE                    |          |
|          | OVERHEAD ELECTRICAL             |          |
|          | UNDERGROUND ELECTRICAL          |          |
|          | ELECTRICAL TRANSFORMER          |          |
|          | FIRE HYDRANT                    |          |
|          | WATER LINE                      |          |
|          | WATER GATE                      |          |
|          | SEWER LINE                      |          |
|          | SEWER MANHOLE                   |          |
|          | DRAINAGE MANHOLE                |          |
|          | CATCH BASIN                     |          |
|          | UNDERDRAIN/STORMDRAIN           |          |
|          | UNDERDRAIN                      |          |
|          | SILT FENCE                      |          |
|          | TEMP. STONE CHECK DAM           |          |
|          | GRADING AND FLOW DIRECTION      |          |
|          | HAY BALES                       |          |
|          | EROSION CONTROL BLANKET         |          |
|          | STORMWATER BOUNDARY             |          |
|          | STORMWATER FLOW (To)            |          |
|          | FACE OF LEDGE OUTCROP           |          |
|          | BIRCH                           |          |
|          | MAPLE                           |          |
|          | TREE LINE                       |          |
|          | SITE LIGHTING (BAYSIDE FIXTURE) |          |
|          | STONE WALL                      |          |





MAINE

180 WASHINGTON AVENUE  
PORTLAND

# PROPOSED BUILDING

[illegible]

HEET TITLE:

## SITE DETAILS

|                 |          |
|-----------------|----------|
| SIGNED:         | DL       |
| DRAWN:          | DL       |
| DATE:           | 01-05-22 |
| PROJECT NUMBER: | 21-312   |

C200



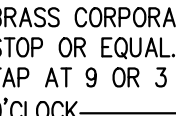
SCALE: NTS



SCALE: NTS



SCALE: NTS



SERVICE CONNECTION NOTES:

1. TEFLON THREADED SEALANT TAPE WILL BE USED ON ALL CORPORATION STOPS PRIOR TO INSTALLATION.
  - A. SPIRAL WRAP COMPLETELY COVERING THE THREAD AREA WITH TWO WRAPS.
  - B. PIPE DOPE OR OTHER LIQUID THREAD SEALANTS ARE NOT ACCEPTABLE.
2. LEAVE UP TO THREE THREADS SHOWING OUTSIDE OF PIPE. A TORQUE OF 35 POUNDS IS RECOMMENDED.

### GENERAL NOTES

1. CONTRACTOR SHALL CONFIRM ALL PIPE SIZES WITH THE CITY WATER DISTRICT.
2. WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE CITY WATER DISTRICT STANDARDS.
3. CONTRACTOR SHALL STUB NEW SERVICES AT THE EDGE OF THE R.O.W. IN THE MIDDLE OF EACH LOT, UNLESS OTHERWISE NOTED ON THE PLAN/PROFILES.
4. FINAL LOCATION OF ALL BLOW OFF VALVES, SHUT OFF VALVES, STREET BOXES AND HYDRANT VALVES SHALL BE IN ACCORDANCE WITH THE CITY WATER DISTRICT.

## WATER MAIN CONNECTION DETAIL

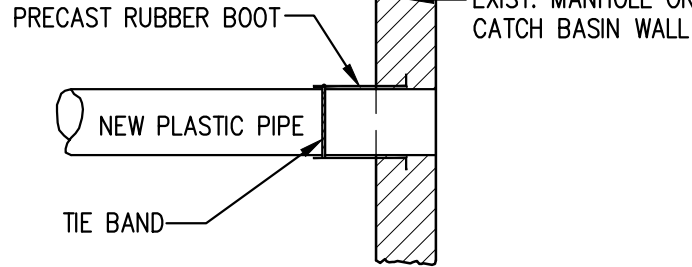
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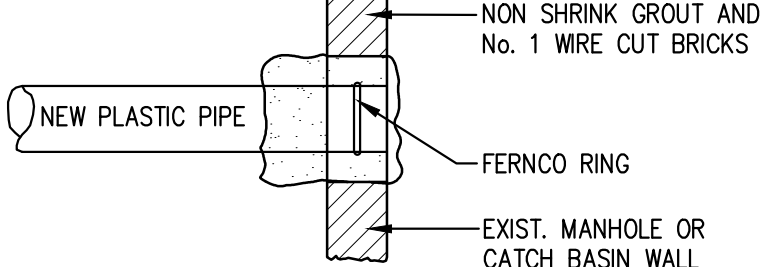
NOTE:  
REFER TO MECHANICAL DRAWINGS FOR BATHROOM ALTERNATE NO. 1.



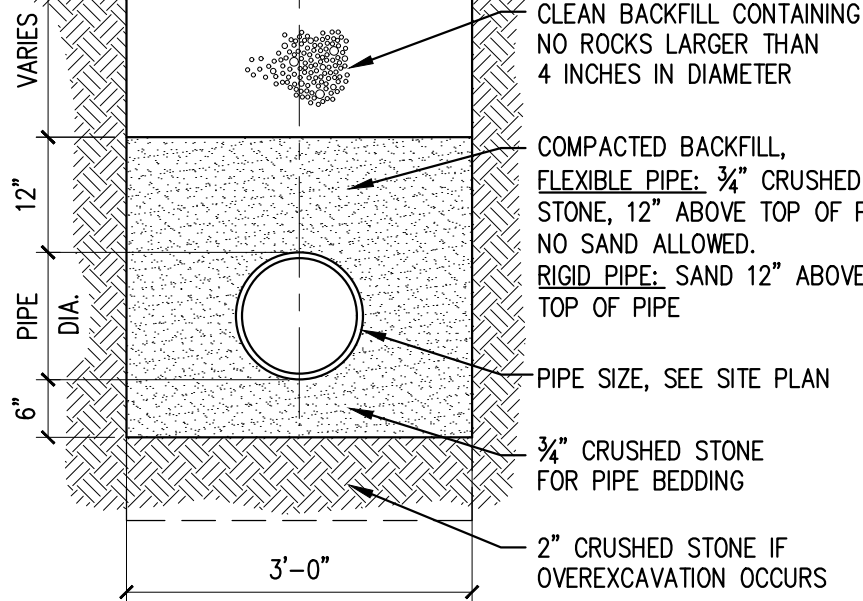
NOTE:  
NEW SEWER PIPE MUST BE PRESSURE TESTED AFTER INSTALLATION IS COMPLETE. SEWER DISTRICT STAFF MUST BE PRESENT DURING TESTING AND MUST INSPECT ALL STRUCTURES AND PIPING BEFORE THEY ARE BACK FILLED.



## METHOD 2 – NEW CONSTRUCTION

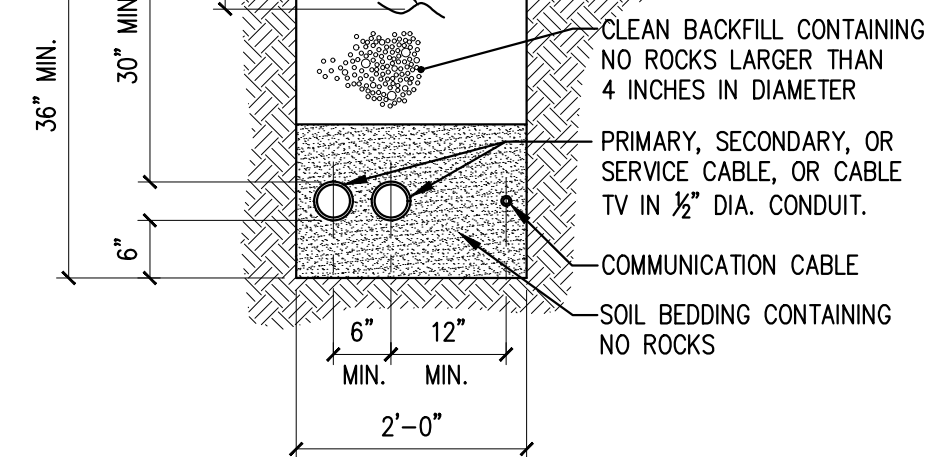


### METHOD 3 – NEW PIPE INTO EXISTING STRUCTURE



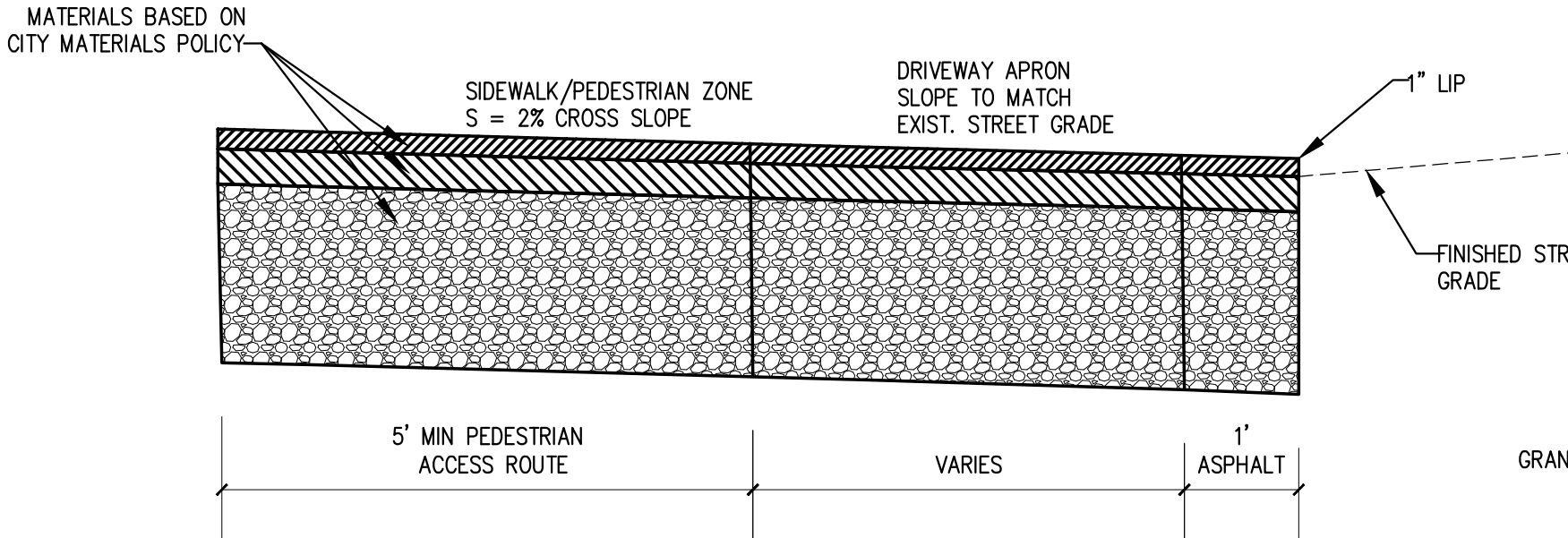
## TYPICAL PIPE TRENCH DETAIL

SCALE: NTS

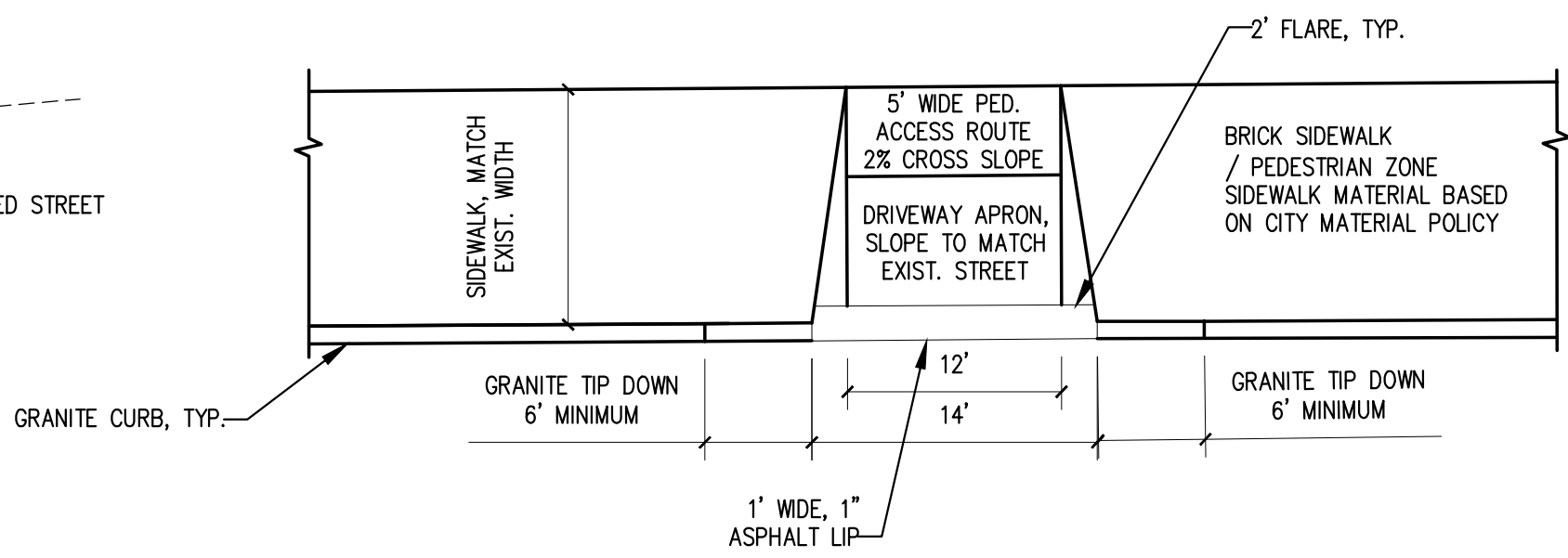


## TYPICAL WIRE TRENCH DETAIL

SCALE: NTS



## TYPICAL DRIVEWAY APRON DETAIL



SCALE: NTS



EROSION AND SEDIMENTATION NOTES

1. THIS PLAN HAS BEEN DEVELOPED TO PROVIDE A STRATEGY FOR DEALING WITH SOIL EROSION AND SEDIMENTATION DURING AND AFTER PROJECT CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARD AND SPECIFICATIONS FOR EROSION PREVENTION AS CONTAINED IN THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: "MAINE EROSION AND SEDIMENT CONTROL BMPs" PUBLISHED BY THE MAINE DEP, LATEST EDITION.

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 DOWN GRADING 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 TO BE PLACED IN LOW FLOW DRAINAGE SWALES AND PATHS TO TRAP SEDIMENTS AND REDUCE RUNOFF VELOCITIES. DO NOT PLACE HAY BALES IN FLOWING WATER OR STREAMS.
- 1.3 RIPRAP: PROVIDE RIPRAP IN AREAS WHERE CULVERTS DISCHARGE OR 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. THE DISTURBED AREAS WILL BE REVEGETATED WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.
- 1.5 STRAW AND HAY MULCH: USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. ALL OTHER SLOPES MUST BE COVERED WITH JUTE MESH OVER MULCH, OR CURLEX II OR EXCELSIOR MAY BE USED IN PLACE OF JUTE MESH AND MULCH OVER LOAM AND SEED.
- 1.6 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%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
2. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES
- PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:
- 2.1 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 85% REVEGETATED.
- 2.2 HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SILT FENCE.
- 2.3 PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:
- A. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
- B. AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
- C. STABILIZE STOCKPILES WITHIN 15 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
- D. SURROUND STOCKPILE SOIL WITH SILTATION FENCE AT BASE OF PILE.
- 2.4 ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH 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 SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.
- 2.5 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.
- 2.6 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 ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
- 3.2 SLOPES GREATER THAN 2:1 WILL RECEIVE RIPRAP.

CONSTRUCTION PHASE

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

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.
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.
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. NO STOCKPILE SHALL BE CLOSER THEN 100' OF A RESOURCE INCLUDING, BUT NOT LIMITED TO, WETLANDS, STREAMS, AND OPEN WATER BODIES. ALL STOCKPILES SHALL HAVE A SILTATION FENCE BELOW THEM REGARDLESS OF TIME OF PRESENCE. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 15 DAYS SHALL BE:
- A. TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
- B. SEEDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.
- C. INSTALL SILT FENCE AROUND STOCKPILE AT BASE OF PILE.
- STOCKPILES TO HAVE SILT FENCE INSTALLED AT TIME OF ESTABLISHMENT AT BASE OF PILE.
4. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 30 DAYS SHALL BE EITHER:
- A. TREATED WITH ANCHORED MULCH IMMEDIATELY, OR
- B. SEEDED WITH CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LBS/1000 SQ. FT) AND MULCHED IMMEDIATELY.
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.)
6. ALL CULVERTS WILL BE PROTECTED WITH STONE RIPRAP (D50 = 6" UNLESS OTHERWISE SPECIFIED) AT INLETS AND OUTLETS.

POST-CONSTRUCTION REVEGETATION

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

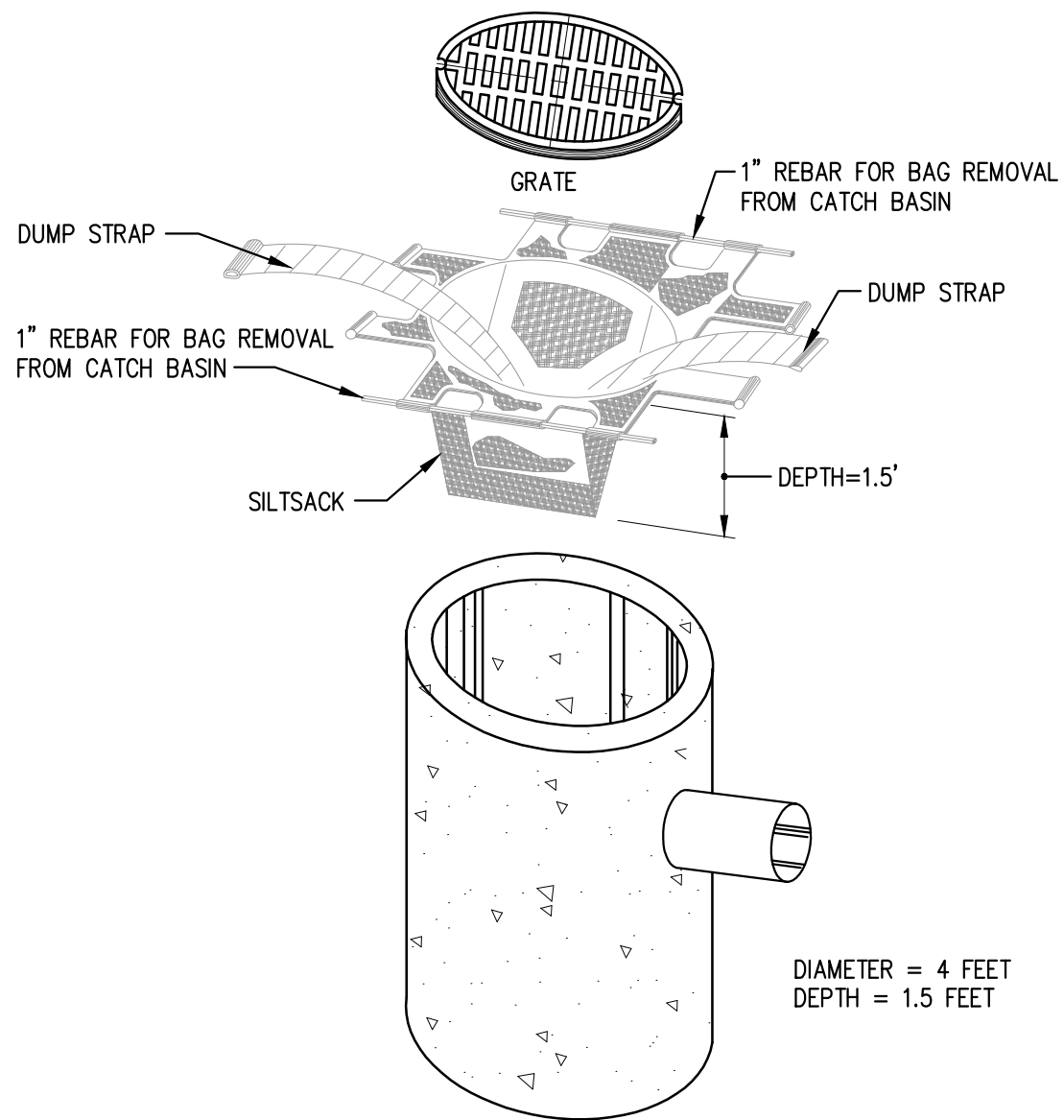
1. A MINIMUM OF 4" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE, OR STONE WILL BE PLACED ON SLOPES TO STABILIZE SURFACES.
2. IF FINAL GRADING IS REACHED DURING THE NORMAL GROWING SEASON (4/15 TO 9/15), PERMANENT SEEDING WILL BE DONE AS SPECIFIED BELOW. 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:
- | LAWNS                                     | SWALES                            |
|-------------------------------------------|-----------------------------------|
| KENTUCKY BLUEGRASS 0.46 LBS/1000 SQ. FT.  | RED TOP 0.05 LBS/1000 SQ. FT.     |
| CREeping RED FESCUE 0.46 LBS/1000 SQ. FT. | TALL FESCUE 0.46 LBS/1000 SQ. FT. |
| PERENNIAL RYE GRASS 0.11 LB/1000 SQ. FT.  |                                   |
3. AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IS HAS BEEN SEEDED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO-MULCH, JUTE NET OVER MULCH, PRE-MANUFACTURED EROSION MATS 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: (NOTE: SOIL SHALL NOT BE VISIBLE)
- I. BEING DRIVEN OVER BY TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
- II. BLANKETED BY TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING, OR WITH SPRAY, ON GRADES GREATER THAN 5%.
- III. SEE NOTE 6, GENERAL NOTES, AND NOTE 8, WINTER CONSTRUCTION.
- B. HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER ASPHALT, WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.
4. 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. ALSO REFER TO NOTE 9 OF WINTER CONSTRUCTION.
- A. ONLY UNFROZEN LOAM SHALL BE USED.
- B. 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.
- C. WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (1.2 LBS/1000 SQ.FT) SHALL BE ADDED TO THE PREVIOUSLY NOTED AREAS.
- D. WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.6 LBS/1000 SQ. FT.) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
- E. FERTILIZING, SEEDING AND MULCHING SHALL BE APPLIED TO LOAM THE DAY THE LOAM IS SPREAD BY MACHINERY.
- F. ALTERNATIVE HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.
5. FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 30 DAYS UNTIL 85% 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.

MONITORING SCHEDULE

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MONITORING, MAINTAINING, REPAIRING, REPLACING AND REMOVING ALL OF THE EROSION AND SEDIMENTATION CONTROLS OR APPOINTING 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:

1. HAY BALE BARRIERS, SILT FENCE, AND STONE CHECK DAMS 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.
2. VISUALLY INSPECT RIPRAP 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.
3. REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEEDED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEEDED AS NEEDED. EXPOSED AREAS WILL BE RESEEDD 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.



"SILTSACK" INSTALLATION INSTRUCTION

1. REMOVE THE CATCH BASIN GRATE AND PLACE THE SACK INTO THE OPENING. HOLD OUT APPROXIMATELY SIX (6) INCHES OF THE SACK BEYOND THE BASIN FRAME TO ALLOW ACCESS TO THE "SILTSACK" LIFTING STRAPS. REPLACING THE GRATE BACK INSIDE OF ITS FRAME WILL HOLD THE SACK IN PLACE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING THIS SEDIMENT CONTROL DEVICE. THE SACK IS CONSIDERED FULL AND READY TO EMPTY WHEN THE THE "RESTRAINT CORD" IS NO LONGER VISIBLE.
3. THE "SILTSACK" IS REMOVED BY PLACING TWO (2) PIECES IF 1 INCH DIAMETER REBAR THROUGH THE LIFTING LOOPS LOCATED ON EACH SIDE OF THE SACK AND LIFTING WITH AN APPROPRIATE PIECE OF CONSTRUCTION EQUIPMENT. THE LIFTING STRAPS ARE CONNECTED TO THE BOTTOM OF THE SACK AND THE LIFTING ACTION WILL CAUSE THE SACK TO TURN INSIDE OUT, AND EMPTYING THE CONTENTS. THE SACK SHOULD THEN BE CLEANED, RINSED AND RETURNED TO ITS ORIGINAL SHAPE AND PLACED BACK IN THE BASIN.
4. THE "SILTSACK" IS REUSABLE, THEREFORE, ONCE THE CONSTRUCTION CYCLE IS COMPLETE, REMOVE THE SACK FROM THE BASIN, CLEAN AND STORE OUT OF DIRECT SUNLIGHT UNTIL ITS NEXT USE.
5. THE "SILTSACK" SEDIMENT CONTROL DEVICE IS MANUFACTURED BY: ACF ENVIRONMENTAL

EROSION CONTROL DURING WINTER CONSTRUCTION

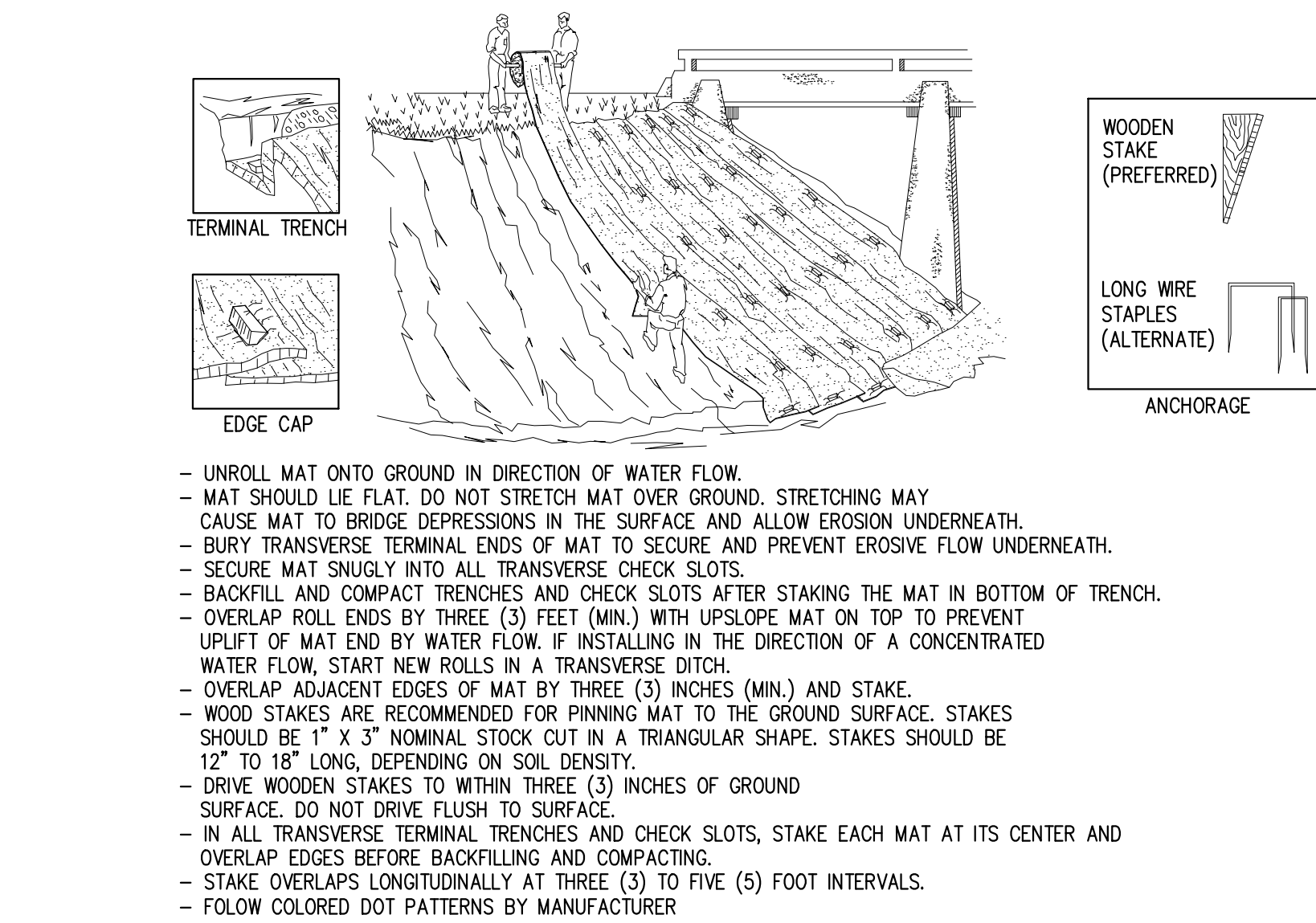
1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. 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 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SODDED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES 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 1 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. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER 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 THE PERMANENT SURFACE TREATMENT; EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SILT FENCE OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30'S.
7. 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%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH EXCELSIOR OR CURLEX.
8. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1 THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
9. BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1, WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.
10. IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

SITE INSPECTION AND MAINTENANCE

1. WEEKLY INSPECTIONS, AS WELL AS ROUTINE INSPECTIONS FOLLOWING RAIN FALLS, SHALL BE CONDUCTED BY THE GENERAL CONTRACTOR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES UNTIL FINAL ACCEPTANCE OF THE PROJECT (85% GRASS CATCH). NECESSARY REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION. FINAL ACCEPTANCE SHALL INCLUDE A SITE INSPECTION TO VERIFY THE STABILITY OF ALL DISTURBED AREAS AND SLOPES. UNTIL FINAL INSPECTION, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL IMMEDIATELY BE CLEANED, AND REPAIRED BY THE GENERAL CONTRACTOR AS REQUIRED. DISPOSAL OF ALL TEMPORARY EROSION AND CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- IT IS RECOMMENDED THAT THE OWNER HIRE THE SERVICES OF THE DESIGN ENGINEER TO PROVIDE COMPLIANCE INSPECTIONS (DURING ACTIVE CONSTRUCTION) RELATIVE TO IMPLEMENTATION OF THE STORMWATER AND EROSION CONTROL PLANS. SUCH INSPECTIONS SHOULD BE LIMITED TO ONCE A WEEK OR AS NECESSARY AND BE REPORTABLE TO THE OWNER, TOWN AND DEP.
2. SHORT-TERM SEDIMENTATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN OUT ALL SWALES AND STRUCTURES PRIOR TO TURNING PROJECT OVER TO THE CITY.

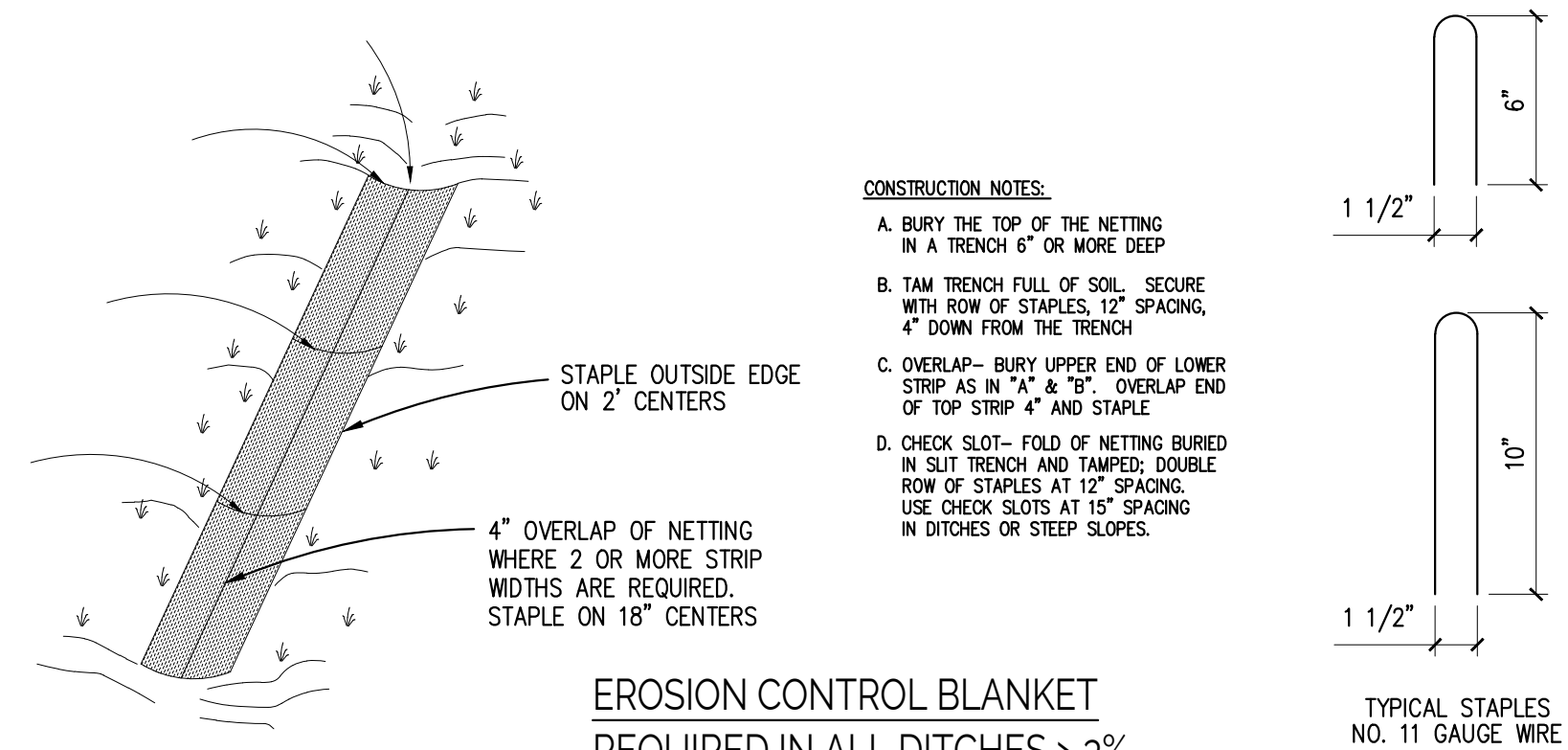
MAINTENANCE AFTER CONSTRUCTION

1. LONG-TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL FACILITIES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER OR THEIR DESIGNEE. SUCH RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO THOSE DETAILED AS FOLLOWS:
- A. PARKING LOT SHALL BE MECHANICALLY SWEEP TWICE PER YEAR. THE FIRST SHALL TAKE PLACE IN THE MID WINTER (JANUARY THRU) TO REMOVE ACCUMULATED SANDS FROM WINTER SANDING TO THIS POINT. THE SECOND SWEEPING SHALL TAKE PLACE AFTER WINTER SANDING OPERATIONS TERMINATE BUT PRIOR TO MAY 1.
- B. INSPECTION OF STORMWATER OUTLET STRUCTURE SHOULD BE CONDUCTED TWICE PER YEAR. ACCESS TO THE STRUCTURE IS THROUGH THE TOP. THE OIL/WATER SEPARATOR UNIT SHALL BE PUMPED DOWN AND THE SEDIMENT AND TRASH SHALL BE REMOVED AT THE TIME OF THE INSPECTION. THE REMOVAL OF ALL SEDIMENT AND TRASH WILL HELP MINIMIZE VOLUME LOSS.
2. THE OWNER SHALL FILE A YEARLY MAINTENANCE REPORT TO THE CITY DOCUMENTING THE REQUIRED MAINTENANCE FOR THE STORMWATER SYSTEM.

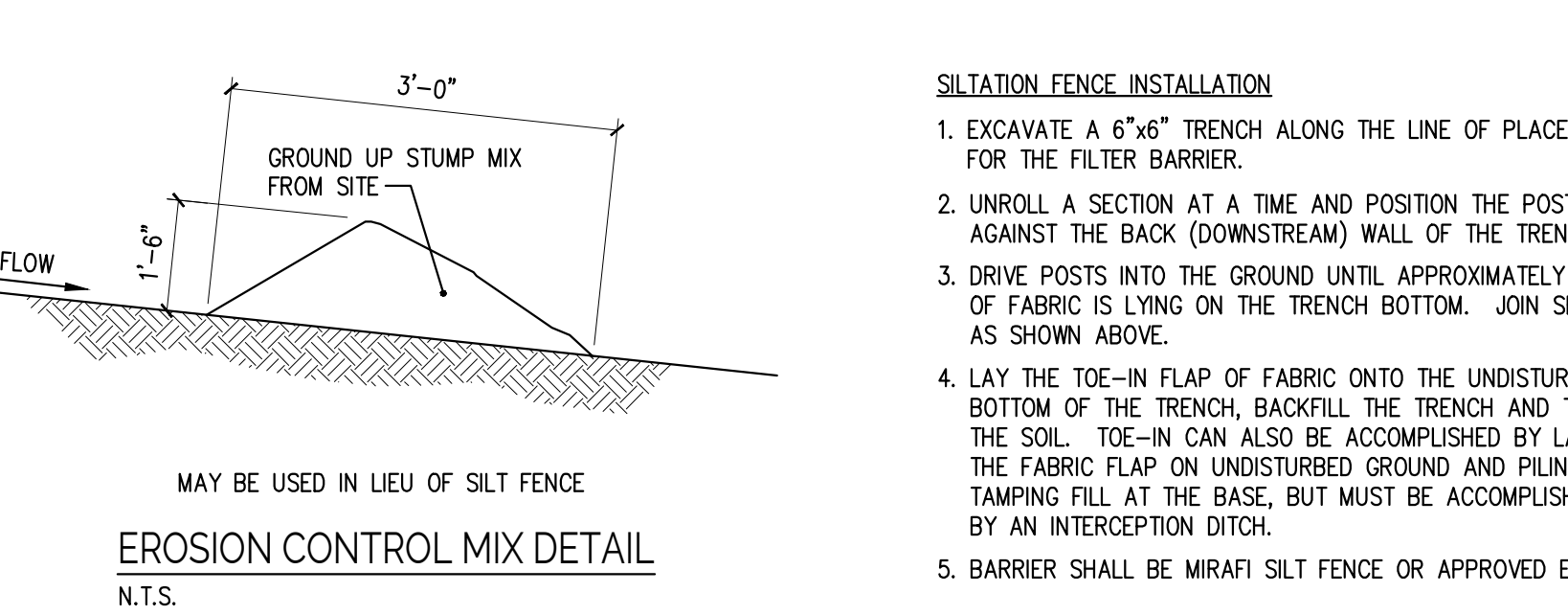
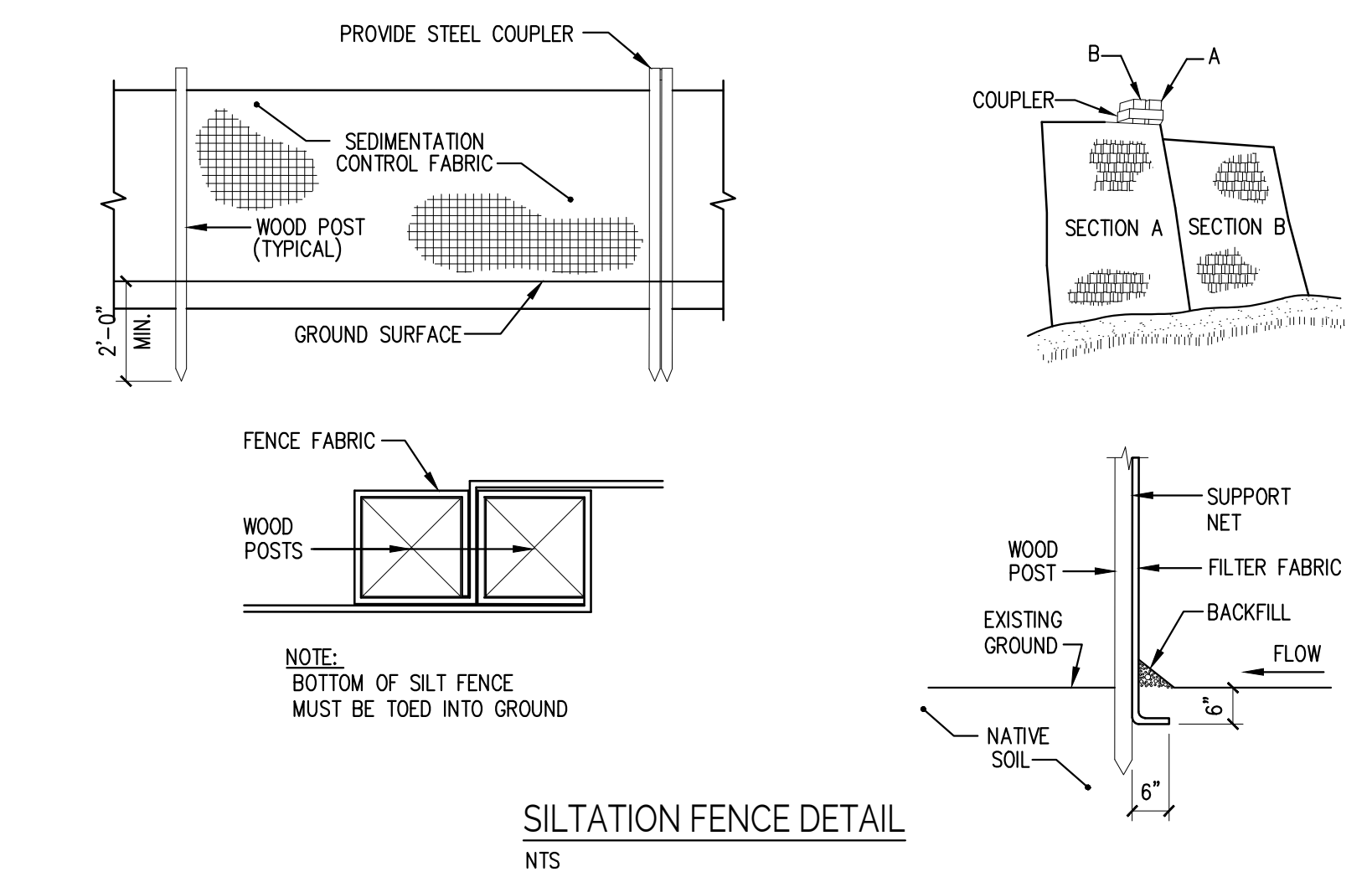


REQUIRED ON ALL SLOPES > 8% (WINTER CONSTRUCTION)  
REQUIRED ON ALL SLOPES > 15% (SUMMER CONSTRUCTION)

EROSION CONTROL BLANKET  
GENERAL INSTALLATION GUIDELINES ON SLOPES  
NTS



NOTE: GRADING PLAN GOVERNS IN ALL LOCATIONS



CLIENT:  
**DAVID HARMON**  
**ARCHITECTURE**  
8 CHASES LANE  
SACO, ME 04072

PRELIMINARY  
NOT FOR CONSTRUCTION

180 WASHINGTON AVENUE  
PORTLAND  
PROPOSED BUILDING

| ISSUED      | NO.               | DESCRIPTION | DATE |
|-------------|-------------------|-------------|------|
| DR.         | BY                | XX          | XX   |
| CHKD.       | BY                | XX          | XX   |
| DATE        | XX                | XX          | XX   |
| DESCRIPTION | ISSUED FOR REVIEW |             |      |
| NO.         | A                 |             |      |

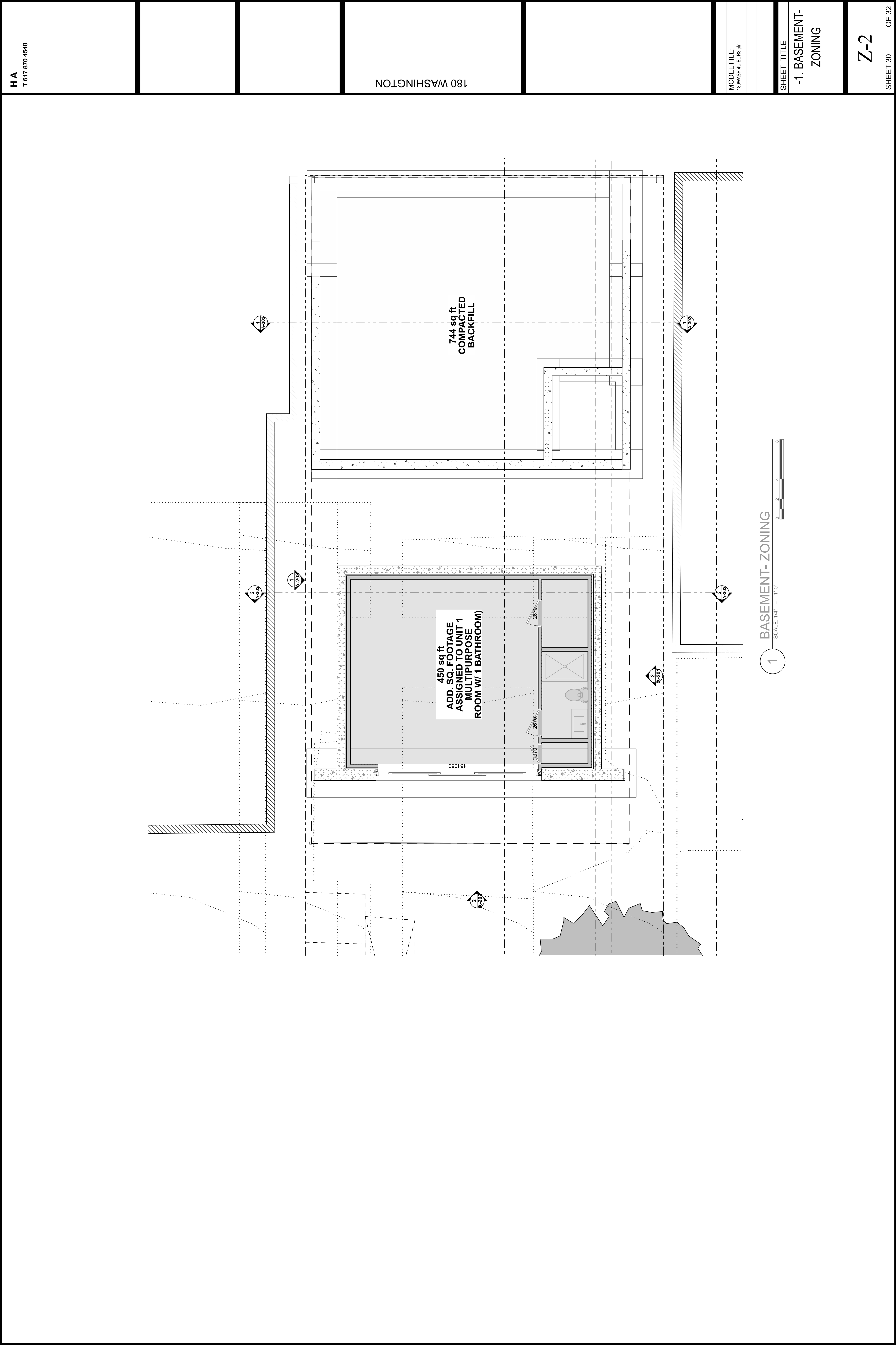
SHEET TITLE:

EROSION  
CONTROL  
DETAILS

DESIGNED: DL  
DRAWN: DL  
DATE: 01-05-22  
PROJECT NUMBER: 21-312

C300







Christian MilNeil <c.neal.milneil@gmail.com>

May 21, 2022, 7:02:41 PM (yesterday)

to ctetelman@portlandmaine.gov, davidharmonarchitecture@gmail.com, planningboard@portlandmaine.gov

I'm an East Bayside resident writing in with a friendly suggestion to the Planning Board and the developers of the proposed 180 Washington Ave. apartment building.

First, I'd like to point out what seems to be an error in the zoning analysis in the City's planning board memorandum for this project.

In the table on page 3, the city erroneously asserts that 4 parking spaces are required for this site. But in 2020, the Planning Board and City Council approved "ReCode" zoning revisions to stipulate that **"no off-street parking shall be required for multi-family housing within ¼ mile of fixed-route transit service"** (this site directly abuts three METRO routes: the 7, 9A, and 9B).

I raise this point because [roughly 1 in 6 Portland households do not own a car](#), and, if the city is going to meet its climate goals, we need to build more housing for car-free families, instead of continuing our bad habit of bringing even more cars and pollution into neighborhoods that have good access to transit.

Furthermore, the economics of constructing this building are considerably hamstrung by the developers' decision to dedicate the entire ground floor to only four parking spaces. I'll note that some version of this scheme has been circulating since 2017, and the owner has never been able to make the financing pencil out. This is because 1/3 of the proposed building, as currently designed, will generate no income to the project, and because the parking garage prevents the construction of leasable housing on the below-grade level downhill from Washington Avenue.

Put more simply: without the money-losing parking garage, this site could fit more housing in the same building envelope, and generate more rental income for the developers, with a lower construction cost, and with fewer traffic and pollution impacts to the neighborhood.

The 2020 ReCode parking revisions to Article 19 were aimed at precisely this problem: if we're only building new housing for car-owners along transit routes, we'll continue to get high-cost housing that worsens traffic and undermines METRO's customer base. Developers have long ignored the market demand from car-free households, but our city's most successful developers are beginning to realize that their projects can work financially by building more housing without any, or with very limited, off-street parking (cf. Redfern's 201 Federal Street and Mercy Hospital projects). This site and this project would benefit with a similar strategy.

Christian MilNeil

# Public Comment: 180 Washington Avenue - Historical Materials

Subscribe ☐

0 views



George Rheault

9:10 AM (3 hours ago)

to Planning Board, ctet...@portlandmaine.gov, Christine Grimando, jmy, Abigail Reed, kkraft, jra...@portlandmaine.gov

Comments below to be addressed at this evening's workshop meeting:

## QUESTION:

Why is the City of Portland (especially its Department of Urban Prevention) indifferent to the historic structure that will be demolished for this project and the working class and immigrant history that will be destroyed along with the building and has it ever been surveyed as part of its historic preservation efforts? NB: The word "historic" here is used in an absolute, objective sense here versus merely a bureaucratic classification triggering formal legal protection. Something can be VERY HISTORIC while also being ignored by officialdom as is the case here.

Per the 1924 Tax Assessor's Card (see attachment), the modest existing vacant house on the site is one of the oldest extant structures in Portland, and one would think its story would be deserving of historic recognition and protection (it is even older, in some cases by many decades, than MANY "historic" properties located in official historic districts in Stroudwater, the West End and atop Munjoy Hill).

Obviously, there is apparently no affluent gentrifier like a Peter Murray or a Rob Whitten who is freaking out about whether the project will impair their views or property values, but it says everything about the role of historic preservation in Portland's land-use regime over the last few decades that structures like this get exterminated without a peep from the historic preservation lobby. Perhaps the consultant hired by the City's planning authority to "study" the decade-long impacts of historic preservation in our community can explain why historic preservation seems to merely be a tool for gentrification here versus an honest tool for equitable and comprehensive historic memory-taking.

## QUESTION:

Did an earlier iteration of this project ever receive a planning review in 2016 or subsequently (staff or otherwise) and what were the sticking points that prevented the project from moving forward at that time?

See attached news coverage from 2016 and very early in 2017 that cite the original development proposal. NB: in the case of the 2017 article, the reporter, Randy Billings, who is (or was since he has been promoted away from the municipal beat) absolutely terrible about writing about urban development matters, screws up the address of the project by noting it as "118 Washington Avenue" instead of the correct address of 180 Washington Avenue.

What is most useful in citing this past news coverage is that the current development proposal is TWO FLOORS SHORTER than what was pitched in 2016 and contains ONE LESS UNIT. Presumably the applicant had hoped to gain additional height via squeezing a commercial use into the ground floor (thus triggering the 50 foot bonus available in the B-2B zone. Undoubtedly, our Department of Urban Prevention did yeoman's work to squelch a viable project from moving forward when it might have helped chip away a tiny bit at our community's housing affordability crisis.

Links to original reporting:

<https://www.pressherald.com/2016/08/18/housing-projects-in-full-boom-in-portland/>

<https://www.pressherald.com/2017/01/09/plan-calls-for-new-building-with-45-condominiums-in-portland/>

# 1924 Portland Tax Records: 178-180 Washington Avenue, Portland, 1924

Portland, Maine

Assessment 19

Name Orlando Enrico

Owner Orlando Enrico

Street Washington Ave No. 178-180

Block 10 Lot 4

Use of Bldg. Dwelling Name

Tenants and Rooms 1 family - owner

Rentals owner occupies

Age old

Condition of Repair Fair

|                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Class</b><br>Bungalow<br>Single House<br>Two family<br>Three family<br>Apartment<br>Store Building<br>Office<br>Factory<br>Storage<br>Stables<br>Garage, private<br>Garage, public<br>Theatre<br>Club House<br>Cottage<br><b>Foundation</b><br>Brick<br>Stone<br>Concrete<br>Pile<br><b>Basement</b><br>Full<br>Cement Floor<br>Waterproof<br><b>Construction</b><br>Frame<br>Brick<br>Tile<br>Blocks<br>Stucco<br>Re-Concrete<br>Mill<br>Steel Frame | <b>Exterior</b><br>Clapboards<br>Siding<br>Shingles<br>Stucco<br>Paper<br>Tapestry Brick<br>Com. Brick<br>Galv. Iron<br>Stone<br>Terra Cotta<br>Concrete<br><b>Heating</b><br>Stove<br>Furnace<br>Hot Water<br>Steam<br><b>Light</b><br>Oil<br>Gas<br>Electric<br><b>Floor</b><br>Common<br>Hardwood<br>Re-Concrete<br>Concrete Slab<br>Waterproof<br><b>Ceiling</b><br>Plaster<br>Metal<br>Panelled<br>Rough | <b>Plumbing</b><br>Common<br>Individual<br>Open<br>Set tubs<br><b>Finish</b><br>Plain<br>Hardwood<br><b>Halls</b><br>Wood<br>Terrazzo<br>Marble<br><b>Roof - Roofing</b><br>Shingle<br>Slate<br>Gravel<br>Prepared<br>Asbestos<br>Flat<br>Hip<br>Gable<br>Dormers<br><b>Windows</b><br>Plain Glass<br>Wire Glass<br>Shutters<br><b>Miscellaneous</b><br>Elevator<br>Sprinkler<br>Fire Escape<br>Refrigerator<br>Vacuum Cleaner<br>Safes and Vaults<br>Telephone Equip. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Ground Area 492 Height 18'

Cubic Feet 8856 Unit 20 cts.

Utility Dep. 70 Per cent.

Dep. 70 Sound Value, \$ 531

Land 5967 Corner  Interior  Alley

Front  Depth  =  ft.

COMPUTATION

| Area | Multiplier | Coefficient |
|------|------------|-------------|
| 5967 | 100        | 5967        |

| Year | Unit | Coefficient | Land Value |
|------|------|-------------|------------|
| 19   | 10   | 5967        | 5967       |

Surveyed by H.E. Cobb

(Remarks on other Side)



Remarks about Buildings

Elev 18'

14'4"

Remarks about Land

14'4" x 34'4" = 492' x 18' = 8856

Remarks about Personal Property

CITY OF PORTLAND, MAINE  
ASSESSORS DEPARTMENT

| CHART                          | BLOCK |
|--------------------------------|-------|
| 3 Building Volumes Checked     |       |
| 4 Building Values Placed       |       |
| 5 Building Values Extended     |       |
| 6 Land Only Questionnaire Made |       |
| 7 Land Values Placed           |       |
| 8 Land Values Extended         |       |
| 9 Compared With 1923           |       |
| 10 Personal Property Added     |       |



1924 Portland Tax Records: 178-180 Washington Avenue, Portland, 1924



**Owner:** Enrico Orlando  
**Address:** 178-180 Washington Avenue, East End, Portland, Maine  
**Use:** Dwelling - Single family  
**Local Code:** Block 10F Lot 4 Book 78 Page 1  
**MMN item number:** 84672  
**Notes:** The property was subsequently owned by Atlanta Orlando.



# Plan calls for new building with 45 condominiums in Portland

 [pressherald.com/2017/01/09/plan-calls-for-new-building-with-45-condominiums-in-portland/](http://pressherald.com/2017/01/09/plan-calls-for-new-building-with-45-condominiums-in-portland/)

By Randy Billings

January 9, 2017



218 WASHINGTON AVE

Portland, Maine

November 2016

 **ARCHETYPE**  
architects

A South Portland developer is proposing a \$13 million condominium development near an interstate off-ramp in Portland.

Vincent Maietta is seeking approvals for a four-story, 45-unit building at 218-220 Washington Ave., according to city planning files. It would replace a single-family home that currently sits across the road from the intersection of the Eastern Promenade and Washington Avenue, where the Exit 8 off-ramp from Interstate 295 ends.

The project is the latest in a seemingly endless procession of residential development proposals in Maine's largest city, where a shortage of housing units and strong demand have been driving up rents, making the market attractive to investors.

Over the past three years, 1,435 units of housing have been approved by the city's Planning Board, according to city data. Only 204 of those units have been completed and 740 are under construction.

"There is no sign of the market slowing down right now," said Jeff Levine, the city's planning and urban development director. "There continues to be an interest in housing development in Portland, and there continues to be a need for more housing."



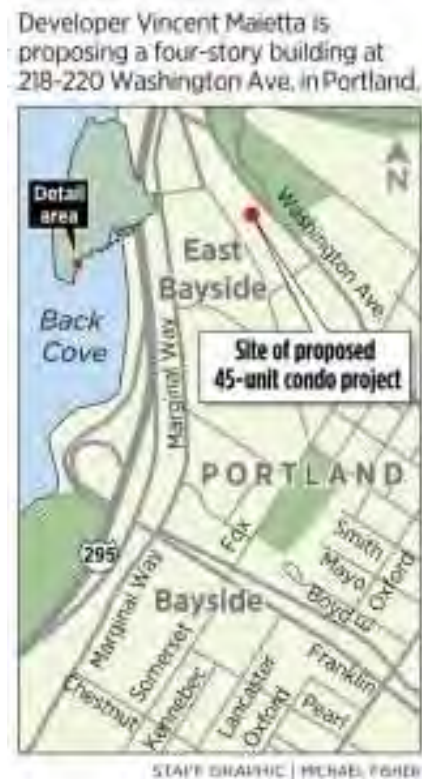
WEST ELEVATION - ANDERSON STREET

These architect's renderings show a proposed five-story 45-unit condominium project at 218 Washington Ave. in Portland.

The project is proposed in an area that is experiencing a bit of a renaissance. The half-mile stretch on Washington Avenue has seen an influx of restaurants, cafes and distilleries in recent years. City officials last year also approved a proposal for one property owner to use shipping containers as retail stores at 93 Washington Ave. Other nearby development proposals include a

five-story, 17-unit condominium building at Congress Street and Washington Avenue, and a five-story, five-unit condo building at 118 Washington Ave.

Maietta did not respond to an interview request Friday afternoon.



The site at 218-220 Washington Ave. is steeply sloped, so developers are planning on building a retaining wall on the Anderson Street side of the property. Parking for 45 vehicles would be available on the basement level of the building, according to planning documents.

The documents indicate that 22 single-bedroom units and 23 two-bedroom units are planned, ranging from 562 square feet to 1,507 square feet.

The project is large enough to trigger the city's inclusionary zoning ordinance, which requires 10 percent of the units in developments with 10 or more units to be affordable to middle-income earners,

defined as earning 100 percent to 120 percent of the area's median income.

Developers can opt out of that requirement at a cost of \$100,000 per unit of affordable housing not built. That money goes into the city's housing trust fund, which is used to provide incentives for affordable housing.

Levine said he's not sure whether Maietta, who has the property under contract to purchase, is planning to provide affordable units or take advantage of the opt-out provision.

A traffic analysis submitted by the developer indicates that the project would generate 15 to 17 vehicle trips in the morning and afternoon peak times. Entry to the basement parking structure would be from Washington Avenue, south of the Eastern Promenade-Washington Avenue intersection.

Levine said planners have just begun reviewing the proposal and that no date has been set for a Planning Board workshop or hearing.

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# Portland's housing boom is still going strong

 [pressherald.com/2016/08/18/housing-projects-in-full-boom-in-portland/](http://pressherald.com/2016/08/18/housing-projects-in-full-boom-in-portland/)

By Randy Billings

August 18, 2016



The development boom in Portland shows no signs of slowing, even as construction costs are climbing and as rents appear to be rising more slowly after years of rapid increases.

Two new housing proposals are being planned in the Bayside neighborhood – a 54-unit apartment building on Chestnut Street and a modern five-unit project on Washington Avenue with condominiums that will be offered for as much as \$950,000.







STAFF GRAPHIC | MICHAEL FISHER

The proposals come as a slew of new housing developments are changing city neighborhoods, especially in and around the downtown. For years, the number of housing units in the city remained relatively stable because there was virtually no new construction. But as more people are discovering Portland's vibrant arts and restaurant communities, demand for housing has overwhelmed the limited number of units and led to spikes in rents and, in some cases, evictions of low-income residents as landlords upgrade to take advantage of the hot market.

And for the first time in decades, the city has seen an explosion in market rate and luxury apartment buildings and condominiums.

Rental housing projects currently under construction include a 132-unit apartment building at 667 Congress St., a 53-unit apartment building at 89 Anderson St., and a 63-unit apartment building at York and High streets. The former Schlotterbeck & Foss building at 117 Preble St. also is being converted into 55 units of housing.

Meanwhile, more than 100 condos have been built in the India Street neighborhood and several smaller condo projects have been sprouting up on small lots on Munjoy Hill. This month, Saco developer Bernie Saulnier unveiled his plan to build a six-story

building with about 34 condo units at 155 Sheridan St., which would alter a panoramic view of the city and Back Cove from the publicly owned Fort Sumner Park on North Street.

An analysis last year by the Portland Press Herald/Maine Sunday Telegram found that the prices of apartments being offered for rent in the city had risen 40 percent over the past five years, while renter incomes had fallen during the same period. Even with the pace of rent increases slowing, Portland's average rents are still hundreds of dollars a month above what is considered affordable for the average renter.

Members of the Southern Maine Landlord Association continue to report an increase in rents for 2016, but at a much slower rate than 2015, when rents increased by nearly 9 percent, according to the association's president, Brit Vitalius, who also tracks the rental market for the Maine Real Estate and Development Association, an industry trade group of builders, tradesmen and real estate professionals.

Vitalius said in an email that this year's increase is "less than half" of the 2015 increase and that one large landlord is "actually reducing rents on a handful of units in Portland and South Portland due to current market conditions."

Although rising construction prices, competition for labor and a slowing growth in rents may discourage some new apartment projects, industry insiders said Wednesday there are no signs that the boom is about to go bust because millennials and baby boomers alike continue to be drawn to places like Portland where they can easily walk to work, restaurants, art galleries and concert venues.

“The underlying thing that is driving this market is that people want to have the urban experience, and it’s not just younger people, it’s older people too,” said MEREDA President Paul Peck, also an attorney and real estate developer. “That’s not slowing down.”

## **A BOOST FOR BAYSIDE NEIGHBORHOOD**

The two new Bayside projects reflect strong markets for both rental and owner-occupied housing.

Portland-based A&M Partners is seeking approvals to build a seven-story apartment building next to a three-level parking garage at 75 Chestnut St. in West Bayside. The 54 units at Westerlea View Lofts would be a mix of one- and two-bedroom apartments, A&M President Lou Wood said.



Portland-based A&M Partners wants to build a 54-unit apartment complex at 75 Chestnut St. in West Bayside. One- and two-bedroom units are planned.

“We’re looking to really meet a need in the city that is affordable in terms of your average market-rate apartment,” said Wood, noting it was too soon to estimate rent prices. “I’m not interested in building a building and having it all high-end.”

The building is proposed for a grassy slope of land between Lancaster and Oxford streets in a neighborhood known for social service agencies and industrial properties. The site is located near two affordable housing developments – Unity Village and Pearl Place. The units would overlook a portion of Bayside that still shows its former industrial heritage, including a metal scrapyard.

It's also less than a block from the city's homeless shelters and about two blocks from the proposed "midtown" project, which includes up to 440 market-rate apartments with first-floor retail and an 850-vehicle parking garage. The Florida-based Federated Cos. closed on the 3.5-acre property in June, but has not yet begun construction.

There will be a neighborhood meeting to discuss the Chestnut Street proposal at 6 p.m. Aug. 31 at the corner of Chestnut and Oxford streets.

The proposal comes at a time when the city is concentrating more police and social service resources to cleaning up the West Bayside neighborhood. The city itself is in the process of moving its Public Works operations out of the neighborhood and plans to sell the property for redevelopment.

## **HIGH-END INFILL IN EAST BAYSIDE**

About a mile away in East Bayside, a distinctive, high-end condominium project is being proposed for 180 Washington Ave., a nearly 2,900 square-foot lot sandwiched between two single-story brick buildings, one of which is the Amvets Charles J. Loring Post 25.



Architect David Harmon, who is doing business as Maine Modern Development, wants to replace a small single-family home with a five-story building containing five condos.



Left: The home currently at 180 Washington Ave. Right: A rendering of the proposed condo building.

The property and vacant three-bedroom Cape, built in 1850, have a tax-assessed value of \$123,800, city records show.

According to the project's website, a 545-square-foot studio on the ground floor of the future condo building is available for \$199,000. Four other units, each roughly 1,500 square feet with two bedrooms, two bathrooms and a terrace, would sell for \$649,000 to \$950,000.

The building, which is 50 feet tall with parking for four vehicles on the first floor, has a boxy metallic look without windows on two sides, primarily because of zoning restrictions. The units will have windows overlooking Washington Avenue, as well as a west-facing view of Bayside and Back Cove.

It will be designed to be highly energy efficient, with the option of adding solar arrays, planning files show.

“The project ... possesses a modern design aesthetic,” consultant Patrick Venne wrote in a memo to planners. “It also intends to seek ‘passive’ energy use status, and presents potential for a rooftop solar array. As such, it presents a dynamic and forward-thinking concept for the Portland peninsula’s growing residential market.”

The “passive house” standard indicates a highly energy efficient building with low heating and power costs.

The developer is slated to go before the Planning Board in September and hopes to begin construction by the end of the year, Venne said in an email.

© 2022

George Rheault <george.rheault@gmail.com>

9:55 AM (3 hours ago)

to Planning Board, ctetelman@portlandmaine.gov, Christine Grimando, jmy, Abigail Reed, kkraft, jra...@portlandmaine.gov

Issues that should have been addressed in the staff memo or somewhere else in the board packet materials:

#### QUESTION:

When was Gould Street access to Washington Avenue closed off and has the Department of Public Works given serious thought to reopening it for vehicular traffic to make life easier for residential and commercial life in this area (which will only continue to grow with proposals like the one under review here)?

I raised this with Jeremiah Bartlett as part of the public engagement process when Washington Avenue was being studied a few years back for various improvements. No one could date the closure of Gould Street with certainty (an astonishing admission since historical maps suggest it was open at least through the 1960s if not even more recently, so within our lifetimes). Gould Street does not appear to be any steeper than Walnut Street so it cannot have been closed merely on technical grounds. Perhaps it was closed when the 295 access was introduced or as part of some misguided public safety initiative to reduce illicit vehicle traffic using it as a convenient cut-thru option to avoid police surveillance back when this area was more "rough around the edges." It would seem obvious that repairing the original intended urban street grid here would help divert SOME traffic from the Fox/Walnut intersection by giving drivers and cyclists of all kinds more choices.

#### QUESTION:

What is the status of the various arrangements cited in the 2015 property deed made between the property owner and the veteran's clubhouse and why did planning staff not address them?

Some modest parking privileges across the street were apparently swapped as part of an agreement to continue to allow access to the rear of the property for various clubhouse events (including a horseshoe pit). Since these were all cited in the deed, they appear to require formal extinguishment if they are no longer to be honored or recognized going forward), but the planning staff are silent about these things.

#### QUESTION:

Should the 2018 property transfer (see attached) between the veteran's clubhouse and the applicant be included in the project review files (including the "Right, Title & Interest" category)?

This small slice of land seems to be very important for making the overall project feasible and perhaps explains why the original 2016 proposal never moved forward.

#### QUESTION:

With respect to the contemplated tree save in the rear of the property, is there any indication of the condition of this tree and how much longer it might be viable into the future so as not to warrant its preservation under the proposed site plan?

This tree is very problematic with its "tail wagging the dog" status. It may very well have never been an intentional planting (often in areas seeing tremendous neglect and underinvestment over time such as this section of lower Munjoy Hill, "volunteer" trees can mature into considerable specimens due to lack of supervision by prior property owners who never sought any advice or consultations with landscape or tree professionals about the long-term appropriateness of such a planting).

Besides complicating the development proposal here, it may very well be harming the private sewer line in the rear of the property as well as undermining nearby foundations/retaining walls, etc. which may not be apparent until site excavation begins. Now might be the perfect time to remove it (sadly requiring the tree's destruction along with its benefits) to avoid further problems down the road or at least give the applicant maximum flexibility here on this question.





MAINE REAL ESTATE TAX PAID

**WARRANTY DEED  
(Maine Statutory Short Form)**

**CHARLES LORING POST NO. 25 AMVETS**, a Maine nonprofit corporation, having a mailing address of 186 Washington Avenue, Portland, Maine 04101 ("Grantor"), for consideration paid, grants to **MAINE MODERN DEVELOPMENT INC.**, a Maine corporation, having a mailing address of 8 Chases Lane, Saco, Maine 04072, with Warranty Covenants, certain real estate situated in the City of Portland, County of Cumberland and State of Maine, being more particularly described in the Exhibit A attached hereto and made a part hereof.

Meaning and intending to convey and hereby conveying the same premises conveyed to the Grantor herein by Warranty Deed from Rita H. Orlando, Henry S. Orlando and Aladino A. Orlando to the Grantor dated January 11, 1966 and recorded in the Cumberland County Registry of Deeds in Book 2942, Page 257.

IN WITNESS WHEREOF, Charles Loring Post No. 25 AMVETS has caused this instrument to be executed this 6<sup>th</sup> day of February, 2018.

**CHARLES LORING POST NO. 25 AMVETS**

Martha Kelley

By: Richard Paiement for post 25 amvets  
Richard Paiement  
Its: Commander

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss.

February 6, 2018

Then personally appeared the above-named Richard Paiement, in his capacity as Commander of Charles Loring Post No. 25 AMVETS and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said Charles Loring Post No. 25 AMVETS.

Before me,

Martha Kelley  
Notary Public / Attorney At Law

Martha Kelley  
Print name:

My commission expires: \_\_\_\_\_



EXHIBIT A

A certain parcel of land situated on the westerly side of Washington Avenue in the City of Portland, County of Cumberland, and State of Maine, bounded and described as follows:

Beginning at a point on the westerly sideline of Washington Avenue at the southeast corner of the land of Charles Loring Post #25 AMVETS, which point is also the northeast corner of the land of David L. Harmon, and which point is located 54.77 feet south, as measured along the sideline of Washington Avenue, from the southerly sideline of Gould Street;

Thence, S 65° 24' 04" W by the land of Harmon 87.30 feet to the land now or formerly of Tristan L. Cuthbert (see Book 31504, Page 61);

Thence, N 23° 03' 15" W by the land of Cuthbert 6.00 feet;

Thence, N 65° 24' 04" E by the remaining land of the AMVETS 87.14 feet to Washington Avenue;

Thence, S 24° 35' 56" E by Washington Avenue 6.00 feet to the point of beginning.

Said parcel contains 523 square feet and is shown on "Boundary & Topographic Survey at 180 Washington Avenue, Portland, Maine made for record owner David Harmon July 22, 2016 Owen Haskell, Inc. Job No. 2016-188P" revised 06/21/17.

Subject to the right to the drainage easement described in a deed from Benedict Francis to Enrico Orlando dated April 16, 1920 and recorded in the Cumberland County Registry of Deeds in Book 1047, Page 394, subject to the covenant contained in said deed.

Received  
Recorded Register of Deeds  
Feb 08, 2018 08:12:14A  
Cumberland County  
Nancy A. Lane

# Planning Board Report

## Planning and Urban Development Department



Place of Assembly Use  
11 Pomeroy Street  
Conditional Use Application  
CU-001763-2021  
Chabad Lubavitch of Maine Inc., Applicant

|                             |                         |                     |                         |
|-----------------------------|-------------------------|---------------------|-------------------------|
| <b>Submitted to:</b>        | Portland Planning Board | <b>Prepared By:</b> | Jimmy Dealaman, Planner |
| <b>Public Hearing Date:</b> | May 24, 2022            | <b>Date:</b>        | May 20, 2022            |

### I. INTRODUCTION

Chabad Lubavitch of Maine Inc. is seeking an after the fact Conditional Use approval to utilize approximately 2,160 square feet of floor area within an existing single family home as a place of assembly space, for religious purposes, at 11 Pomeroy Street. A related Minor Site Plan application, PL-000058-2021, is also under staff review.



*Figure 1: Aerial View with 11 Pomeroy Street Outlined in Blue*

Per the City's Land Use Code, gatherings may include 15 non-permanent residents before a building's use is considered a "place of assembly." Due to the single family home's usage as a place of assembly, with gatherings in which more than 15 non-permanent residents assemble, the current use of the building is in violation of City codes. In order to bring the religious place of assembly activity into compliance, the City provided the applicant with a letter that outlined all necessary regulatory actions required to correct the non-compliance, including but not limited to obtaining required permits and approvals. The proposed place of assembly use in the R-3 zone requires a Conditional Use permit to be reviewed by the Planning Board for compliance with the General Conditional Use standards in Section 6.5.2 as well as the supplemental use-specific conditional use standards in Section 6.5.6(F) of the Land Use Code.

The Planning and Urban Development Department mailed 116 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the May 13<sup>th</sup> and May 14<sup>th</sup> editions of the *Portland Press Herald*. The Planning Board held a first workshop on October 26, 2021, and a public hearing April 12, 2022 which was tabled to May 24, 2022 by the Board.

**Applicant:** Chabad Lubavitch of Maine Inc.  
**Applicant**  
**Representatives:** Chris Macdonald, BH2M, Civil Engineer

### II. REQUIRED REVIEWS

| <i>Review</i>                                            | <i>Applicable Standards</i>                                                                                      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Conditional Use Review (Places of assembly (<10,000 SF)) | General Conditional Use standards Section 6.5.2 and supplemental use-specific conditional use standards 6.5.6(F) |
| Site Plan                                                | Section 14.6 (reviewed by staff)                                                                                 |

### III. PROJECT DATA

|                 |                                       |
|-----------------|---------------------------------------|
| Existing Zoning | R-3 Residential                       |
| Property Size   | 73,821 square feet                    |
| Existing Use    | Single Family Home                    |
| Proposed Use    | Single Family Home; Place of Assembly |

|                         | <i>Existing</i> | <i>Proposed</i> | <i>Net Change</i> |
|-------------------------|-----------------|-----------------|-------------------|
| Building Footprint      | 3,071 SF        | 3,071 SF        | 0                 |
| Building Floor Area     | 7,605 SF        | 7,605 SF        | 0                 |
| Impervious Surface Area | 7,500 SF        | 9,650 SF        | 2,150 SF          |
| Parking Spaces          | 3 space         | 9 spaces        | +6 spaces         |

### IV. SITE HISTORY

The Chabad Lubavitch of Maine (“Chabad”) property previously (2004-2005) received approval for a single-family home and synagogue on site. However, the applicant did not post the required performance guarantee, and the approval expired in 2007.

In 2013, Chabad received a Level II site plan approval to pave Pomeroy Street and a separate Level I minor residential approval to construct the existing single family home. Both of these changes were reviewed at a staff level. The building and Pomeroy Street paving was finished in 2015, however, the Pomeroy Street acceptance request as part of the street buildout was stalled and the street’s status remains unaccepted.

In 2017, Chabad received a building permit for a two-story addition to the single family home. Including the addition, the house is 7,605 square feet, and is located on a 73,821 square foot (1.69 acre) lot. Permits for the building addition were reviewed and issued by the Permitting and Inspections Department.

In 2018, Chabad submitted a Conditional Use and Site Plan application to allow a place of assembly for religious assembly purposes due to the number of worshipers attending services at the site increasing to more than 15 people. The Conditional Use application was brought before the Planning at a [workshop held in November 2018](#) (CU-000057-2018). The application expired after staff and Planning Board comments were unresolved by the applicant.

In 2020, the City issued a letter of noncompliance to the applicant (Attachment 2) and outlined a process to clarify the requirements to bring the property into compliance, which included submitting a complete new site plan and conditional use application. At the request of the applicant a pre-application meeting with City staff was held on June 16, 2021. During the meeting staff provided the applicant with guidance on how to resume the application process via reapplying again for a conditional use application and a minor site plan application.

In 2021, Chabad submitted a short term rental registration application to the City’s Permitting and Inspections Department for two rental units within the single family home. The Permitting and Inspections

Department issued a short term rental unit license on January 27, 2021 (Attachment 3). The license expired on December 31, 2021. At this time the applicant has not renewed the license. For Chabad to continue renting rooms within a portion of the residential structure, the rental units would need to be registered with the Permitting and Inspections Department.

## V. EXISTING CONDITIONS AND SURROUNDING AREA

The existing 12-bedroom, single family home located at 11 Pomeroy Street is situated on a 1.7 acre site zoned R-3 Residential, and is located in the Rosemont neighborhood. The neighborhood is bounded by the Capisic Brook to the west, Brighton Avenue and Woodford Street to the north, Capisic Street to the south, and Stevens Avenue to the east. Land uses within the immediate area include predominantly residential buildings. Immediately adjacent to the site are 11 single family homes that are located on Bancroft Street, Benjamin Way, and Redlon Park Road. Benjamin Way was accepted by the City Council as a city street on May 16, 2022.

The site is accessible to public transit. METRO bus routes 9A and 9B operate along Stevens Avenue roughly 0.5 miles to the east. The site is also served by METRO bus route 4, which runs along Brighton Avenue to the north.



*Figure 2: Subject Property at 11 Pomeroy Street*

## VI. PROPOSED DEVELOPMENT



### A. Overview

The applicant is seeking conditional use approval to allow a place of assembly space of less than 10,000 square feet to operate within a portion of the building at 11 Pomeroy Street. The assembly space is intended for religious services. The building at 11 Pomeroy Street is privately owned and has been occupied since 2015 by Rabbi Wilansky and his family.

The proposed place of assembly space would occupy approximately 2,160 square feet of the building's first floor, which includes utilizing the Family Room as the primary place of worship. Since the last public meeting the applicant has clarified that there is additional shared space on the first floor that is used primarily for residential use but occasionally serves

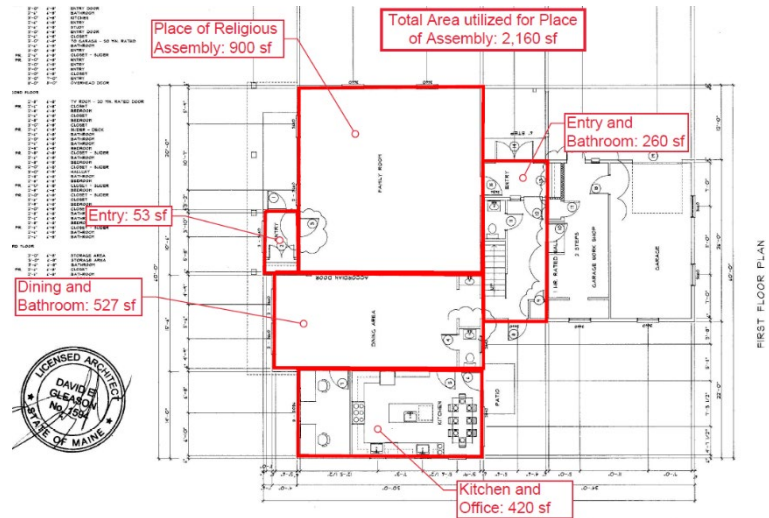


Figure 3: First Floor Plan with Place of Assembly Area Outlined in

as ancillary space for the place of assembly (Attachment Q). The total place of assembly area includes two entries and bathrooms, a dining room for occasional use during services that would typically focus on food service or dining, office space which is used for typical administrative functions associated with administering worship services, and a kitchen for occasional use involving food preparation and conducting classes. The remainder of the building would remain a single family home to be occupied by Rabbi Wilansky and his family. The proposed place of assembly space includes the following breakdown:

- Family Room (900 square feet)
  - Dining and Bathroom (527 square feet)
  - Rear Entry (53 square feet)
  - Front Entry and Bathroom (260 square feet)
  - Kitchen and Office (420 square feet)
- =Total Area Utilized for Place of Assembly (2,160 square feet)**

Additional proposed site improvements would include paving and striping the existing parking area to be able to accommodate nine total parking spaces (7 public assembly spaces; 2 residential spaces) as well as widening the parking aisle to 24 feet in order to provide a sufficient vehicle turnaround area. To address the Fire Department's comments regarding access, the applicant proposes expanding the driveway width to 16 feet, as well as creating a no-parking area along Pomeroy Street across from the driveway in order to provide sufficient fire truck access.

The purview of the Planning Board for the Conditional Use review is to allow 2,160 square feet (Figure 3) of the building's first floor to be utilized as a place of assembly of less than 10,000 square feet within the existing 7,605 square foot single family home. The remaining 5,445 square feet of the building would continue to function as a separate single family residential use. The renting of rooms is beyond the scope of the Planning Board's review of the Conditional Use application because it is associated exclusively with the single family use. For Chabad to continue renting rooms within a portion of the residential structure, the rental units would need to be registered as a short term rental with the Permitting and Inspections Department. In addition, any events that are intended to welcome the general public to the site would



require an entertainment or event permit through the City's Permitting and Inspections Department. Furthermore, as outlined in the City's August 4, 2020 violation letter, if and when the applicant receives site plan and conditional use approval, the applicant must diligently pursue a building permit for the work required for the approved uses and apply for a state and local food license if Chabad intends to sell bread and meals from the premises.

### **B. Place of Assembly Services**

According to the applicant Chabad of Maine offers worship services operating on Thursdays (7:00 am – 8:15 am), Saturdays (10:30 am – 1:00 pm) and Sundays (9:00 am – 10:00 am). Chabad of Maine also offers occasional lectures that are held during the daytime and evenings between 7:00 pm – 8:00 pm or conducted in a web format. The applicant indicated that the first floor kitchen space is occasionally used to offer pre-packaged or pre-made food and to serve refreshments following worship services. In addition, the applicant notes that the kitchen is used to prepare traditional Challah Bread which is served to worshippers as well as prepared during cooking classes associated and offered by Chabad. According to the applicant cooking classes are held seven times a year on Friday mornings.

The organization also provides other services offered off site including a summer camp that starts at the end of June and operates for three-four weeks ending in July. Additionally, the organization conducts larger gatherings off-site of 25-35 people during special events approximately eight times a year, including *"lighting of the Menorah at City Hall in Portland and a Hanukkah parade that meets at the Jewish Community Alliance on Congress Street in Portland. Purim is celebrated off site and has been held at the Ocean Gateway, Italian Heritage Center, and Woodfords Club in past years."*

## **VII. PREVIOUS WORKSHOP AND PUBLIC HEARING**

### **WORKSHOP – OCTOBER 26, 2021**

The application was introduced to the Planning Board by the applicant and staff at a [workshop held on October 26, 2021](#). Staff answered Board questions about aspects of the conditional use review, including but not limited to clarifying that a place of religious assembly is the specific subtype of place of assembly use being reviewed, and that the scope of the application is based on the square footage of the proposed use.

The Board requested more information about how the proposed use operates. In addition, the Board requested that the applicant describe the proposed activities that Chabad was intending to offer at the site. The Board had questions about what a conditional use approval would include and, if approved, were interested in having a condition of approval to clearly define the uses scope and setting parameters to cap the place of assembly square footage.

### **PUBLIC HEARING – APRIL 12, 2022**

The application was reviewed by the Planning Board at a [public hearing held on April 12, 2022](#). An applicant team comprised of Rabbi Wilansky, Chris MacDonald of BH2m Engineering, and Marshall Tinkle of Thompson, MacColl & Bass, LLC. presented on the proposed application. During the presentation of the applicant team and public comment period, it was indicated that the proposal and programming provided on site included uses and spaces within the building not specified in the application, including offering cooking classes, meals, and the renting of rooms. The Board determined that there was inadequate information available on the intended activity to render a decision and the public hearing was tabled to May 24, 2022.

During the hearing the Board raised several questions concerning the scope of the proposed place of assembly's footprint within the existing building, the number of constituents served by Chabad, and requested clarity on the breakdown of ancillary uses offered on the site, including cooking classes, lectures, and day camps. In addition, the Board had questions related to the short term rentals offered on the site and if those units should be considered as part of the scope of review.

In response to the Board's questions the applicant has provided updated materials (Attachment Q) that show all place of assembly related areas including all ancillary areas and provided more information about services conducted onsite and offsite (See Section VI above). The applicant has also provided supplemental information regarding short-term rentals (STR) operated out of the building.

## VIII. RIGHT, TITLE, & INTEREST

The applicant submitted a warranty deed (Attachment D) recorded in book 21417 page 198 in the Registry of Deeds as evidence of ownership of the property in question.

## IX. ZONING ANALYSIS

### A. DIMENSIONAL REQUIREMENTS

The building at 11 Pomeroy Street was originally permitted as a single family home, and Chabad of Maine seeks a conditional use approval for a place of assembly for a portion of the building. Places of assembly in the R-3 Residential zone are sized by maximum floor area and must be located on a corresponding minimum acreage. While the overall building is 7,605 square feet, the place of assembly space utilized for religious services and ancillary services is approximately 2,160 square feet. Thus, it is categorized as a place of assembly of less than 10,000 square feet requiring a minimum lot size of one acre, which the existing lot size meets.

The project is subject to both the dimensional and parking standards for the respective uses, single family residential (approximately 6,705 square feet) and institutional place of assembly (approximately 2,160 square feet) in the R-3 Residential zone. For parking, the applicant is required to provide one parking space per 150 square feet of floor area used for assembly purposes, however based on the applicant's materials (Attachment Q) which demonstrate that the site is within a ¼ mile of fixed route transit service, staff have confirmed that the place of assembly use is eligible for the exception to the parking requirement and therefore no additional parking is required (Land Use Code Table 19-B). The applicant continues to propose nine total parking spaces.

The following table is provided below to summarize the dimensional requirements of the R-3 zone (Land Use Code Sec. 7.3) which are met by both uses:

| Place of Assembly                            | <i>Permitted</i> | <i>Proposed</i> |
|----------------------------------------------|------------------|-----------------|
| Lot Area (min.) Place of Assembly <10,000 SF | 1 ac.            | 1.695 ac.       |
| Single-Family Residence                      | <i>Permitted</i> | <i>Existing</i> |
| Lot Area (min.) Residential                  | 6,500 SF         | 73,821 SF       |
| Lot Area Per Dwelling Unit                   | 6,500 SF         | 73,821 SF       |
| Minimum Street Frontage                      | 50 feet          | 67.17 feet      |
| Front Yard Minimum                           | 25 feet          | 168.8 feet      |
| Rear Yard Minimum                            | 25 feet          | 130.9 feet      |
| Side Yard (right)                            | 16 feet          | 43.5 feet       |
| Side Yard (left)                             | 16 feet          | 70.2 feet       |

|                           |                                                                                                                     |                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Maximum Lot Coverage      | 35%                                                                                                                 | 5.4%                                                                                |
| Maximum Structure Height  | 35 feet                                                                                                             | 35 feet                                                                             |
| Off Street Parking Spaces | 15 spaces(1 space required for residential) (14 spaces required for assembly purposes (1 space per every 150 feet)) | 9 spaces<br>(2 residential spaces)<br>(7 spaces proposed for place of assembly use) |

#### B. ZONE-SPECIFIC CONDITIONAL USE STANDARDS – SEC. 6.5.6(F)

Places of Assembly are permitted in the R-3 zone as conditional uses, requiring review by the Planning Board. The applicant has submitted an analysis addressing how the proposal meets the R-3 Conditional Use Standards (Attachment N). Staff review of the conditional use standards is provided below:

##### *Sec. 6.5.6 Supplemental use-specific conditional use standards:*

*In addition to the general conditional use standards, the following standards shall apply to specific conditional uses:*

##### *(F) Institutional uses (excluding preschools):*

1. *The Planning Board shall be the review authority.*

Staff Comments: The application has been referred to the Planning Board as the reviewing authority.

2. *In the case of expansion of existing institutional uses onto land other than the lot on which the principal use is located, it shall be demonstrated that the proposed use cannot reasonably be accommodated on the existing site through more efficient utilization of land or buildings, and will not cause significant physical encroachment into established residential areas.*

Staff Comments: The proposal does not involve any expansion outside of the existing lot.

3. *The proposed use will not cause significant displacement or conversion of residential uses existing as of June 1, 1983, or thereafter.*

Staff Comments: The proposal does not displace any residential units.

4. *In the case of a use or use expansion which constitutes a combination of the conditional institutional uses with capacity for concurrent operations, the applicable minimum lot sizes shall be cumulative.*

Staff Comments: The lot meets the minimum lot size requirements for the combination of uses.

Standards 5-8. Staff Comments: These provisions do not apply to the subject proposal.

#### C. GENERAL CONDITIONAL USE STANDARDS – SEC. 6.5.2

The following standards in Section 6.5.2 apply to all conditional uses:

**Sec. 6.5.2 General conditional use standards:**

*The review authority shall, after review of the application, approve a conditional use upon a finding that the proposed conditional use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zone. The review authority shall find that this standard is satisfied if it finds that:*

- A. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.***

**Applicant Response:** *“The project does not generate vehicle volume substantially greater than the surrounding uses. Attendees are prohibited to drive on days when attendance will be at its highest, which will reduce the number of vehicles on site than what may be typically expected for religious assembly. The driveway and parking are proposed to be expanded to the minimal extent practical to meet the City’s code. The proposed 16’ wide driveway is not considered to be abnormally wide in comparison to the surrounding uses. Additional parking for 7 vehicles is effectively replacing informal gravel parking of the same size and location currently found on site.”*

**Staff comment**

The site is located in the R3 zone which allows residential and government uses as of right as well as places of assembly, schools, and intermediate and long-term care facilities amongst other institutional uses as conditional uses. Chabad provides worship services and lectures as well occasional food preparation classes on site. According to the applicant approximately 10 – 20 people attend.

According to the applicant worship services would generate approximately six vehicles during the peak hour. The City’s traffic engineer expects 12 place of assembly related trips (6 entering/6 exiting) for services and six miscellaneous trips by the household which is separate from the assembly use. Further, if lectures are held, the daily trip level has the potential to increase by 12 daily trips for a maximum daily trip load of 24 trips and 6 household trips. However, the application materials indicate that there is no conflict resulting between onsite services offered (those include worship services, lectures, and food preparation classes) which do not occur at the same time, and the applicant has indicated that many of the same attendees participate in the lectures and worship services so the number of daily trips is expectedly less than the 24 trips on days when lectures will occur. Based on the information provided above, the City’s consulting traffic engineer finds that the maximum level of traffic generated by the proposed use at the contemplated intensity would not be expected to create mobility or safety issues and is not substantially greater than other nonresidential uses in the zone (Attachment 1).

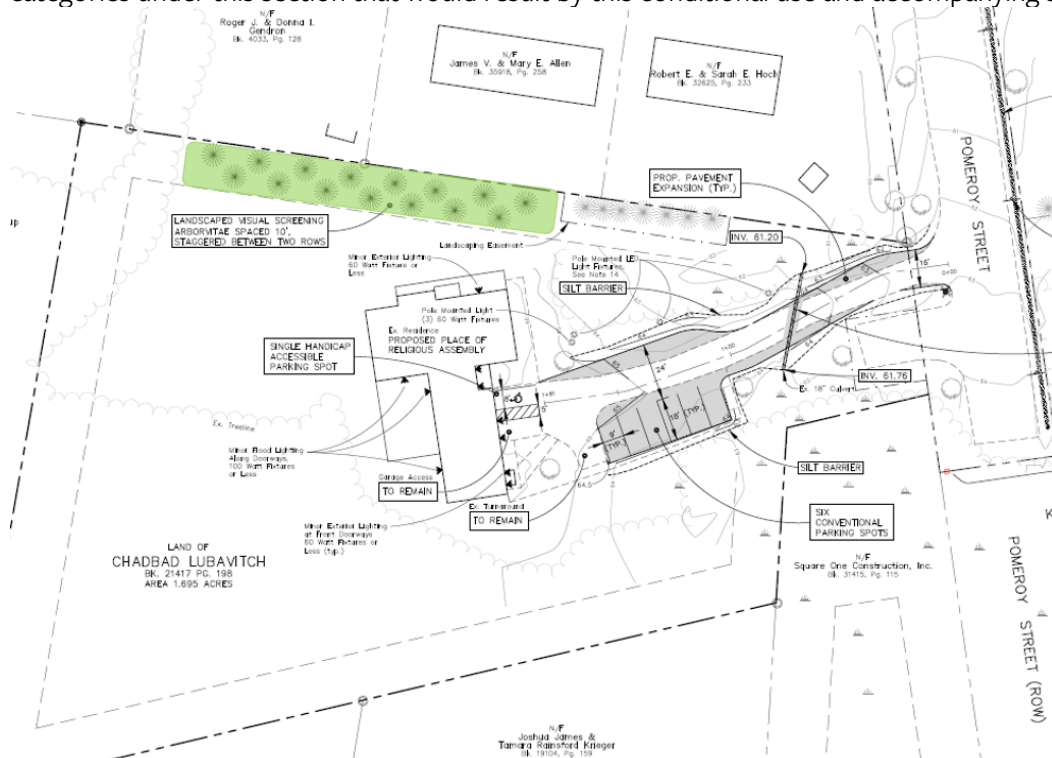
According to the applicant, under the worst-case scenario, there will be a need for six parked vehicles during either worship services or lectures which do not occur at the same time. In addition, the applicant notes that attendees are prohibited to drive on Saturdays due to religious restrictions, when attendance will be at its highest. The required two residential parking spaces associated with the single-family use will be provided in the garage or in parking spaces located in front of the garage. The City’s consulting traffic engineer has reviewed the site plan and the circulation layout and finds the design to be acceptable for the demand noted. It is assumed that the project will be providing parking accommodations on-site and not utilizing off-street parking spaces or the turnaround area at the end of Pomeroy Street.

The amount of parking proposed for the place of assembly use is consistent with the minimum number of parking required in the R-3 Residential zone for sites within a  $\frac{1}{4}$  of fixed route transit service. The proposed place of assembly totals 2,150 square feet and the R-3 requires one parking space for every 150 square feet of floor area used for assembly purposes (14 spaces required for place of assembly). However, the site is within a  $\frac{1}{4}$  of a fixed route transit service and therefore no parking is required. The applicant proposes seven parking spaces for the place of assembly space which is reasonable given the assumption of 10 to 12 worshippers per service. The applicant notes that there will be food preparation classes that will typically be attended by 10 to 15 people. Assuming an average of two occupants per vehicle and some walk/bike/transit trips, the parking demand appears to be feasible. As noted by the applicant, parking is also not required by the Land Use Code due to the site being within  $\frac{1}{4}$  mile of a fixed route transit line.

**B. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.**

**Applicant Response:** “The project does not generate harmful or unsanitary conditions. The existing building utilizes municipal water and sewer, hosting worshippers with no negative effects. No additional lighting or emissions are proposed with the use, and with the majority of activities occurring inside the building, no harmful generation of noise is anticipated.”

**Staff comment:** Staff have reviewed the applicant’s proposal and do not believe the project will generate harmful or unsanitary conditions. The applicant has provided additional information on their site plan (Plan 2) identifying existing lighting locations providing low-level lighting fixtures. Given that there are no proposed exterior building changes and based on the information provided by the applicant, staff do not find there are any substantially greater negative impacts related to the categories under this section that would result by this conditional use and accompanying site work.



**Figure 4: Proposed Site Plan Highlighting Proposed Landscaping Area**



- C. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.*

**Applicant Response:** “The proposed use will not have impact on surrounding properties. The building and parking are well screened from abutting properties. No impacts to landscaping, arrangement of structures, screening and signage are proposed with this proposed use, as no tree removal or expansions of the building are proposed. No increases in deliveries, trash, or loading are proposed over what is currently occurring on site.”

**Staff comment:** The applicant has indicated that no increases in deliveries, trash, or loading is proposed over what is currently occurring on site. Public Works has confirmed that if the property contains a parsonage or residential apartment it will remain eligible for trash pick-up. In response to a staff recommendation to provide additional landscaping to help screen the proposed use from adjacent properties, the applicant has proposed adding an area of arborvitae along the north property line (Figure 4). Staff find that this additional measure will help to minimize potential impacts to immediate abutters. Staff have reviewed the proposal as it relates to the design and operation and find that the proposed site changes do not create significant impacts to landscaping, screening, signage, loading, deliveries, trash and waste generation, arrangement of structures, and materials storage. Based on the materials provided as part of the current application to utilize 2,160 square feet of the existing single family home as a place of assembly, the proposal at the proposed size does not create a substantially greater negative impact on surrounding properties than those allowable uses in the zone as related to these categories.

- D. The proposed use will meet any additional zone or use-specific standards identified in Tables 6-A to 6-F and Subsections 6.5.6 and 6.5.7.*

**Staff comment:** All applicable standards referenced under these sections have been incorporated into this memo, see Section B.

## X. PUBLIC COMMENT

When the previous application (CU- 000057-2018) was under review in 2018, Planning staff received 11 written comments (Attachments PC1 – PC11) which are attached to this report again for reference. When the project went to the Planning Board in 2018 public comments focused on the activities advertised on the Chabad of Maine website, including a kid’s camp and room rentals. Area residents also expressed concerns regarding traffic, parking, and stormwater impacts. Previous expansion of uses on site, and the potential for growth, also caused concern.

Staff received twenty-four public comments (Attachments PC12-35) on the current application. Some comments described concerns that the site has grown with a significant amount of guest traffic on a regular basis despite the status of the use as out of compliance with the Land Use Code. Other comments expressed disapproval of expanding the driveway and parking area to facilitate the place of assembly use. Comments also included concerns that larger gatherings have taken place in the summer which have created disruptive conditions to the surrounding neighbors, as well as bringing unwanted additional traffic through the neighborhood. In responses to concerns related to large gatherings, Planning staff coordinated with the Permitting and Inspections Department to clarify the threshold for an entertainment license, which is required for any event to which the public is invited or allowed to watch, listen to, or participate in; or is conducted for the purposes of holding the attention of, gaining the attention of, or diverting or

amusing patrons or guests. Therefore, if an event fell under this category a single event license would be required.

## **XI. STAFF RECOMMENDATION**

Subject to the proposed motions and conditions of approval listed below, Planning Department staff recommends that the Planning Board approve application #CU-001763-2021 to allow a conditional use for a place of assembly space totaling 2,160 square feet within an existing building at 11 Pomeroy Street, which at the proposed size and intensity contemplated meets the applicable standards of Portland's Land Use Code.

## **XII. PROPOSED MOTIONS**

### **A. CONDITIONAL USE**

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on April 12, 2022 for application #CU-001763-2021 relevant to Land Use Code Section 6.5.2 and Section Sec. 6.5.6(F) and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan is/is not in conformance with the conditional use standards of the Land Use Code, subject to the following conditions of approval:

#### **PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY**

1. The applicant shall submit a completed Street Acceptance Application Packet to the Department of Public Works and finalize the street acceptance process to dedicate Pomeroy Street as a public right-of-way.

## **XIII. ATTACHMENTS**

### **PLANNING BOARD REPORT**

1. Comments from Consulting Traffic Engineer (dated 5.18.2022)
2. Letter of Noncompliance (dated 8.4.2020)
3. Short Term Rental License (2021)

### **APPLICANT'S SUBMITTAL**

- A. Cover Letter
- B. Conditional Use Checklist
- C. Minor Site Plan Checklist
- D. Right Title Interest
- E. Traffic
- F. Environmental Impacts
- G. Design and Operation
- H. Zoning Analysis Table
- I. Site Plan Assessment
- J. Waiver Table
- K. Public Infrastructure and Safety Narrative
- L. Site Design
- M. Stormwater Report
- N. Response to Staff Comment (dated 10.20.2021)
- O. Response to Staff Comment (dated 1.24.2022)
- P. Response to Staff Comment (dated 2.4.2022)
- Q. Response to Staff Comments (dated 5.19.2022)

**PLANS**

|        |                                |
|--------|--------------------------------|
| Plan 1 | Cover Page                     |
| Plan 2 | Site Plan                      |
| Plan 3 | Existing Conditions            |
| Plan 4 | Erosion Control Details        |
| Plan 5 | Pre Development Drainage Plan  |
| Plan 6 | Post Development Drainage Plan |

**PAST PUBLIC COMMENT (Submitted in 2018)**

PC1. Judy Gailen 9-6-18  
 PC2. Kristine and Rick Jacobs 9-9-18  
 PC3. Jonathan Matt 9-10-18  
 PC4. Jeff Emerson 9-11-18  
 PC5. Jonathan Matt 9-12-18  
 PC6. Douglas Babkirk 9-12-18  
 PC7. Jessica Teesdale 9-23-18  
 PC8. Bill Green 10-17-18  
 PC9. Douglas Babkirk 11-29-18  
 PC10. Kenneth Capron 11-27-18  
 PC11. Jeff Emerson 11-28-18

**NEW PUBLIC COMMENT**

PC12. Judy Richard 10-6-2021  
 PC13. Lisa Richard 10-6-2021  
 PC14. Judy Gailen 10-16-2021  
 PC15. Matt Steege 10-20-2021  
 PC16. Richard Funnell 10-20-2021  
 PC17. Heather Shields 10-21-2021  
 PC18. Jeff Emerson 10-21-2021  
 PC19. Sarah Delisle 10-21-2021  
 PC20. Richie Garcia 10-21-2021  
 PC21. Lee Lindenau 10-21-2021  
 PC22. Ali Goldstein 10-22-2021  
 PC23. Douglas Dempsey 10-22-2021  
 PC24. Emily Raisch 10-22-2021  
 PC25. Colin Wilkie 10-26-2021  
 PC26. Jeff Emerson 10-28-2021  
 PC27. Judy Richard 10-28-2021  
 PC28. Judy Gailen 4-2-2022  
 PC29. Matt Steege 4-8-2022  
 PC30. Richard Funnell 4-8-2022  
 PC31. Douglas Dempsey & Lauren McCosham 4-8-2022  
 PC32. Judy Richard 4-8-2022  
 PC33. Daniel and Alison Norup 4-8-2022  
 PC34. Judy Gailen 4-12-2022  
 PC35. Kate Allen 5-18-2022





Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

## 11 Pomeroy Street - Final Traffic Comments

Tom Errico &lt;thomas.errico@tylin.com&gt;

Wed, May 18, 2022 at 2:35 PM

To: James Dealaman &lt;jdealaman@portlandmaine.gov&gt;

Hi Jimmy – I have reviewed project details as it relates to Sec. 6.5.2 General conditional use standards for item A. *The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement and number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.* The following is a status update from my prior final traffic comments.

- According to the applicant the project is projected to generate 10 daily trips and 2 peak hour trips. They note the project will generate less than 10 cars at the site. The estimate is based on an outdated version of the ITE Trip Generation Manual and for a land use that is not representative for this project. I would suggest the applicant provide an estimate based upon the maximum number of attendees expected and an assumption regarding vehicle occupancy. I would expect this project to generate more than 10 trips per day. This estimate should also be performed for the summer camp. The applicant should also define the hours of traffic generation for both events and the summer camp.

Status: The applicant has provided the requested information. Based on the information provided, worship services would generate approximately 6 vehicles (average vehicle occupancy of 2) during the peak hour. On a daily basis, I would expect about 12 place of assembly related trips (6 entering/6 exiting) for services and 6 miscellaneous trips by the household which are separate from the assembly use. This trip level will increase when lectures are held and would add 12 daily trips for daily trip load of 24 trips (the lecture trips will not occur at the same time as the worship services) and 6 household trips. This level of traffic would not be expected to create mobility or safety issues and is not substantially greater than other non-residential uses in the zone.

### **Revised Final Comment: I have no further comment.**

- While the parking supply is based on zoning requirements, I am concerned that parking demand will exceed supply and thus will require vehicles parking off site. The applicant shall consider the estimate for trip generation (and number of attendees) in estimating parking demand.

Status: The applicant has noted that under a worst-case scenario, there will be a need for 6 parked vehicles during either worship services or lectures which do not occur at the same time. The required two residential parking spaces will be provided in the garage or in the spaces in front of the garage. I have reviewed the site plan and find the circulation and layout to be acceptable for the demand noted. It is assumed that the project will be providing parking accommodations on-site and not utilizing on-street parking spaces or the turnaround area at the end of Pomeroy Street. The amount of proposed parking spaces for the place of assembly use is consistent with the minimum number of required parking spaces in the R-3 Residential zone. The proposed place of assembly space totals 1,020 SF and the R-3 requires 1 space for every 150 SF or floor area used for assembly purposes (7 spaces required for place of assembly use). The project proposes 7 spaces to meet the minimum number of required spaces, therefore the extent of parking provided is not significantly greater than would normally occur at other allowable uses in the same zone.

**Revised Final Comment: As noted by the applicant, parking is not required by City Ordinance. The project is proposing 7 parking spaces which is reasonable given the assumption of 10 to 12 worshippers per service. The applicant notes that there will be food preparation classes that will typically be attended by 10 to 15 people. Assuming an average of 2 occupants per vehicle and some walk/bike/transit trips, the parking demand appears to be 7 or less vehicles.**

- The extent of the paved surface area proposed is not excessive to provide the required parking and turnaround areas for the people attending a place of assembly use apart from the existing residential use.**
- The hours of operation appear to be consistent with those typical of a place of assembly use.**

If you have any questions, please contact me.

Best regards,



## Tom Errico, PE

NE TRAFFIC ENGINEERING DIRECTOR

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**E** [thomas.errico@tylin.com](mailto:thomas.errico@tylin.com)

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**Corporation Counsel**

Michael I. Goldman  
 Associate Counsel

Jennifer L. Thompson  
 Associate Counsel

Anne M. Torregrossa  
 Associate Counsel

August 4, 2020

**VIA CERTIFIED MAIL, R.R.R. & REGULAR U.S. MAIL**

Rabbi Moshe Wilansky  
 11 Pomeroy Street  
 Portland, ME 04102-2055

Dear Rabbi Wilansky,

As you know, the City of Portland has taken the position that many of the activities taking place at your property at 11 Pomeroy Street are in violation of the City of Portland Code of Ordinances. The City has tried to work with you cooperatively to give you time to remedy those violations and, over the past several years, representatives of the City of Portland have met with you and your representatives to try to assist you in bringing your property into compliance. The process for doing so has been stalled for quite some time now, and we write to clarify the requirements to bring your property into compliance and to lay out the City's expectations with respect to the timing of completing those requirements. If you are unable, or unwilling, to meet these expectations, the City will have no choice but to issue you a Notice of Violation and to proceed with enforcement measures. We hope that we will be able to avoid the enforcement process, but we cannot allow the violations to continue.

You must complete the following work:

1. **Register your short term rental units no later than August 14, 2020.** It is clear from your website that you are renting rooms and suites in your home on a short term basis. All short term rental units must be registered with the City pursuant to § 6-151 of the City Code, including paying the associated fees. Please also note that you can register no more than five units in your home as short term rentals. Unless and until these units are registered, they may not be rented or let.

*389 Congress Street, Room 211, Portland, ME 04101*

*www.portlandmaine.gov / tel. 207.874.8480 / tty. 207.874.8936 / fax. 207.874.8497*

2. **Submit a complete new site plan and conditional use application no later than October 2, 2020**, and diligently pursue those approval processes. On November 20, 2018, the City of Portland Planning Board held a workshop to review your site plan and place of assembly conditional use applications. In that workshop, and at follow-up meetings, City staff provided feedback on steps that would be required before the application could proceed to a Planning Board public hearing and decision on your original conditional use and site plan application. Those steps were not undertaken. Please reapply for approval and ensure that your applications address the following:
- a. **Improved Fire Access:** the property's access driveway, from Pomeroy Street to the building, shall be required to be a minimum of twenty feet wide for its entire length. Paved emergency access lanes shall be provided on a minimum of two sides of all structures. Access lanes should be engineered and maintained to support the weight of emergency vehicles during all weather conditions.
  - b. **Impervious Surfaces and Site Disturbance:** the improved fire access requirements are expected to result in increased impervious surface and increased site disturbance from your originally proposed plan. The updated site plan application must meet applicable stormwater and site plan standards triggered by these increases.
  - c. **Transportation:** Estimated trip generation projections for the proposed place of assembly must be provided. Parking demand estimates and how vehicles will be accommodated during events must also be documented with a parking management plan.
  - d. **Current, Accurate Representation of Existing On-Site Activity and Intended Activity:** In November of 2018, Sevee & Maher Engineers provided a memo specifying the current usage and participants for assembly and event-related spaces within the existing onsite buildings, as well as anticipated future participation. This information, or updated information reflecting current realities, should be used as a basis for your site plan and conditional use application.

Unless and until you obtain site plan and conditional use approval, obtain the required building permits, and finalize all additional work, you must stop using your single family home as a place of assembly and house of worship, and you may not engage in the accessory uses such as a daycare and summer camp. However, the City will allow you to continue the limited use of your house for religious services only so long as no more than 49 people are in attendance at any one time. The City's willingness to work with you on this will continue only so long as you adhere to the deadlines given and continue to move forward in bringing your property into compliance.

3. **Apply for a building permit within two months from site plan approval**, and diligently pursue any required permits. If and when you have site plan approval and conditional use approval, you will must apply for a building permit to complete the work required for the approved uses. Based on the information previously provided, this will require, at a minimum, the following upgrades:
  - a. Upgraded sprinkler system from a system only designed for the residence to a system designed for the multiple occupancies;
  - b. Renovate your kitchen to meet the commercial kitchen standards including commercial exhaust and fire suppression systems and commercial sanitation;
  - c. Provide egress components that are compliant with the applicable codes for the multiple occupancy type in the building which may include fire separation protection of the stairway, and making and illumination of the egress.
4. **Apply for a food license and upgrade your kitchen to a commercial kitchen.** You are currently selling bread and meals from your home, which requires both a state and local food license, as well as a commercial kitchen. Within two months from site plan approval, you must apply for your state and local food licenses. Unless and until you receive a food license, you must stop selling bread and meals from your home.
5. **Finalize the addition and schedule final inspections of that addition.** In 2018, you put in an addition consisting of a bath house and bedrooms. That addition was never completed and final inspections were never approved. If the work is complete, please contact Permitting and Inspections to schedule your final inspection. Unless and until you receive final approval, you may not occupy the bath house or bedrooms.

Please let us know if you require any clarification on the City's expectations. Although these are large undertakings, you have already been given a significant amount of time to work towards bringing your property into compliance, with little progress. Ultimately, we want you to be successful in your endeavors while still being compliant with City ordinances for the safety of your guests, as well as the public.

Sincerely,

*/s/ Anne Torregrossa*

Anne Torregrossa

C: Marshall Tinkle, Esq. (via email)



## City of Portland

Permitting and Inspections Department

Att. 3

**Business Name:** MOSHE WILANSKY

**Classification:** Owner Occupied

**Business Location:** 11 POMEROY ST  
Portland, ME 04102

**Description:** Unit Suite (1) & Unit Bedroom (2)

**Owner:** CHABAD LUBAVITCH OF MAINE INC

**License Number:** STHR-002933-2021

**Number of Rental Units:** 2

**Issued Date:** 1/27/2021

**Expiration Date:** 12/31/2021

A handwritten signature in cursive script that reads "Jessica Blais Hanscombe".

---

Jessica Blais Hanscombe, Director of Permitting and  
Inspections

THIS LICENSE IS NOT TRANSFERRABLE  
PLEASE POST IN A CONSPICUOUS PLACE

---

### BILLING CONTACT

CHABAD LUBAVITCH OF MAINE INC  
11 Pomeroy St  
Portland, Me 04102





WILLIAM A. THOMPSON  
ROBERT C. LIBBY, Jr.  
WALTER E. PELKEY  
ANDREW S. MORRELL  
STEVEN J. BLAKE

Berry, Huff, McDonald, Milligan Inc.  
*Engineers, Surveyors*

380B Main Street  
Gorham, Maine 04038

Tel. (207) 839-2771  
[www.bh2m.com](http://www.bh2m.com)

August 24, 2021

Shukria Wiar  
Planner  
Planning and Urban Development Department  
389 Congress Street 4<sup>th</sup> Floor  
Portland, Maine 04101

Re: Chabad Lubavitch of Maine  
Change of Use and Minor Site Plan Applications

Dear Shukria,

Chabad Lubavitch of Maine Inc. has engaged with BH2M to provide design and permitting assistance for Conditional Use and Minor Site Plan applications through the City of Portland for their private residence at 11 Pomeroy Street in Portland. Chabad Lubavitch has been providing assembly space for worshippers at their private residence, and these applications seek to clarify the use of this property as a Place of Religious Assembly.

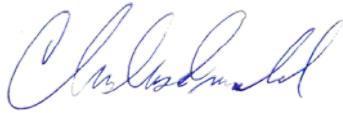
Working with Rabbi Moshe Wilanski of Chabad Lubavitch, we understand that 900 square feet of the private residence has been dedicated toward a Place of Religious Assembly. Chabad Lubavitch has been operating as Place of Religious Assembly and does not propose any additional structures to facilitate this change of use, nor does it project any increased use of the property. However, following the parking requirements for a Place of Assembly, and requirements as provided by the City of Portland Fire Department, additional parking and expanded driveway widths are required to conform to the proposed use.

Following up on our June 16, 2021 pre-application meeting, we are providing the attached applications for the Planning Department's review. Given the proposed change of use, a Conditional Use Permit application is required. We understand that given the proposed change to an Institutional Use, approval of the Conditional Use Permit is required through the Planning Board. We also discussed the Minor Site Plan Permit application as being required for this change of use to facilitate permitting of the expanded parking and driveway areas.

We have organized our submission into lettered attachments for use in uploading to eplan, and have noted on the application checklists which attachment can be referenced for responses to a specific checklist item.

We trust that these applications and supporting documents will facilitate approval of the change of use for the project. We look forward to answering any questions yourself or the Planning Department may have and look forward to addressing the Planning Board to gain approval of the Conditional Use Permit application.

Sincerely,

A handwritten signature in blue ink, appearing to read "Christopher MacDonald".

Christopher MacDonald, P.E.  
Civil Engineer

**CITY OF PORTLAND**  
**Planning & Urban Development Department**

**CONDITIONAL USE – PLANNING BOARD REVIEW  
SUBMISSION CHECKLIST**

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

Conditional uses are listed in the land use code for each zone. The applicant must address the general standards as well as any use- or zone-based conditional use standards contained in Article 6.5 of the land use code in the written application.

**GENERAL APPLICATION DOCUMENTS**

|                                         |     |                                                                                                                                                                    |
|-----------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Yes | N/A | <b>Project Description</b> <ul style="list-style-type: none"> <li>Cover letter with detailed project description <b>Attachment A</b></li> </ul>                    |
| <input checked="" type="checkbox"/> Yes | N/A | <b>Completed Checklist – Conditional Use</b> (this document) <b>Attachment B</b>                                                                                   |
| <input checked="" type="checkbox"/> Yes | N/A | <b>Evidence of Right, Title and Interest</b> <b>Attachment D</b> <ul style="list-style-type: none"> <li>Deeds, leases, or purchase and sales agreements</li> </ul> |

**CONDITIONAL USE STANDARDS AND CRITERIA**

|                                         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Yes | N/A | <b>Traffic</b> <b>Attachment E</b> <ul style="list-style-type: none"> <li>Demonstrate that the volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the zone.</li> </ul>                                                                                                                                |
| <input checked="" type="checkbox"/> Yes | N/A | <b>Environmental Impacts</b> <b>Attachment F</b> <ul style="list-style-type: none"> <li>Demonstrate that the proposed use will not create any unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.</li> </ul>                                                                                                                                                                                                 |
| <input checked="" type="checkbox"/> Yes | N/A | <b>Design and Operation</b> <b>Attachment G</b> <ul style="list-style-type: none"> <li>Demonstrate that the design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.</li> </ul> |
| <input checked="" type="checkbox"/> Yes | N/A | <b>Use- and Zone-Specific Criteria</b> <b>Attachment H</b> <ul style="list-style-type: none"> <li>Address any use- or zone-specific standards in Sections 6.5.6 and 6.5.7 of the land use code.</li> </ul>                                                                                                                                                                                                                                                                                   |

**CITY OF PORTLAND**  
**Planning & Urban Development Department**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MINOR SITE PLAN</b><br><b>GENERAL DOCUMENT AND DRAWINGS CHECKLIST</b><br>Please submit each document as a separate PDF file.<br>Please confirm by electronically checking the boxes in the left-hand column.<br><br><b>** PLEASE FILL OUT AND UPLOAD SEPARATELY THE ZONING ASSESSMENT TABLE AND WAIVER TABLE AS NOTED BELOW **</b><br><br><p style="color: red; text-align: center;">At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.</p> |           |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>GENERAL APPLICATION DOCUMENTS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Yes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NA        | <b>Project Description</b> <ul style="list-style-type: none"> <li>Cover letter with detailed project description <span style="color: red;">Attachment A</span></li> </ul>                                                                                                                                                                                                                                                    |
| <b>Yes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NA        | <b>Completed Checklist</b> (this document) <span style="color: red;">Attachment C</span>                                                                                                                                                                                                                                                                                                                                     |
| <b>Yes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NA        | <b>Evidence of Right, Title and Interest</b> <span style="color: red;">Attachment D</span> <ul style="list-style-type: none"> <li>Deeds, leases, or purchase and sales agreements</li> </ul>                                                                                                                                                                                                                                 |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>NA</b> | <b>Evidence of State or Federal Approvals</b> <ul style="list-style-type: none"> <li>Permits or letters of non-jurisdiction, if applicable</li> </ul>                                                                                                                                                                                                                                                                        |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>NA</b> | <b>Zoning Assessment</b> (see <a href="#">Zoning Assessment Table</a> ) <ul style="list-style-type: none"> <li>Summary of compliance with use and dimensional standards of the land use code</li> </ul>                                                                                                                                                                                                                      |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NA        | <b>Site Plan Standards Assessment</b> (see Article 14.6 of the land use code) <span style="color: red;">Attachment I</span> <ul style="list-style-type: none"> <li>Summary of project compliance with site plan standards of the land use code</li> </ul>                                                                                                                                                                    |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>NA</b> | <b>Summary of Existing and/or Proposed Easements or Covenants, if applicable</b> <ul style="list-style-type: none"> <li>Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way</li> </ul>                                                                                                                                                                                     |
| <b>Yes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NA        | <b>Waiver Requests</b> (see <a href="#">Waiver Table</a> ) <span style="color: red;">Attachment J</span> <ul style="list-style-type: none"> <li>Written request for waiver describing request and compliance with waiver standards</li> </ul>                                                                                                                                                                                |
| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>NA</b> | <b>Evidence of Financial and Technical Capacity*</b> <ul style="list-style-type: none"> <li>Letter or evidence from a financial institution or third party verifying financial capacity to undertake project</li> <li>Evidence of the project team's technical capacity to undertake project</li> </ul> <p style="color: red;">*NOTE: Not required for Minor Residential and <u>Low Impact Site Development</u> projects</p> |

| <p style="text-align: center;"><b>MINOR SITE PLAN</b></p> <p style="text-align: center;"><b>STANDARDS AND SUBMISSION CHECKLIST</b></p> <p style="text-align: center;">Provide assessment of compliance with standards and include supplemental documentation, as applicable.<br/>Please submit each document as a separate PDF file.</p> |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRANSPORTATION                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Yes                                                                                                                                                                                                                                                                                                                                      | NA | <b>Impact on Surrounding Street Systems (14-14.6.1(A)) Attachment E</b> <ul style="list-style-type: none"> <li>Describe incremental volume of traffic impacts and mitigation measures. If needed</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Yes                                                                                                                                                                                                                                                                                                                                      | NA | <b>Access and Circulation (14-14.6.1(B)) Attachment E</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Site access and internal circulation, including ADA access</li> <li>Drive-up features, if applicable</li> <li>Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable</li> <li>Sidewalks and condition along street frontages and internal walkways</li> <li>Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)</li> </ul> |
| Yes                                                                                                                                                                                                                                                                                                                                      | NA | <b>Public Transit (14-14.6.1(C)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter</li> </ul>                                                                                                                                                                                                                                                                                                                                            |
| Yes                                                                                                                                                                                                                                                                                                                                      | NA | <b>Off-Street Parking (14-14.6.1(D)), if applicable Attachment E</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code</li> <li>Curb cut separation and parking layout (Technical Manual, Section 1)</li> <li>Construction details for bicycle racks</li> <li>Management plan for snow storage and removal</li> </ul>                                                                                                             |
| Yes                                                                                                                                                                                                                                                                                                                                      | NA | <b>Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable</b> <ul style="list-style-type: none"> <li>Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                |

| ENVIRONMENTAL |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes           | NA | <b>Preservation of Significant Natural Features (14-14.6.2(A)), if applicable</b><br>Identify and describe the following: <b>Attachment F</b> <ul style="list-style-type: none"> <li>• High and moderate value waterfowl and wading habitat</li> <li>• Aquifers (for Casco Bay Islands)</li> <li>• Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)</li> <li>• Proposed preservation areas and protection measures</li> <li>• Documentation from environmental compliance consultants and determinations from applicable state and federal agencies</li> </ul>            |
| Yes           | NA | <b>Landscape Preservation (14-14.6.2(B))</b> <b>Attachment F</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4)</li> <li>• Measures to protect existing vegetation during construction</li> </ul>                                                                                                                                                                                                                                                                           |
| Yes           | NA | <b>Site Landscaping and Buffers (14-14.6.2(C))</b> <b>Attachment F</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Overall landscaping approach and consistency with standards</li> <li>• The use of screening and buffering of service areas and between non-residential and residential uses</li> <li>• Existing Heritage or Feature Trees on site and measures to preserve</li> <li>• Compliance with street tree requirements</li> </ul>                                                                                                                                 |
| Yes           | NA | <b>Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))</b> <b>Attachment F</b> <ul style="list-style-type: none"> <li>• Provide stormwater management plan in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general, and flooding standards, as applicable</li> <li>• Provide erosion control plan and measures</li> <li>• Provide evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable</li> <li>• Describe subsurface sanitary sewage disposal and groundwater protection</li> </ul> |



| PUBLIC INFRASTRUCTURE AND SAFETY |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes <b>NA</b>                    | <b>Consistency with City Master Plans (14-14.6.3(A))</b> <ul style="list-style-type: none"> <li>Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable</li> </ul>                                                                                                                                                                                                                                                                                                                        |
| <b>Yes</b> NA                    | <b>Public Safety and Fire Prevention (14-14.6.3(B)) Attachment K</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3)</li> <li>Emergency vehicle access</li> <li>Consistency with public safety standards (Technical Manual, Section 3)</li> </ul>                                                                                                                                                               |
| <b>Yes</b> NA                    | <b>Availability and Adequacy of Public Utilities (14-14.6.3(D)) (Technical Manual, Sections 2 &amp; 9) Attachment K</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Electrical services, including providing underground services</li> <li>Existing and proposed connections for public utilities and required public utility upgrades</li> <li>Sewer line connections</li> </ul> <div style="border: 1px solid red; padding: 5px; display: inline-block; margin-top: 10px;"> Section "C", as there is no Section "D" </div> |
| SITE DESIGN                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Yes <b>NA</b>                    | <b>Massing, Ventilations and Wind Impact (14-14.6.4(A))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable</li> <li>Bulk, location, or height impacts on adjoining structures</li> </ul>                                                                                                                                                                                                                |
| Yes <b>NA</b>                    | <b>Shadows (14-14.6.4(B)), if applicable</b> <ul style="list-style-type: none"> <li>Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)</li> </ul>                                                                                                                                                                                                                                                                                                                                                              |
| <b>Yes</b> NA                    | <b>Snow and Ice Loading (14-14.6.4(C)) Attachment L</b> <ul style="list-style-type: none"> <li>Describe building design to prevent snow and ice from loading or falling onto adjacent properties or public ways</li> </ul>                                                                                                                                                                                                                                                                                                                                      |
| Yes <b>NA</b>                    | <b>View Corridors (14-14.6.4(D)), if applicable</b> <ul style="list-style-type: none"> <li>Describe any protection of designated view corridors (Portland Design Manual, Appen. 1)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   |
| Yes <b>NA</b>                    | <b>Historic Resources (14-14.6.4(E)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>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</li> </ul>                                                                                                                                                                                                       |

|               |                                                                                                                                                                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <ul style="list-style-type: none"> <li>Compliance with standards for preservation and documentation of archaeological resources</li> </ul>                                                                                                                                                             |
| Yes <b>NA</b> | <b>Exterior Lighting (14-14.6.4(F))</b> <ul style="list-style-type: none"> <li>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</li> </ul>                     |
| Yes <b>NA</b> | <b>Noise and Vibration (14-14.6.4(G))</b> <ul style="list-style-type: none"> <li>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</li> </ul>   |
| Yes <b>NA</b> | <b>Signage and Wayfinding (14-14.6.4(H)), if applicable</b> <ul style="list-style-type: none"> <li>Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs</li> <li>Provide drawings of all commercial and directional signage on site</li> </ul> |
| Yes <b>NA</b> | <b>Zone-Related Design Standards (14-14.6.4(I))</b> <ul style="list-style-type: none"> <li>Address any applicable design review standards by zone, including compliance with Design Manual</li> </ul>                                                                                                  |

## MINOR SITE PLAN DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan.

**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:

- Location, area, and limits of the proposed site disturbance or alteration, including any proposed pier, dock, or wharf reconstruction
- Proposed structures, including floor area and finish floor elevation and distance from the property line
- Proposed paved areas, including parking spaces and dimensions if applicable
- Location of proposed utilities
- Proposed protection measures for watercourses, wetlands, or other significant natural features
- Proposed grades and contours
- Erosion control plan
- Proposed landscaping, screening, and proposed street trees, including existing vegetation to be preserved
- Proposed stormwater management controls

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Proposed curb and sidewalk (show any proposed geometric modifications, if applicable)</li> <li>Engineered specifications and cross-sections for proposed driveways, sidewalks and paved areas, if applicable</li> <li>Location, dimensions and ownership of proposed easements, public or private rights-of-way</li> <li>Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed</li> </ul> <p><b>*NOTE: Minor Residential and Low-Impact Site Development projects may optionally submit the drawings below, but are not required to do so; all other Minor Site Plan applications should include the below drawings in their submission.</b></p> |
| <b>UTILITY PLAN* including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Proposed electrical infrastructure</li> <li>Location, sizing and directional flows of all proposed sewer and stormwater infrastructure</li> <li>Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site</li> <li>Electric utility infrastructure</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>GRADING AND DRAINAGE PLAN* including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>Proposed grades</li> <li>Proposed stormwater management measures meeting Technical Manual (Section 5) standards</li> <li>Any proposed alteration of a watercourse or wetlands</li> <li>Any groundwater protection measures</li> <li>Proposed buffers and preservation measures for wetlands or significant natural features</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>LANDSCAPE PLAN* including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>Existing vegetation to be preserved and preservation measures</li> <li>Proposed landscaping, screening, and street trees, including caliper widths for trees</li> <li>Planting schedule, including street trees</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ARCHITECTURAL PLANS AND RENDERINGS* including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Exterior building elevations, color renderings, illustrations of all sides</li> <li>Axonometric and street-level views for structures greater than three stories in height</li> <li>Provide context drawings, if applicable (Design Manual, page 1)</li> <li>Floor plans</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>CONSTRUCTION MANAGEMENT PLAN* including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Specifics on traffic control, sidewalk sheds, and pedestrian rerouting</li> <li>Include a drawing and written narrative</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>OTHER*</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>Details and cross-sections, as necessary</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



## **Attachment D. Right Title and Interest**

See attached deed.

### WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **MOSHE WILANSKY** and **CHANA WILANSKY** of Portland, Maine, for consideration paid, GRANTS TO **CHABAD LUBAVITCH OF MAINE, INC.**, a Maine non-profit corporation whose mailing address is 101 Craigie Street, Portland, ME 04102, with WARRANTY COVENANTS, the premises situated in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land located on the southwesterly sideline of Pomeroy Street, so-called, in the City of Portland, County of Cumberland and State of Maine; said parcel being more particularly described as follows:

Beginning at an 1/2" iron rod found on the southwesterly sideline of said Pomeroy Street at the southeasterly corner of land now or formerly of Kriston Briggs;

Thence South 46° 11' 30" East along the southwesterly sideline of said Pomeroy Street a distance of 269.44 feet to a capped iron rod found (PLS #1278) and the northerly sideline of Motley Street, so-called;

Thence South 71° 08' 30" West along the northerly sideline of said Motley Street a distance of 58.71 feet to a point;

Thence in a general southwesterly direction along the northerly sideline of said Motley Street and along a circular curve to the left, circumscribed by a radius of 218.81 feet, an arc length of 44.47 feet to a capped iron rod found (PLS #1278) and land now or formerly of Joshua James and Tamara Rainsford Krieger; said capped iron rod found being South 65° 19' 13" West a tie distance of 44.39 feet from said previous capped iron rod found;

Thence North 34° 26' 02" West along the land of said Krieger a distance of 86.47 feet to a capped 5/8" iron rod found (PLS #1172);

Thence South 38° 44' 24" West along the land of said Krieger, along land now or formerly of the Redlon Park Homeowner's Association, and along land now or formerly of Nancy A. Roy a distance of 350.00 feet to a point and remaining land of Stuart B. Herrick, Jr.;

Thence North 28° 05' 22" West along the remaining land of Stuart B. Herrick, Jr. a distance of 286.03 feet to a point and land now or formerly of Thomas and Melody Lussier;

Thence North 60° 18' 30" East along the land of said Lussier, along land now or formerly of Roger and Donna Gendron, along land now or formerly of Jean Gilpatrick and along land of said Briggs a distance of 350.00 feet to the point of beginning.

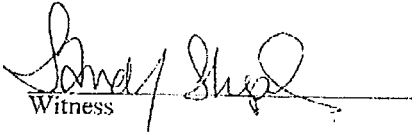
The above-described parcel contains 87,924 square feet. All bearings refer to Magnetic North as observed in 1973.

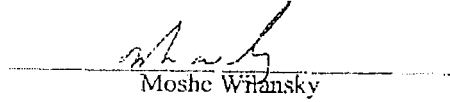
Reference is made to an unrecorded plan entitled Plan of Property, Bancroft Street, Portland, Maine, dated July 31, 1986, by R.P. Titcomb Associates, Inc. (Job #8660), as revised by unrecorded plan entitled Standard Boundary Survey and existing Conditions Plan for Stuart B. Herrick, Jr., dated March 2004, by BII2M (Job #03217).

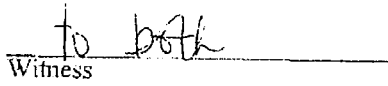


Being the same premises conveyed to the Grantors herein by Warranty Deed of Stuart B. Herrick, Jr. dated May 28, 2004 and recorded in the Cumberland County Registry of Deeds at Book 21341, Page 37.

IN WITNESS WHEREOF, the said Moshe Wilansky and Chana Wilansky have caused this instrument to be signed and sealed on June 15, 2004.

  
Witness

  
Moshe Wilansky

  
Witness

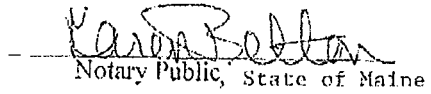
  
Chana Wilansky

State of Maine  
Cumberland, ss.

June 15, 2004

Then personally appeared the above-named Moshe Wilansky and/or Chana Wilansky and acknowledged the foregoing instrument to be his/her/their free act and deed.

Before me,

  
Notary Public, State of Maine

SEAL

Print Name: Karen Belton

My commission expires 08/26/06

Received  
Recorded Register of Deeds  
Jun 15, 2004 11:22:22A  
Cumberland County  
John B. O'Brien

f:\home\nc\clerk\endwilansky, moshe & chana\warranty deed to chabad.doc



## Attachment E. Traffic

As there are no proposed expansions of the use of the property, as such there are no proposed increases in traffic to and from the property. Per discussions with the Portland Fire Department, on street parking is proposed to be excluded for the opposite (North) side of Pomeroy Street to allow a fire truck “sweep” into the driveway.

Additional specific traffic related sections of the Land Use Ordinance:

- **Section 14.6.1 A:** The project does not propose changes to the surrounding street network and will not create or aggravate any significant hazard to safety. The project is located in a neighborhood with relatively low traffic and should not be classified as Level “D” or below.
- **Section 14.6.1 B 1:** The project proposes to widen the access drive to 16’ and will provide safe and reasonable access for the proposed use and increased access for safety and emergency equipment.
- **Section 14.6.1 B 2:** The existing turn around is proposed to remain, and should not affect the continued access and safe turning around of delivery vehicles. The proposed increased width of the driveway should also allow better access to the site.
- **Section 14.6.1 B 3:** See Attachment J for a waiver request of the requirement for curbing and sidewalk along Pomeroy Street.
- **Section 14.6.1 D:** Parking is proposed to be in conformance with the standards of the proposed use, see Attachment H. Bicycle parking is not required as the project proposes less than 10 parking spaces. Snow storage is proposed as existing, utilizing the periphery of the driveway areas. The proposed changes to parking and driveway width are not anticipated to significantly increase snowbank accumulation and can be handled effectively on site.



## Attachment F. Environmental Impacts

There are no environmental impacts proposed or assumed for the change of use or proposed site improvements. Expansions of parking and driveway are proposed in areas previously developed areas. The driveway is proposed to be expanded in areas of lawn and the proposed parking is sited in an area of gravel currently used as informal parking. Bordering wetlands and wooded areas are not proposed to be disturbed, and no trees are proposed to be removed.

Additional specific environmental related sections of the Land Use Ordinance:

- **Section 14.6.2 A:** The project does not propose impacts to the surrounding wetlands or trees and proposes to place areas of improvement in existing developed areas.
- **Section 14.6.2 B:** The project does not propose to disturb areas of trees. Silt barriers are shown along the limits of disturbance to protect the surrounding areas from silt migration and incidental impact.
- **Section 14.6.2 C:** The project does not propose to disturb the existing areas of buffering. Existing trees along the property line will remain in place and continue to provide effective screening from abutting properties. Existing trees along the ROW will not be disturbed with the proposed site improvements.
- **Section 14.6.2 D:** The project proposes the minimum amount of additional impervious area required by City for the proposed use, assuming 6 parking spots and a widened driveway. A stormwater report is included with this submission as Attachment M demonstrating that there are no anticipated increases in stormwater runoff from pre to post development conditions. Stormwater treatment is not required as the project qualifies as a redevelopment project and proposes less than 5,000 s.f. of additional non-roof impervious areas.



## **Attachment G. Design and Operation**

The subject property and surrounding properties are made up of private residences. For the subject property, in addition to being a private residence, worshippers have been welcomed. The permit applications do not seek to expand this use, but seeks to clarify the use of this property additionally as a Place of Religious Assembly. Given this, the project does not propose an increase in deliveries, trash, or waste generation or materials storage. There are no proposed changes to trees, screening, or arrangement and expansion of structures. No signage is proposed, outside of the “No Parking” signs as required by the City Fire Department.



**ZONING ANALYSIS** Relevant Zone(s) R-3

**All Projects:**

|                           | Required         | Proposed    |
|---------------------------|------------------|-------------|
| Lot Size                  | 1 ac. (Assembly) | 1.695 ac.   |
| Area Per Dwelling Unit    | 6,500 s.f.       | 1.695 ac.   |
| Minimum Street Frontage   | 50'              | 67.17'      |
| Front Yard Minimum        | 25'              | 168.8'      |
| Front Yard Maximum        | N/A              |             |
| Rear Yard                 | 25'              | 130.9'      |
| Yard Right                | 16'              | 43.5'       |
| Yard Left                 | 16'              | 70.2'       |
| Side Street Setback       | N/A              |             |
| Step Back                 | N/A              |             |
| Maximum Lot Coverage      | 35%              | 5.4%        |
| Minimum Lot Coverage      | N/A              |             |
| Maximum Height            | 35'              | 34' - 10.5" |
| Open Space                | N/A              |             |
| Maximum Impervious Area   | N/A              |             |
| Pavement Setback          | N/A              |             |
| Floor Area Ratio          | N/A              |             |
| Off Street Parking Spaces | 6 (Assembly)     | 7           |
| Loading Bays              | N/A              |             |
| Other 1                   |                  |             |
| Other 2                   |                  |             |
| Other 3                   |                  |             |



## **Attachment I. Site Plan Assessment**

The project proposes to meet the requirements of the Site Plan Review Standards, section 14.6 of the Land Use Code. As detailed in the checklist, Attachment C, additional attachments have been included to address specific requirements of section 14.6.



| <b>Standard to be Waived:</b><br>Cite Ordinance or Technical Manual Standard | <b>Cite Standard Language:</b><br>Cite specific language of applicable Ordinance or Technical Manual Standard                                                                                     | <b>Waiver Being Sought:</b><br>Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet. | <b>Justification for Waiver:</b><br>Address specific waiver criteria, if applicable, and document reasons for the waiver request.                                                                                |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.6.1-B-3-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. | Waiver from Sidewalks, section 14.6.1.B-3-c                                                                                               | i: There is no reasonable expectation for pedestrian use<br><br>ii: There are no sidewalks in the surrounding neighborhood and construction of sidewalks will not contribute to pedestrian oriented development. |
| 14.6.1-B-3-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. | Waiver from Curb, section 14.6.1-B-3-d                                                                                                    | iii: The street was constructed in the past 60 months without curb.<br><br>v: Runoff within the street does not require curbing for stormwater management                                                        |
| Tech. Manual 1.7.2.3                                                         | Any site with driveway access to a street shall have a minimum width of 20 feet for two-way ingress and egress, with a preferred 24 feet.                                                         | Waiver from 20' minimum driveway width, section 1.7.2.3                                                                                   | See October 20, 2021 comment response. Given constraints of of property lines along frontage of existing driveway, fire hydrant, likely wetland impacts, and recommendations from PFD of 16' wide min.           |



## Attachment K. Public Infrastructure and Safety

The project proposes to meet the following applicable Land Use Ordinance requirements:

- **Section 14.6.3 B:** The project meets the requirements of CPTED. The configuration of the driveway provides a clear view from the front door of the building to Pomeroy Street with unobstructed views of the entirety of the driveway. Existing lighting is proposed to remain, featuring lighting along the west side of the driveway. The City of Portland Fire Department has had an opportunity to provide comments for the change of use, and has requested that the driveway be 16' wide and parking be prohibited along the opposite side (north) of Pomeroy Street to provide better emergency vehicle access to the site. The site plans show both of these requirements being met.
- **Section 14.6.3 C:** The project does not propose any new utility connections. The property is currently serviced by City utilities, and these are to remain.



## Attachment L. Site Design

As the project does not propose any new structures, the bulk of site design requirements listed do not apply to the project. The project is not located in a view corridor or historic district. No new lighting is proposed as part of the project. No new HVAC systems are proposed, and no new wayfinding signs are proposed. The proposed project is not subject to zone-related design standards.

Following up on the requirements of the Land Use Ordinance, the project proposes to meet the following applicable requirements:

- **Section 14.6.4 C:** While no new structures are proposed, the current structures do not pose an issue with snow and ice loading onto adjacent properties. Snow will continued to be managed on site for driveway and parking areas to be cleared, with snowbanks along the periphery of the driveway.

**STORMWATER MANAGEMENT REPORT**  
**11 POMEROY STREET CHANGE OF USE**  
**Portland, Maine**

Submitted by:

**CHABAD LUBAVITCH OF MAINE, INC.**

Prepared by:



Date:  
**August, 2021**  
**Updated October, 2021**

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**LIST OF APPENDICES**

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| APPENDIX A | SOILS REPORT                  |
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## 1.0 **INTRODUCTION**

Chabad Lubavitch of Maine, Inc. is proposing a Change of Use to a Place of Religious Assembly for their private residence located at 11 Pomeroy Street in Portland. In order to meet the City's requirements for a use of this type, parking and emergency vehicle access must be upgraded. The upgrades also require a Minor Site Plan review through the City of Portland. We are providing this stormwater report to satisfy the requirements of the Minor Site Plan review.

The scope of work includes but is not limited to:

- Construction of an increase in width of the existing driveway to 16' wide.
- Construction of additional parking.

The proposed improvements will create approximately 2,150 square feet of new impervious area.

The Stormwater Management Plan has been prepared to satisfy the requirements of the City of Portland by applying Maine Department of Environmental Protections "Stormwater Management Rules" Chapters 500, 501 and 502 as well as the most recent version of the "Maine Stormwater Best Management Practices Manual". Per the City of Portland land use regulations, the project will be required to meet the Basic, General, and Flooding Standards.

## 1.1 **OVERVIEW OF MODELING METHODOGY AND SOURCE INFORMATION**

Hydrologic Analysis: The pre and post development conditions have been modeled using modeling software (Hydrocad Version 10) which is based upon the methodology contained within the USDA Soil Conservation Service Technical Release 55. Type III 24-hour storm distributions for south east Cumberland County were used for the analysis. The following frequencies and 24-hour rainfall depths were used for the analysis:

| <b>Return Period</b> | <b>24-Hour Rainfall Depth</b> |
|----------------------|-------------------------------|
| 2-Year Storm         | 3.10 inches                   |
| 10-Year Storm        | 4.60 inches                   |
| 25-Year Storm        | 5.80 inches                   |

Soils: The soils used for the stormwater analysis were digitized from the Natural Resource Conservation Service (NRCS), web soil survey website. The source of the data is the Cumberland County Soil Survey (Class D). Refer to the following for additional documentation regarding the soils used for modelling:



- Appendix A of this Report
- Pre and Post Development Watershed Plans (Sheets A and B)

The soils include:

| Soil Map Unit | Unit Description                              | Hydrologic Soil Group |
|---------------|-----------------------------------------------|-----------------------|
| BgB           | Nicholville very fine sandy loam, 0-8% slopes | C                     |
| HrB           | Lyman-Tunbridge complex, 0-8% slopes, rocky   | D                     |
| Wa            | Walpole fine sandy loam                       | A/D*                  |

\*D soils assumed for areas of known wetlands

Topography: Field survey by BH2M, areas outside the immediate property utilize contour information provided by the Maine Office of GIS.

## 1.2 **DESCRIPTION OF POINTS OF ANALYSIS**

The watershed model analyzes the discharge of runoff at three Analysis Points as described below:

### Analysis Point #1

Description: Discharge along neighboring property lines along the northwest side of the project

Pre Development Tributary Drainage Areas: 4.17 acres

Post Development Tributary Drainage Areas: 4.17 acres

## 1.3 **PRE DEVELOPMENT CONDITIONS**

The Pre Development Conditions are shown on Sheet 2 - Existing Conditions by BH2M as well as Sheet A –Pre Development Drainage Plan of the accompanying plans. The project is located along the south eastern end of Pomeroy Street, and is the only home with a driveway along Pomeroy Street. The project features an existing residence with an approximate 200 lf driveway and associated areas of lawn. There are areas of wetlands to the east of the property with an existing culvert under the driveway crossing the wetlands.

The watershed that was analyzed for this project is approximately 4.17 acres. The analysis points are described in Section 1.2 of this report. The watershed generally runs from east to west.

The Pre Development Watershed Map is included as Sheet A – Pre Development Drainage Plan of the accompanying plans and the Calculations are attached as Appendix B.

The Pre Development Watershed Model predicts the following peak flow rates:

| Pre Development Peak Flows (cu. ft./sec) |        |         |         |
|------------------------------------------|--------|---------|---------|
| Analysis Point                           | 2-Year | 10-Year | 25-Year |
| AP-1                                     | 1.57   | 4.37    | 7.02    |

#### 1.4 **POST DEVELOPMENT CONDITIONS**

The proposed project includes construction of a wider driveway and additional parking to meet the requirements of the proposed Change of Use to a place of Religious Assembly. The driveway is proposed to be widened from the approximate 10'-12' wide of existing to 16' wide to meet requirements of emergency access. Six additional parking spots are required, with 1 handicap spot on existing pavement and 6 spots proposed expanded pavement to the east of the driveway in an area of existing informal gravel parking.

The Post Development Drainage Plan is included as Sheet B of the accompanying plan set and the Calculations are attached as Appendix C.

Given the minor nature of the proposed improvements there is no net change in run off expected, as the modeled results indicate. The Post Development Watershed Model predicts the following peak flow rates:

| Post Development Peak Flows (cu. ft./sec) |        |         |         |
|-------------------------------------------|--------|---------|---------|
| Analysis Point                            | 2-Year | 10-Year | 25-Year |
| AP-1                                      | 1.57   | 4.37    | 7.02    |

#### 1.5 **DEVELOPMENT WITHIN URBAN IMPAIRED STREAM WATERSHEDS**

The project is located within the Capisic Brook Watershed. Capisic Brook is listed as an Urban Impaired Stream (06-096 CMR 502 Appendix B) as well as the Portland Technical Manual Section 5, Part II-A. To meet the Urban Impaired Stream Standard, the Applicant must either mitigate project impacts by reducing or eliminating an off-site or on-site pre-development impervious stormwater source or pay a compensation fee. Compensation fees may only be used in watersheds where a Compensation Fee Utilization Plan (CFUP) has been developed by a Municipality or other entity and approved by the Department. The City of Portland administers a CFUP for Capisic Brook. The Applicant intends to pay a compensation fee to the CFUP to meet the Urban Impaired Stream Standard. The compensation fee for the project is based on Table 1 found in 06-096 CMR 501 3.A.(1). The calculated compensation fee for the project is shown in the Table below. The project proposes some areas of new pavement, but does not propose new areas of landscaped areas, as disturbed areas are proposed in existing landscaped areas.

| Type of Surface                     | Compensation Fee<br>(per acre) | Proposed Area<br>(acres) | Compensation<br>Fee |
|-------------------------------------|--------------------------------|--------------------------|---------------------|
| <b>Non-roof<br/>Impervious Area</b> | \$12,500                       | 0.04                     | \$500.00            |
| <b>Roof</b>                         | \$5,000                        | 0                        | \$0                 |
| <b>Landscape Area</b>               | \$2,500                        | 0                        | \$0                 |
| <b>Total</b>                        |                                |                          | <b>\$500.00</b>     |

## 1.6 **BASIC STANDARDS**

The proposed project is required to meet the Basic Standards. To meet the Basic Standards the project design must demonstrate that the erosion and sedimentation control, inspection and maintenance, and housekeeping standards specified in Appendices A, B, and C of 06-096 Chapter 500 are met, and that the grading or other construction activity will not impede or otherwise alter drainageways so as to have an unreasonable adverse impact on a wetland or waterbody, or an adjacent downslope parcel.

The proposed project will provide temporary (during construction) BMP's and post-construction BMP's. Refer to Sheet 3 of the Project Plans for erosion and sedimentation control narratives and details.

## 1.7 **GENERAL STANDARDS - REDEVELOPMENT**

The proposed project is not required to meet General Standards. Per the City of Portland Technical Manual Section 5, Part II-D "Redevelopment Projects", projects are required to provide treatment that include redevelopment of non-roof impervious greater than 5,000 sf. Where this project proposes 2,150 sf of new impervious treatment is not required.

## 1.8 **FLOODING STANDARD**

The proposed project is required to meet the Flooding Standards. To meet the Flooding Standard, the project design must demonstrate that the stormwater management systems will accomplish the following:

- a) The system must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.
- b) The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits.

- c) The areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be defined, and no buildings or other similar facilities may be planned within such areas.
- d) Runoff from the project may not flood the primary access road to the project and any public roads bordering the project as a result of a 25-year, 24-hour storm.

The following Table compares the Pre and Post Development peak flow rates for the 2-year, 10-year, and 25-year return periods. Refer to Appendix B for the Pre-Development model and Appendix C for Post Development model.

| Peak Flow Comparison (cu. ft./sec) |        |      |         |      |         |      |
|------------------------------------|--------|------|---------|------|---------|------|
| Analysis Point                     | 2-Year |      | 10-Year |      | 25-Year |      |
|                                    | Pre    | Post | Pre     | Post | Pre     | Post |
| AP-1                               | 1.57   | 1.57 | 4.37    | 4.37 | 7.02    | 7.02 |

As illustrated in the table above, the proposed redevelopment project will not increase expected run off from the site. These results are expected given the minor nature of the required improvements.

## 1.9 **CLOSURE**

The proposed stormwater management facilities have been designed to mitigate stormwater impacts associated with development of the proposed project. The proposed stormwater management facilities have been designed to meet the Basic, General and Flooding Standards required by Chapter 500 and the City of Portland.

**Appendix A**  
**Soils Report**



United States  
Department of  
Agriculture

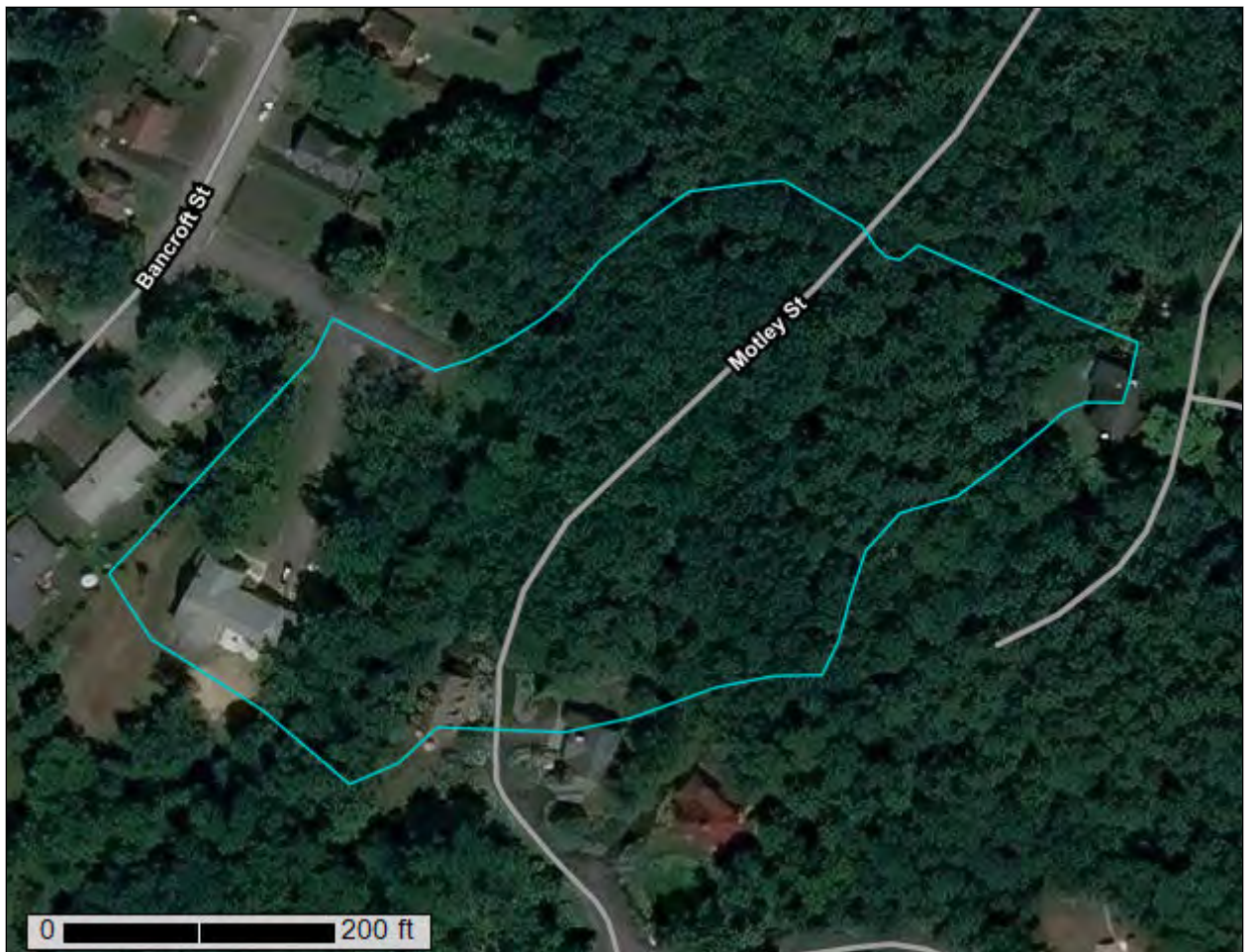
**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

11 Pomeroy Street



July 13, 2021



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.



# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
Survey Area Data: Version 17, Jun 5, 2020

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

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

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

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                              | Acres in AOI | Percent of AOI |
|------------------------------------|------------------------------------------------------------|--------------|----------------|
| BgB                                | Nicholville very fine sandy loam,<br>0 to 8 percent slopes | 1.8          | 43.2%          |
| HrB                                | Lyman-Tunbridge complex, 0 to<br>8 percent slopes, rocky   | 1.1          | 25.8%          |
| Wa                                 | Walpole fine sandy loam                                    | 1.3          | 31.0%          |
| <b>Totals for Area of Interest</b> |                                                            | <b>4.2</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Cumberland County and Part of Oxford County, Maine

### BgB—Nicholville very fine sandy loam, 0 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2yJg5

*Elevation:* 20 to 2,300 feet

*Mean annual precipitation:* 34 to 50 inches

*Mean annual air temperature:* 37 to 45 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Nicholville and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Nicholville

##### Setting

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Coarse-silty glaciomarine deposits

##### Typical profile

*Ap - 0 to 7 inches:* very fine sandy loam

*Bs - 7 to 19 inches:* very fine sandy loam

*BC - 19 to 30 inches:* very fine sandy loam

*C - 30 to 65 inches:* loamy very fine sand

##### Properties and qualities

*Slope:* 0 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.14 to 1.42 in/hr)

*Depth to water table:* About 18 to 30 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Available water capacity:* High (about 10.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C

*Hydric soil rating:* No

#### Minor Components

##### Roundabout, somewhat poorly drained

*Percent of map unit:* 5 percent

*Landform:* Lakebeds (relict)



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*Landform position (two-dimensional):* Footslope, toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

### **Croghan**

*Percent of map unit:* 5 percent

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

### **Salmon**

*Percent of map unit:* 3 percent

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Backslope, summit

*Landform position (three-dimensional):* Side slope, crest

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Hydric soil rating:* No

### **Roundabout**

*Percent of map unit:* 2 percent

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Footslope, toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Hydric soil rating:* Yes

## **HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky**

### **Map Unit Setting**

*National map unit symbol:* 2x1cx

*Elevation:* 0 to 520 feet

*Mean annual precipitation:* 36 to 65 inches

*Mean annual air temperature:* 36 to 52 degrees F

*Frost-free period:* 90 to 160 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Lyman and similar soils:* 50 percent

*Tunbridge and similar soils:* 30 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Lyman

### Setting

*Landform:* Ridges, hills

*Landform position (two-dimensional):* Shoulder, backslope, summit

*Landform position (three-dimensional):* Crest, nose slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

### Typical profile

*Oe - 0 to 1 inches:* moderately decomposed plant material

*A - 1 to 3 inches:* loam

*E - 3 to 5 inches:* fine sandy loam

*Bhs - 5 to 7 inches:* loam

*Bs1 - 7 to 11 inches:* loam

*Bs2 - 11 to 18 inches:* channery loam

*R - 18 to 79 inches:* bedrock

### Properties and qualities

*Slope:* 0 to 8 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* 11 to 24 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to high (0.00 to 14.03 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 3.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* D

*Hydric soil rating:* No

## Description of Tunbridge

### Setting

*Landform:* Hills, ridges

*Landform position (two-dimensional):* Backslope, shoulder, summit

*Landform position (three-dimensional):* Side slope, crest

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

### Typical profile

*Oe - 0 to 3 inches:* moderately decomposed plant material

*Oa - 3 to 5 inches:* highly decomposed plant material

*E - 5 to 8 inches:* fine sandy loam

*Bhs - 8 to 11 inches:* fine sandy loam

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*Bs - 11 to 26 inches:* fine sandy loam  
*BC - 26 to 28 inches:* fine sandy loam  
*R - 28 to 79 inches:* bedrock

### Properties and qualities

*Slope:* 3 to 8 percent  
*Surface area covered with cobbles, stones or boulders:* 1.5 percent  
*Depth to restrictive feature:* 21 to 41 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to high (0.00 to 14.03 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 5.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

### Minor Components

#### Ragmuff

*Percent of map unit:* 10 percent  
*Landform:* Ridges, hills  
*Landform position (two-dimensional):* Backslope, footslope  
*Landform position (three-dimensional):* Base slope, side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Abram

*Percent of map unit:* 5 percent  
*Landform:* Hills, ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Nose slope, crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Peru

*Percent of map unit:* 4 percent  
*Landform:* Hills, ridges  
*Landform position (two-dimensional):* Footslope, backslope  
*Landform position (three-dimensional):* Base slope, side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 1 percent  
*Landform:* Hills, ridges  
*Landform position (two-dimensional):* Shoulder, summit  
*Landform position (three-dimensional):* Nose slope, crest, free face  
*Down-slope shape:* Convex

*Across-slope shape:* Convex  
*Hydric soil rating:* No

## **Wa—Walpole fine sandy loam**

### **Map Unit Setting**

*National map unit symbol:* blk7  
*Elevation:* 0 to 2,800 feet  
*Mean annual precipitation:* 30 to 50 inches  
*Mean annual air temperature:* 37 to 46 degrees F  
*Frost-free period:* 80 to 165 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Walpole and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Walpole**

#### **Setting**

*Landform:* Outwash plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy glaciofluvial deposits

#### **Typical profile**

*H1 - 0 to 8 inches:* fine sandy loam  
*H2 - 8 to 20 inches:* fine sandy loam  
*H3 - 20 to 65 inches:* gravelly loamy sand

#### **Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)  
*Depth to water table:* About 0 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 5.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

## Minor Components

### **Au gres**

*Percent of map unit:* 9 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

### **Scarboro**

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

### **Deerfield**

*Percent of map unit:* 1 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

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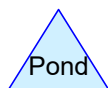
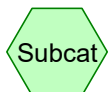
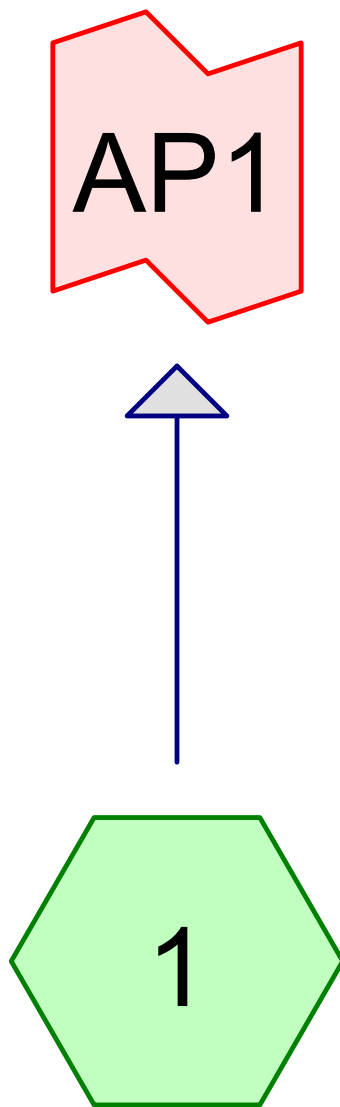
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**Appendix B**  
**Pre-Development Calculations**



**Routing Diagram for Pre Development**  
Prepared by BH2M, Printed 8/18/2021  
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## Pre Development

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Type III 24-hr 25-YR Rainfall=5.80"

Printed 8/18/2021

Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,488 sf 8.54% Impervious Runoff Depth>2.18"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=7.02 cfs 0.756 af

### Link AP1:

Inflow=7.02 cfs 0.756 af  
Primary=7.02 cfs 0.756 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.756 af Average Runoff Depth = 2.18"**  
**91.46% Pervious = 3.811 ac 8.54% Impervious = 0.356 ac**

**Pre Development**

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Type III 24-hr 25-YR Rainfall=5.80"

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Page 3

**Summary for Subcatchment 1:**

Runoff = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af, Depth&gt; 2.18"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 12,902    | 39 | >75% Grass cover, Good, HSG A |
| 1,140     | 74 | >75% Grass cover, Good, HSG C |
| 9,786     | 80 | >75% Grass cover, Good, HSG D |
| 24,855    | 30 | Woods, Good, HSG A            |
| 75,546    | 70 | Woods, Good, HSG C            |
| 41,757    | 77 | Woods, Good, HSG D            |
| * 15,502  | 98 | Impervious                    |
| 181,488   | 67 | Weighted Average              |
| 165,986   |    | 91.46% Pervious Area          |
| 15,502    |    | 8.54% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 15.1     | 150           | 0.1133        | 0.17              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                  |
| 9.0      | 457           | 0.0284        | 0.84              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps                         |
| 0.1      | 41            | 0.0100        | 5.94              | 10.50          | <b>Pipe Channel,</b><br>18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 |
| 0.4      | 23            | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps              |
| 24.6     | 671           | Total         |                   |                |                                                                                   |

**Summary for Link AP1:**

Inflow Area = 4.166 ac, 8.54% Impervious, Inflow Depth &gt; 2.18" for 25-YR event

Inflow = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af

Primary = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

## Pre Development

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Type III 24-hr 2-YR Rainfall=3.10"

Printed 8/18/2021

Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,488 sf 8.54% Impervious Runoff Depth>0.56"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=1.57 cfs 0.195 af

### Link AP1:

Inflow=1.57 cfs 0.195 af  
Primary=1.57 cfs 0.195 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.195 af Average Runoff Depth = 0.56"**  
**91.46% Pervious = 3.811 ac 8.54% Impervious = 0.356 ac**

## Pre Development

Prepared by BH2M

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Type III 24-hr 10-YR Rainfall=4.60"

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,488 sf 8.54% Impervious Runoff Depth>1.39"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=4.37 cfs 0.481 af

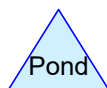
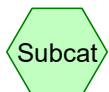
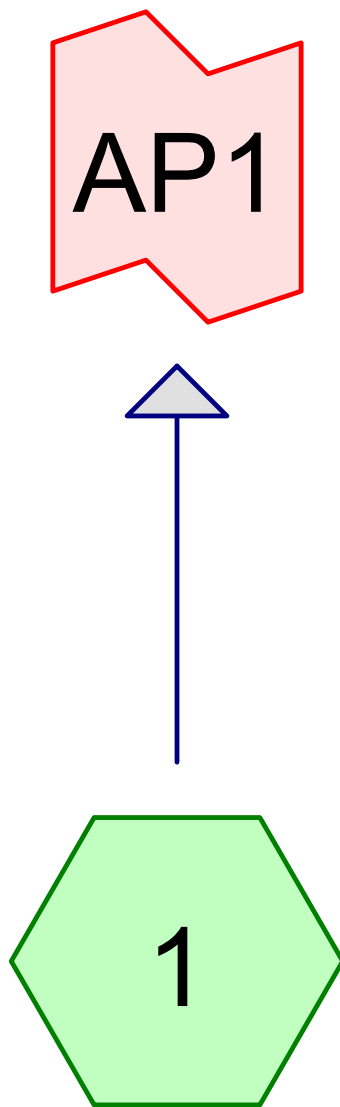
### Link AP1:

Inflow=4.37 cfs 0.481 af  
Primary=4.37 cfs 0.481 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.481 af Average Runoff Depth = 1.39"**  
**91.46% Pervious = 3.811 ac 8.54% Impervious = 0.356 ac**



**Appendix C**  
**Post Development Calculations**



**Routing Diagram for Post Development**  
Prepared by BH2M, Printed 10/20/2021  
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## Post Development

Type III 24-hr 25-YR Rainfall=5.80"

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,490 sf 9.73% Impervious Runoff Depth>2.18"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=7.02 cfs 0.756 af

### Link AP1:

Inflow=7.02 cfs 0.756 af  
Primary=7.02 cfs 0.756 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.756 af Average Runoff Depth = 2.18"**  
**90.27% Pervious = 3.761 ac 9.73% Impervious = 0.405 ac**

**Post Development**

Prepared by BH2M

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Type III 24-hr 25-YR Rainfall=5.80"

Printed 10/20/2021

Page 3

**Summary for Subcatchment 1:**

Runoff = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af, Depth&gt; 2.18"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 11,144    | 39 | >75% Grass cover, Good, HSG A |
| 1,052     | 74 | >75% Grass cover, Good, HSG C |
| 9,484     | 80 | >75% Grass cover, Good, HSG D |
| 24,855    | 30 | Woods, Good, HSG A            |
| 75,546    | 70 | Woods, Good, HSG C            |
| 41,757    | 77 | Woods, Good, HSG D            |
| * 17,652  | 98 | Impervious                    |
| 181,490   | 67 | Weighted Average              |
| 163,838   |    | 90.27% Pervious Area          |
| 17,652    |    | 9.73% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                       |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 15.1     | 150           | 0.1133        | 0.17              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                  |
| 9.0      | 457           | 0.0284        | 0.84              |                | <b>Shallow Concentrated Flow,</b><br>Woodland Kv= 5.0 fps                         |
| 0.1      | 41            | 0.0100        | 5.94              | 10.50          | <b>Pipe Channel,</b><br>18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 |
| 0.4      | 23            | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow,</b><br>Short Grass Pasture Kv= 7.0 fps              |
| 24.6     | 671           | Total         |                   |                |                                                                                   |

**Summary for Link AP1:**

Inflow Area = 4.166 ac, 9.73% Impervious, Inflow Depth &gt; 2.18" for 25-YR event

Inflow = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af

Primary = 7.02 cfs @ 12.36 hrs, Volume= 0.756 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

## Post Development

Prepared by BH2M

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Type III 24-hr 2-YR Rainfall=3.10"

Printed 10/20/2021

Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,490 sf 9.73% Impervious Runoff Depth>0.56"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=1.57 cfs 0.195 af

### Link AP1:

Inflow=1.57 cfs 0.195 af  
Primary=1.57 cfs 0.195 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.195 af Average Runoff Depth = 0.56"**  
**90.27% Pervious = 3.761 ac 9.73% Impervious = 0.405 ac**

## Post Development

Type III 24-hr 10-YR Rainfall=4.60"

Prepared by BH2M

Printed 10/20/2021

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1:

Runoff Area=181,490 sf 9.73% Impervious Runoff Depth>1.39"  
Flow Length=671' Tc=24.6 min CN=67 Runoff=4.37 cfs 0.481 af

### Link AP1:

Inflow=4.37 cfs 0.481 af  
Primary=4.37 cfs 0.481 af

**Total Runoff Area = 4.166 ac Runoff Volume = 0.481 af Average Runoff Depth = 1.39"**  
**90.27% Pervious = 3.761 ac 9.73% Impervious = 0.405 ac**



ANDREW S. MORRELL  
ROBERT C. LIBBY, Jr.  
WALTER E. PELKEY  
STEVEN J. BLAKE

Berry, Huff, McDonald, Milligan Inc.  
*Engineers, Surveyors*

Att. N

380B Main Street      Tel. (207) 839-2771  
Gorham, Maine 04038      [www.bh2m.com](http://www.bh2m.com)

October 20, 2021

Jimmy Dealaman, Planner  
City of Portland Planning and Urban Development  
City Hall, 389 Congress Street, 4<sup>th</sup> Floor  
Portland, Maine 04101

Re: Initial Review Comments  
11 Pomeroy Street

Dear Jimmy;

We have reviewed the initial comments that were provided on October 13, 2021 and October 19, 2021 and offer the following responses. We have included the original comment (*italics*) and our responses (**bold**). Revisions to documents can be found on the project portal as referenced, and also included is the following list of attachments:

- Attachment 1 – Land Use Section 6.5.6.F Review
- Attachment 2 –Turning Template Figure
- Attachment 3 – First Floor Plan

**Conditional Use:**

*Please submit narrative to meeting the specific zone criteria which is for 6.5.6.F, which is for institutional uses.*

**Response: Responses to each section of 6.5.6.F have been included as Attachment 1.**

**Transportation:**

*Please provide vehicle turning templates sized for the type of vehicles expected to use the site (Note: a waiver to the minimum driveway aisle width within the parking area may be needed. The minimum width in this area is 24 feet as specified in Sec 1.14.3 of the City's Technical Manual.)*

**Response: Please see the Attachment 2 showing turn templates for the proposed parking area. The vehicle shown is a Sprinter Van, a typical passenger van expected to access the site. This shows that a wider driving isle is necessary for vehicles to maneuver and remain on pavement. A 24' wide isle behind the proposed parking is now shown on the plan to be in conformance with the requirements of the technical manual and to meet the turning template. A waiver request will not be necessary. An updated site plan and stormwater report, showing the additional impervious area for the isle, have been uploaded to the portal.**



*The current driveway width of 16 feet does not meet the requirements of Section 1.7.2.3 of the City's Technical Manual which apply to the project requiring a minimum width of 20 feet. If the project cannot provide the minimum width please submit a waiver request providing justification as a basis for granting a waiver.*

**Response:** Section 1.7.2.3 relates to Multi family, Commercial and Industrial uses, however, in this case we understand that is the most appropriate standard for an Institutional use as is proposed. The driveway width has been proposed based on feedback from the City Fire Department, requesting a minimum of 16' wide access. The driveway width is constrained at the frontage along Pomeroy Street by the property boundary and an existing tree to the north, and an existing fire hydrant and city easement for a hammerhead turn around to the south. The 16' width proposed is the widest practical driveway that can be provided without impacts to the adject properties or city easement. Additionally, the area of the existing wetland crossing would likely require additional wetland impacts to facilitate a wider driveway. We request a waiver from the 20' minimum width standard based on these constraints. An updated waiver table uploaded to the portal.

*Please provide an estimate of traffic expected to the site and provide this information (i.e. measuring the # of trips that occur during a peak hour time of the week).*

**Response:** Utilizing Trip Generation Rates from the 8'th edition of the ITE Trip Generation Report, reviewing "Synagogue", ITE Code 561, we find a total of 10 calculated daily trips and 2 pm peak trips expected given the 900 sf assembly area. While the ITE Report provides these values generally for this category, in reality less than 10 cars are expected on site.

#### **Parking:**

*Please submit updated floor plans (or confirm if those submitted on 11/16/2018 are still current/accurate for the project) Staff are seeking to confirm the proposed square footage of the place of assembly use and the square footage used for single family home. Per Table 19-A of the City's Land Use Code, Places of Assembly must provide 1 parking space for 150 SF of floor area used for assembly purposes. Also, single family homes are required to provide 1 parking space. In order to confirm the combined parking requirement for the site is met, floor plans indicating the square footage of each use are needed.*

**Response:** A copy of the first floor plan has been included as Attachment 3 showing of the area of religious assembly. Consistent with our initial submission, this shows 900 sf, corresponding to 6 parking spots required. The plans show six proposed conventional spots, one proposed handicap spot, with the existing garage space and the space outside in front of the garage reserved for residential use. There are sufficient spaces proposed and existing to meet requirements.

#### **General:**

*During review of the project, feedback from peer reviewers asked whether the property was operating a summer camp? Please share more information about the operations of as they relate to trips to the site, hours of operation, drop-off/access, etc.*

**Response:** There is a summer camp that is conducted from the premises. The summer camp is conducted for 3 weeks in July and there are 15 to 18 kids from 4 to 6 families that participate in the camp. Children are dropped off in the morning and picked up in the

afternoon of the weekdays. This summer camp is typically conducted off site with field trips and visits to other locations, but given the effects of Covid, one week of the camp was conducted onsite this past season.

*Please clarify if the area highlighted below [note: highlighted 12x70 area] is denoted for any special reason (existing easement, etc)*

**Response:** This is a previously granted landscaping easement for trees apparently existing prior development of the residence. This has been noted as “Landscaping Easement” on the updated site and existing condition plans, which have been updated on the portal.

**Sec. 6.5.2 General conditional use standards:**

*The review authority shall, after review of the application, approve a conditional use upon a finding that the proposed conditional use, at the size and intensity contemplated at the proposed location, will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zone. The review authority shall find that this standard is satisfied if it finds that:*

*A. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.*

**Response:** The project does not generate vehicle volume substantially greater than the surrounding uses. Attendees are prohibited to drive on days when attendance will be at its highest, which will reduce the number of vehicles on site than what may be typically expected for religious assembly. The driveway and parking are proposed to be expanded to the minimal extent practical to meet the City’s code. The proposed 16’ wide driveway is not considered to be abnormally wide in comparison to the surrounding uses. Additional parking for 6 vehicles is effectively replacing informal gravel parking of the same size and location currently found on site.

*B. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.*

**Response:** The project does not generate harmful or unsanitary conditions. The existing building utilizes municipal water and sewer, hosting worshippers with no negative effects. No additional lighting or emissions are proposed with the use, and with the majority of activities occurring inside the building, no harmful generation of noise is anticipated.

*C. The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.*

**Response:** The proposed use will not have impact on surrounding properties. The building and parking are well screened from abutting properties. No impacts to landscaping, arrangement of structures, screening and signage are proposed with this proposed use, as no tree removal or expansions of the building are proposed. No increases in deliveries, trash, or loading are proposed over what is currently occurring on site.

*D. The proposed use will meet any additional zone or use-specific standards identified in Tables 6-A to 6-F and Subsections 6.5.6 and 6.5.7."*

**Response: The proposed use, a place of assembly under 10,000 sf, is identified in Table 6 A as a permittable conditional use in this Zone, R-3. A detailed response to the applicable items in Section 6.5.6.F has been included as Attachment 1.**

We trust these responses will provide additional information helpful in your review of the project. We look forward to discussing the project with the Planning Board.

Sincerely,

A handwritten signature in blue ink, appearing to read "Christopher R. MacDonald".

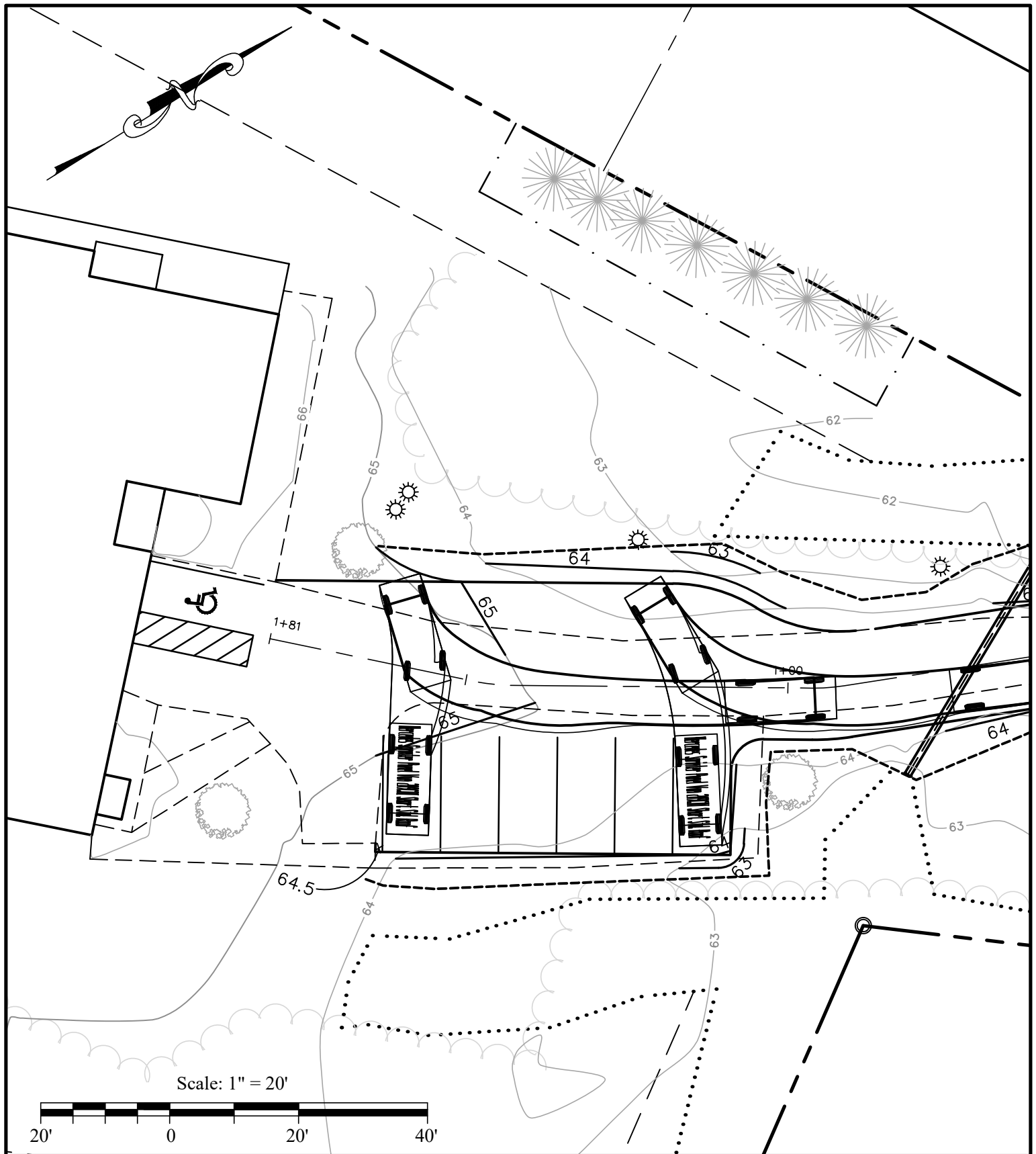
Christopher R. MacDonald, P.E.  
Project Manager

## **Attachment 1. Land Use Section 6.5.6.F Review**

The following enumerated sections relate to the individual sections of 6.5.6.F.

1. We understand the Planning Board has review authority for this change of use application.
2. The project does not propose any building expansions and all driveway expansions are proposed on existing property.
3. This item is not applicable as it relates to the IR-1 and IR-2 zones; this project is located in the R-3 zone.
4. The proposed project will have a residence and place of religious assembly. Per table 7-A, the R-3 district requires 6,500 sf for a residence, and 1 acre per place of assembly under 10,000 sf. The cumulative lot size requirement is 1.15 acres. The property consists of 1.695 acres, and therefore is in conformance with this requirement.
5. This item is not applicable as it relates to a community hall, no such use is proposed.
6. This item is not applicable as it relates to a private club serving alcoholic beverages; no such uses are proposed.
7. This item is not applicable as it relates to the R-2 zone and a post-secondary school, this is a different zone and no such use is proposed.
8. This item is not applicable as it relates to the R-5 zone and a post-secondary school, this is a different zone and no such use is proposed.

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ATTACHMENT 2  
PARKING TURNING TEMPLATE  
11 POMEROY CHANGE OF USE AND  
MINOR SITE PLAN APPLICATIONS

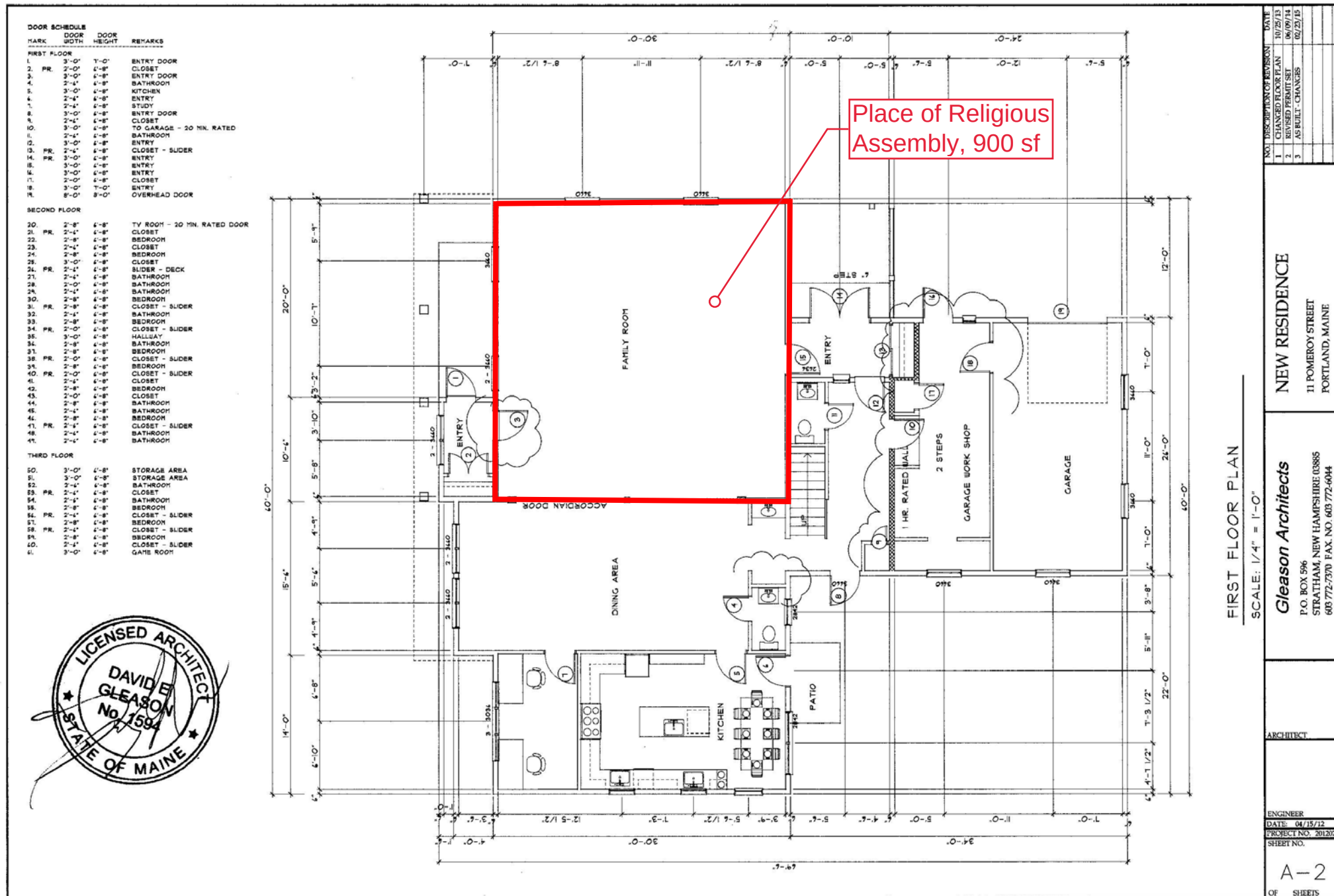


**BH2M**

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January 24, 2021

Jimmy Dealaman, Planner  
City of Portland Planning and Urban Development  
City Hall, 389 Congress Street, 4<sup>th</sup> Floor  
Portland, Maine 04101

Re: Planning Board Workshop Follow up Comments  
11 Pomeroy Street Change of Use and Minor Site Plan

Dear Jimmy;

We have reviewed the comments that were provided in a November 23, 2021 email and offer the following responses. Below these, we also have included comments from other correspondence that is appropriate to include here. We have included the original comment (*italics*) and our responses (**bold**).

*Estimated trip generation estimate and projections please share the maximum number of attendees expected and an assumption regarding vehicle occupancy. This should also factor in anticipated future participation levels, and should also define the hours of traffic generation for the place of assembly use including the special events and any other concurrent activities.*

**Response: The applicant team has met to discuss the specifics of attendance and parking needs for the proposed use. The main use for the physical place of assembly is for weekly worship services and occasional lectures. A summer camp, holiday celebrations, and other large gatherings that are typically conducted off site.**

**The typical worship services on site are attended by 3 members of the family and 7-9 worshippers from outside the household. There are no plans to expand these services. It is typical for some worshippers to walk to the site as they are close by, some arriving by car, and others will carpool to the site. These services occur on the following schedule, with attendees and anticipated parking demands noted:**

**Sunday: 9:00 am – 10:00 am; 10-12 worshippers; 5-6 vehicles utilizing on-site parking  
Thursday: 7:00 am – 8:15 am; 10-12 worshippers; 5-6 vehicles utilizing on-site parking  
Saturday 10:30 am – 1:00 pm; 10-12 worshippers; 5-6 vehicles utilizing on-site parking**

**Lectures are occasionally offered to worshippers throughout the year. These lectures are held at times outside the typical worship services noted above as many of the same attendees participate in the lectures and worship services. These lectures last approximately an hour, and are typically held during daytime hours and occasionally between 7:00 - 8:00 pm. As is similar to worship services, approximately 10-12 attendees are typical, and 5-6 vehicles are also typical. These lectures are conducted in a web format on some occasions and would not require on site**



assembly. There are no plans to expand these lectures beyond the current levels of attendance. Approximate schedule for these lectures as follows:

**Timed outside of typical scheduled worship during week day; 10-12 attendees; 5-6 vehicles**

A summer camp is held as part of this place of worship, but is not conducted on site. These camps have met, and are expected to continue to meet off site at Congregation Bet Ha'am in South Portland. It is typical for the attendees to be dropped off directly at Congregation Bet Ha'am. As has been discussed previously, given the effects of Covid 19 and related facility closures, the summer camp was held at 11 Pomeroy for one week when it could not meet off site otherwise. The summer camp begins the end of June (end of school year) for 3-4 weeks until the end of July, and typically has 15 attendees and 4 vehicles. On the occasion that it had to meet at Pomeroy Street, attendees were dropped off and picked up; no attendee cars are parked for longer than loading and unloading, and there was no overlap with the typical worship services or lectures. The proposed parking would be sufficient for these needs.

It is important to note that there are a few large events that have been traditionally held off site in an acknowledgement to the limitations of the facilities at 11 Pomeroy. These larger events are held off site at locations more suited to the higher numbers of attendees expected to participate. Examples of these are lighting of the Menorah at City Hall in Portland and a Hanukkah parade that meets at the Jewish Community Alliance on Congress Street in Portland. Purim is celebrated off site and has been held at the Ocean Gateway, Italian Heritage Center, and Woodfords Club in past years.

*Provide a parking demand estimate which considers the trip generation for the site and how parking demand will be accommodated. As with trip generation estimates, this should factor in all activities such as special events, etc and if there is any overlapping parking demand resulting from concurrent activities requiring parking.*

**Response:** As discussed above, the typical worship services are not proposed in overlap with any of the other services offered. There are 7 proposed parking spots, not including the 2 existing spaces reserved for the family's use in the garage and outside the garage. The family members share cars, and 2 car spaces are sufficient for their needs. As 5-6 cars are expected during worship and lecture services, the 7 proposed on-site parking spots are adequate as proposed.

*Regarding types of trips, there was a public comment at the previous workshop which raised concerns of a bus being used. If bus/es are expected or anticipated to visit the site, please incorporate this into your traffic/parking/loading assumption.*

**Response:** The occasion that a group visited 11 Pomeroy Street in a bus was not a typical visit, and not related to the place of religious assembly. A group of students were traveling in New England and had stopped at 11 Pomeroy for a visit and to have dinner together with the family. This was not offered as a worship service, but rather was a visit to the family, and in line with a residential use. This visit was not during worship services. Food was not offered for sale, but rather was offered as hospitality during their visit.

*Please clarify if the proposed place of assembly is just for the 900 square feet or for any additional portions of the structure. In other words, if bathrooms, storage, or any other areas are primarily being*

*used by the proposed place of assembly use, please indicate on floor plans and provide an updated square footage that factors in all areas primarily used by a Place of Assembly use.*

**Response:** Additional areas for the entry and bathroom areas have been included in the calculation for place of assembly area. A marked-up floorplan indicating these areas has been included as Attachment 1. This brings the total area to 1,020 sf, requiring 6.8 parking spaces. This is met with the current design, proposing 7 spaces dedicated for use in the place of religious assembly.

*For larger events how will trash/recycling generation be accommodated. Are trash bags and recycling currently brought to Bancroft Street for pick up?*

**Response:** As discussed in our November 23 email correspondence, Public Works has reported that as long as there is a residence included with the place of worship, religious assembly spaces are eligible for trash pick up. As this space is also the family home, 11 Pomeroy would meet this condition. The intention is to continue to utilize municipal waste services.

*From a November 11 email correspondence: Additionally, as I review the project with the site plan standards, I would at this point also recommend submitting a site lighting plan as well as including some dense evergreen landscaping or equivalent buffer along the northern property edge on the plan. This will help minimize any impacts of the nonresidential use on the surrounding properties.*

**Response:** There is no additional lighting proposed on site. Existing lighting along the driveway is shielded behind a stand of evergreen trees, and an existing landscaping easement has been previously granted to neighboring properties to maintain an existing stand of evergreen trees. For the area along the rear of the building, only smaller conventional doorway lighting is existing, and no new lighting is proposed. A proposed area of Arborvitae landscaped screening is now proposed along the rear of the building. We understand a comment from the public was received about lighting concerns that may be highlighting this issue. Our understanding is that this member of the public lives at 88 Bancroft Street, which is on the north side of the intersection with Pomeroy and Bancroft Streets. Rather than lighting directly on site being an issue, it is likely that the lighting concern comes from the municipal street lights at the intersection, which were required to be installed at the time the street was constructed.

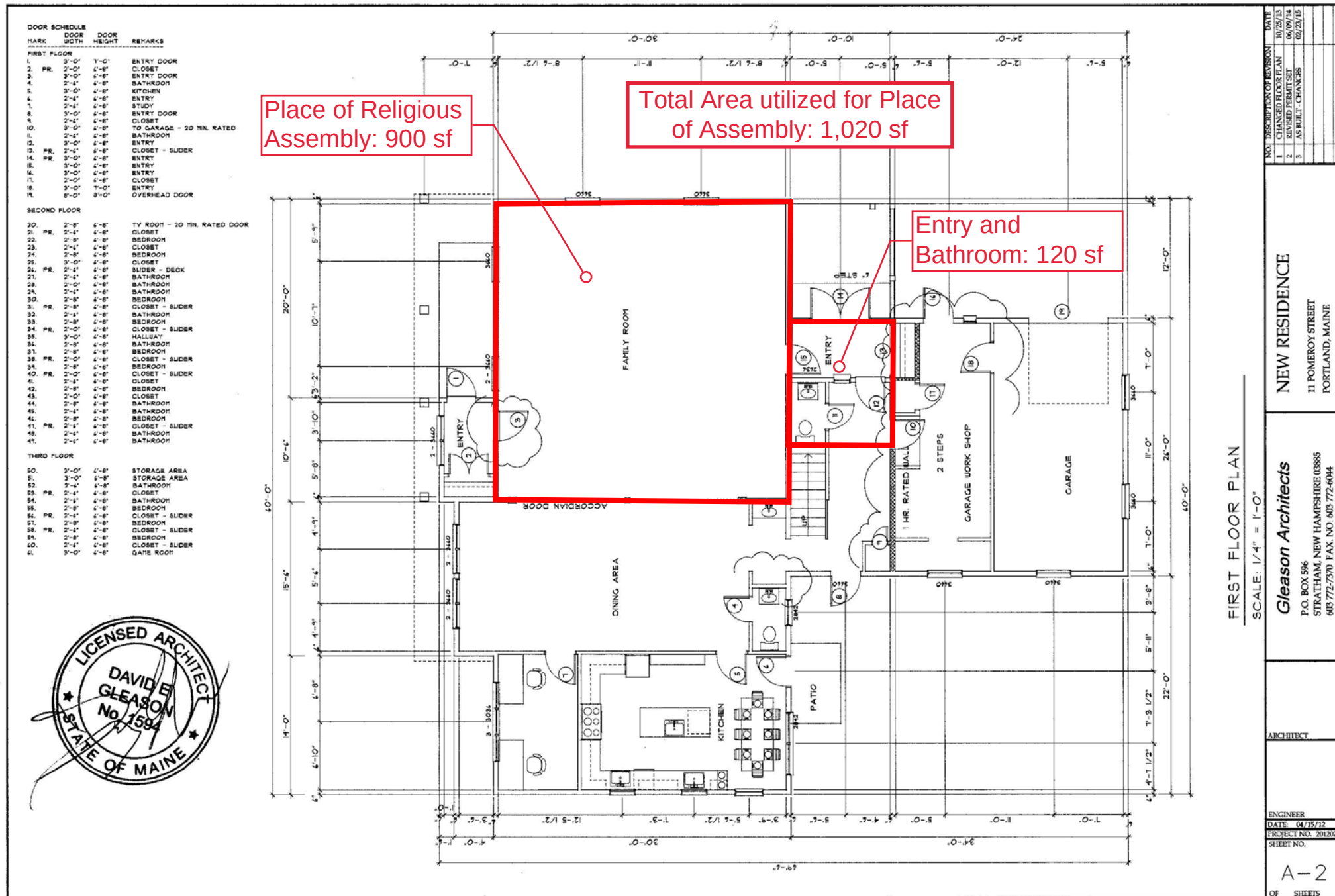
In general, an important thing to note about this site is the mixed use nature of this being a family home as well as a place of worship. Given that Rabbi Wilansky has a large family, many friends, and many connections inside and outside of the community, the family does host guests that would not be specifically attending worship services. While there may be a perception that all events on site would be for the place of worship, there are events that are of a more personal nature or family gatherings not related to the place of worship.

We trust these responses will provide additional information helpful in your review of the project. We look forward to further discussing the project with the Planning Board.

Sincerely,



Christopher R. MacDonald, PE  
Project Manager





Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

---

## 11 Pomeroy Street - Checking in

---

**Chris MacDonald** <cmacdonald@bh2m.com>

Fri, Feb 4, 2022 at 4:11 PM

To: Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

Cc: "RABBI@CHABADOFMAINE.COM" &lt;RABBI@chabadofmaine.com&gt;, Marshall Tinkle &lt;mtinkle@thomport.com&gt;

Good afternoon Jimmy,

On the topic of the summer camp: These are held off site between the hours of 9:00 am and 3:00 pm on week days. There are no plans to have these conducted on site, and the only exception to this has been during Covid related closures. In the rare event that the summer camp would have to be held at 11 Pomeroy Street it is outside the window of worship services, given this, there are no overlaps. If it is helpful we can clarify our response letter to include this timing.

On Circulation: Per previous comments we have received on the site layout, we are now including a 24' wide drive isle behind the proposed parking. This drive isle provides maneuvering room for cars to enter and exit the parking spaces inside the driveway, similar to a larger parking lot. The turn around area to remain is primary to be used by the handicap spot parallel to the resident parking. Resident parking includes one parking space outside and one space inside the garage, so in effect, resident parking will be parallel to the handicap parking spot and will not block access to the turn around area. There will be sufficient space for a car to back out and there will be no conflicts for circulation.

Thank you for the clarification on signage and anticipated timing. Please keep us in the loop as soon as this project is placed on the agenda and we will make sure the signage is installed as required.

[Quoted text hidden]



Civil Engineering | Surveying

Jimmy Dealaman, Planner  
City of Portland Planning and Urban Development  
City Hall, 389 Congress Street, 4<sup>th</sup> Floor  
Portland, Maine 04101

May 19, 2022

Re: Planning Board Public Hearing Follow up  
11 Pomeroy Street Change of Use and Minor Site Plan

Dear Jimmy;

Following up on the April 12, 2022 Public Hearing, we are providing additional information for the Planning Board's consideration. Questions were raised on other aspects of the services provided, and how these may play into additional areas of assembly. In the previous permit application submissions, the focus was solely on the actual temple space, or the 900 s.f. family room. As discussed at the Public Hearing as well as follow up with Planning Staff, there are additional areas of the first floor that are used most of the time for family purposes but occasionally serve a use that is ancillary to the place of worship. To avoid any confusion, these additional areas are now also being applied for in the Place of Religious Assembly.

As shown on Attachment 1, the areas of the Place of Religious Assembly have been increased to include the dining room, kitchen, office space, an additional bathroom, and an auxiliary entrance off the family room. The areas defined as Place of Religious Assembly now total 2,160 s.f. These areas are now also bounded by walls and doors giving a specifically defined area.

The nature of these ancillary uses are mostly focused around light food preparation and service to worshippers or attendees of the lectures. Given that the 900 sf place of worship is not fully bounded by walls and doors, with an open end that abuts the Dining Room, this area will occasionally have some use during the services. That this is a Dining Room, uses for this space would typically focus on food service or dining. The office space off the Dining Room is used for typical administrative functions such as writing, reading, and other day to day functions of conducting and administering worship services.

Food is prepared on occasion in the area of the kitchen, and while the worship services are not physically conducted in the kitchen it is customary to serve refreshments following services, therefore this area of the kitchen has been included as an ancillary use. It's important to note that typically food is not prepared in a traditional sense of cooking, but rather pre-packaged or pre-made food is provided in line with the traditions of Shabbat. The kitchen also is used in preparing traditional Challah Bread, which is served to worshippers as well as prepared during classes in preparation and recipes. These classes are held 7 times a year on Friday mornings and are typically attended by 10 to 15 people with an expectation of 5-6 vehicles on site.

Following up on some concerns raised about occupancy and building upgrades that may be necessary, we have included as Attachment 2 a Plan of Correction report from 7 CS Consulting, who are Fire, Safety and Security experts. This report details suggestions for improved fire safety and commercial cooking. These recommendations will be acted on and will be a basis of approval for in subsequent building permit applications. This report also details occupancy limits, showing the assembly area can support 87 worshippers, far more than expected or historically present.

Following up on a specific concern from the Board, with the additional areas included the project is now proposing to have 2 bathrooms to serve the worship services. The 2021 International Building Code (IBC), Table 2902.1 “Minimum Number of Required Plumbing Fixtures”, provides guidance that places of worship and other religious services shall have 1 water closet per 150 men and 1 per 75 women. Seeing that guidance from 7 CS Consulting’s Plan of Correction suggests a maximum occupancy of 87 people, which again is far in exceedance of expected worshippers, two bathrooms will be more than sufficient to meet the IBC’s recommendations.

For parking requirements, Land Use, Chapter 14 of the City Code, Article 19, Table 19-B offers Categorical Exceptions to Off-Street Parking. Under “Transit proximate development and uses” states “*No off-street parking shall be required within ¼ mile of fixed route transit service.*” As shown in Attachment 3 on a Google Map image showing the measured distance, 11 Pomeroy Street is located within ¼ mile of the intersection of Bancroft Street and Brighton Avenue, with Brighton Avenue being a fixed route transit service in the form of a Metro Bus route. We have coordinated with Planning Staff to confirm this condition, and have agreed that this meets the criteria of the exception. In recognition of the findings of the traffic consultant and information previously provided, the project is still proposing 7 additional parking spaces to provide off street parking for the typical worship services, but no additional parking is deemed necessary.

We also discussed the issue of short-term rental uses for the residence. These short-term rental spaces are not considered part of the place of religious assembly use, but are being permitted through the City. Permits were granted for 2021, and applied for in February of 2022, and are included here as Attachment 4. These also include recent inspections of the sprinkler system in the building to support these applications. Final coordination for this year’s permit application is ongoing, but is expected to be approved shortly. We provide these documents to show Rabbi Wilansky intends to be in full compliance with City regulations on short-term rentals.

To reiterate information specific to the Place of Religious Assembly use as previously provided, we offer the following detail on planned services going forward:

The typical worship services on site are attended by 3 members of the family and 7-9 worshippers from outside the household. While there are no plans to expand these services, there are rare occasions where the total number of worshippers can exceed 20 attendees and hence the need for a conditional use permit as a place of religious assembly. It is typical for some worshippers to walk to the site as they are close by, some arriving by car, and others will carpool to the site. As discussed above, there is also reasonable proximity to a fix route transit service. These services occur on the following schedule with attendees and anticipated parking demands:

Sunday: 9:00 am – 10:00 am; 10-12 worshippers; 5-6 vehicles utilizing on-site parking  
Thursday: 7:00 am – 8:15 am; 10-12 worshippers; 5-6 vehicles utilizing on-site parking  
Saturday 10:30 am – 1:00 pm; 10-12 worshippers; 5-6 vehicles utilizing on-site parking

Lectures are occasionally offered to worshippers throughout the year. These lectures are held at times outside the typical worship services noted above as many of the same attendees participate in the lectures and worship services. These lectures last approximately an hour, and are typically held during daytime hours an occasionally between 7:00 - 8:00 pm. As is similar to worship services, approximately 10-12 attendees are typical, and 5-6 vehicles are also typical. These lectures are conducted in a web format on some occasions and would not require on site assembly. There are no plans to expand these lectures beyond the current levels of attendance. Approximate schedule for these lectures as follows:

Timed outside of typical scheduled worship during week day; 10-12 attendees; 5-6 vehicles

Obviously, these are estimates and averages, subject to a fair degree of fluctuation. At times, attendance will be down when “regulars” are away or have other commitments. At other times, one-time visitors might attend, causing the numbers to increase somewhat, and in some cases exceeding 20 people. The foregoing are good-faith projections based on historical data.

A summer camp is held as part of this place of worship, but is not conducted on site. These camps have met, and are expected to continue to meet off site at Congregation Bet Ha’am in South Portland. It is typical for the attendees to be dropped off directly at Congregation Bet Ha’am. Given the effects of Covid 19 and related facility closures, the summer camp was held at 11 Pomeroy for one week when it could not meet off site otherwise. The summer camp begins the end of June (end of school year) for 3-4 weeks until the end of July, and typically has 15 attendees and 4 vehicles. On the occasion that it had to meet at Pomeroy Street the summer camp was conducted on the first floor in the area of the dining and family rooms, which is included in the identified Place of Religious Assembly areas. Attendees were dropped off and picked up; no attendee cars are parked for longer than loading and unloading, and there was no overlap with the typical worship services or lectures. The proposed parking would be sufficient for these needs, on the rare occasion it would be necessary.

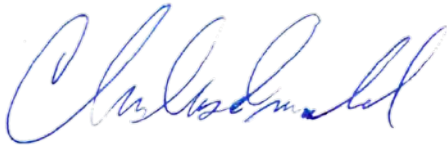
It is important to note that there are a few large events that have been traditionally held off site in an acknowledgement to the limitations of the facilities at 11 Pomeroy. These larger events are held off site at locations more suited to the higher numbers of attendees expected to participate. Examples of these are lighting of the Menorah at City Hall in Portland and a Hanukkah parade that meets at the Jewish Community Alliance on Congress Street in Portland. Purim is celebrated off site and held at the Ocean Gateway, Italian Heritage Center, and Woodfords Club in past years.

There is no additional lighting proposed on site. Existing lighting along the driveway is shielded behind a stand of evergreen trees, and an existing landscaping easement has been previously granted to neighboring properties to maintain an existing stand of evergreen trees. For the area along the rear of the building, only smaller conventional doorway lighting is existing, and no new lighting is proposed. A proposed area of Arborvitae landscaped screening is now proposed along the rear of the building to provide additional screening.



We trust that this letter will provide the Board with additional information to better clarify the assembly space for services that are being offered, and that there are sufficient facilities to support the proposed use. We hope that this information will bring a close to this multiple year process. We look forward to the next opportunity to present to the Planning Board for acceptance of the Change of Use permit application, and proceed forward with finalization of the Minor Site Plan permit.

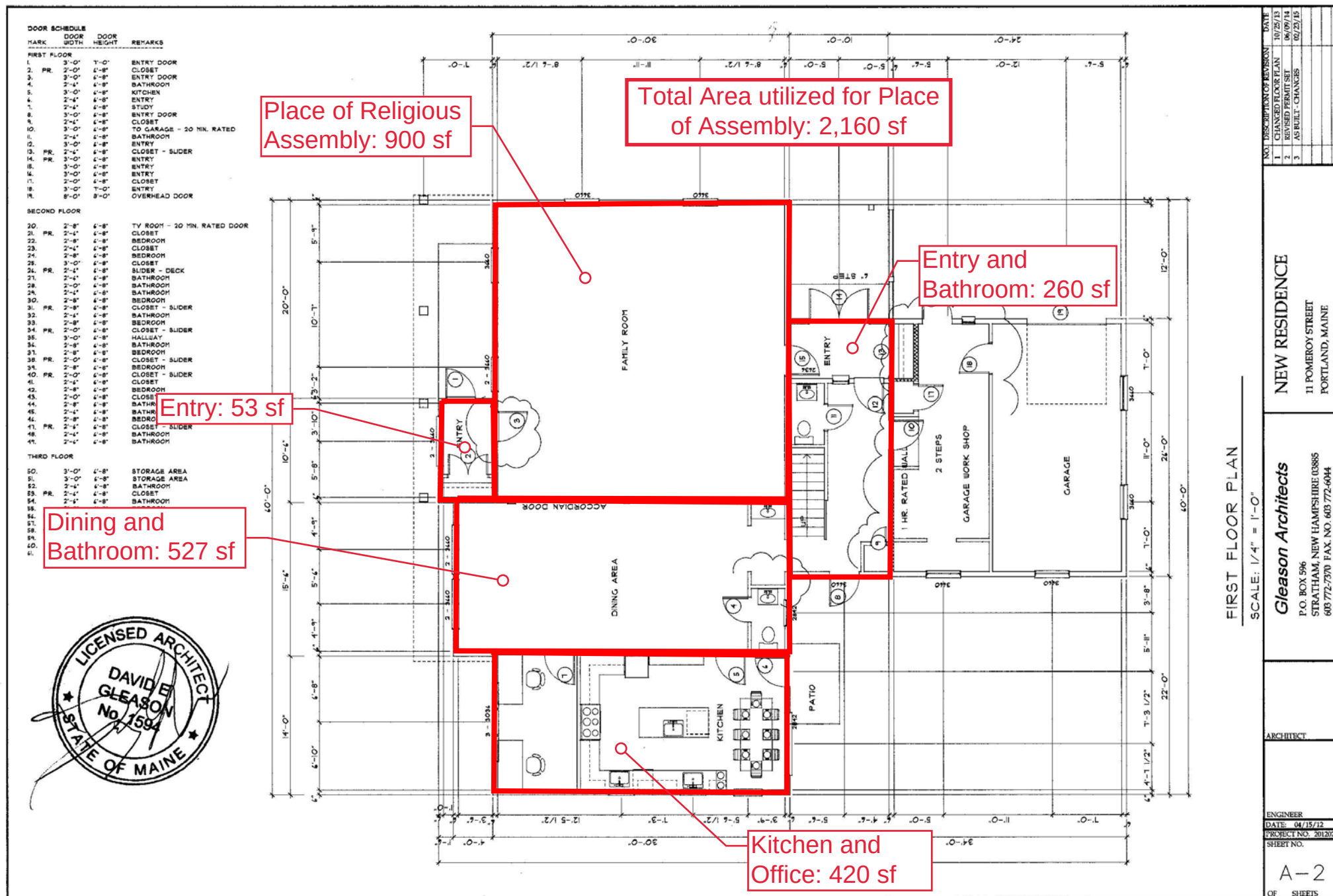
Sincerely,



Christopher MacDonald, P.E.  
Project Manager

Cc Rabbi Wilansky – Chabad of Maine  
Marshall Tinkle, Esq. – Thompson, MacColl & Bass

**Attachment 1**  
**Place of Religious Assembly – First Floor Plan**







**7CS CONSULTING, LLC**  
FIRE, SAFETY, AND SECURITY EXPERTS

+1-207-200-6878 - [info@7CSconsult.com](mailto:info@7CSconsult.com)  
238 Granny Kent Pond Rd, Shapleigh, ME 04076

[7CSconsult.com](http://7CSconsult.com)



## Plan of Correction

11 Pomeroy Street, Portland, ME

Attn: King Weinstein

Date of Inspection: 5/3/21

All observations are based upon NFPA 1:2018; and NFPA 101:2018

### **Abstract:**

Type V(000) permitted single family dwelling. 3 story, no below grade levels. Protected with an NFPA 13D system. No fire alarm system. No separations between levels. As a single family dwelling, the house appears to be in line with the Life Safety Code as designed. It is currently being used as a mixed-use building, with multiple uses intermingled, non-incidental.

### **Proposed use of the Structure:**

1. The owner uses most of the structure as a single family dwelling. The owner has a large family with many children, some married with children of their own. The use of the structure, per the Life Safety Code “**24.1.1.2\*** One-and two-family dwellings shall be limited to buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms.” The owner will limit the use of the structure to the above code citation, in respects to the rental of rooms.
2. Assembly. The use of the structure conforms with the use category Place of Assembly. On the first floor, there is a large room, setup as a temple area, thus conforming with chapter 12. 6.1.2.1 states: *An occupancy used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses.* The space under consideration is currently setup with a stage area, and tables with chairs. The square footage of the space is approximately 1,310 sq ft, The space is used as a less concentrated use, with tables and chairs. This lends to 15 sq ft per person, or 87 persons occupant load.
  1. From the assembly area, egress door #3 and #1 will be changed to outswing doors, minimum clear width opening of 36”. Panic hardware will be installed on these doors, as well as doors #14 and #15.
  2. Emergency lighting and exit signage will to be installed throughout the first floor area.
  3. A sole means of egress from the single family dwelling (24.1.3) will not pass through he assembly area. The assembly shares the secondary means of egress with the single family dwelling only at the atrium area of the main entrance. A door will be installed at the base of

the stairs, near the hand washing sink. This door would be a 20 minute rated door, self closing/self latching. The doors serving this area must be ousting, with panic hardware.

4. Fire extinguishers will be installed at a minimum rating of 5#ABC. We recommend these be installed by the main entrance, and the secondary egress. A class K fire extinguisher will be installed in the kitchen.
3. Commercial Cooking. The kitchen is used to prepare meals for guests and family members. It is constructed as a single family dwelling, with residential appliances. As the kitchen uses residential appliances, we would like to propose the use of UL300A compliant systems. We recommend the specific use of the Guardian G600b due to the microwave hoods over two of the appliances. The third range we would protect with a G300b. A class K fire extinguisher with appropriate signage will be installed as well.

*-end of report-*

*The opinions and observations stated above reflect a limited knowledge of the property and are subject to change and other requirements unforeseen at the time of authoring this report.*

Respectfully;

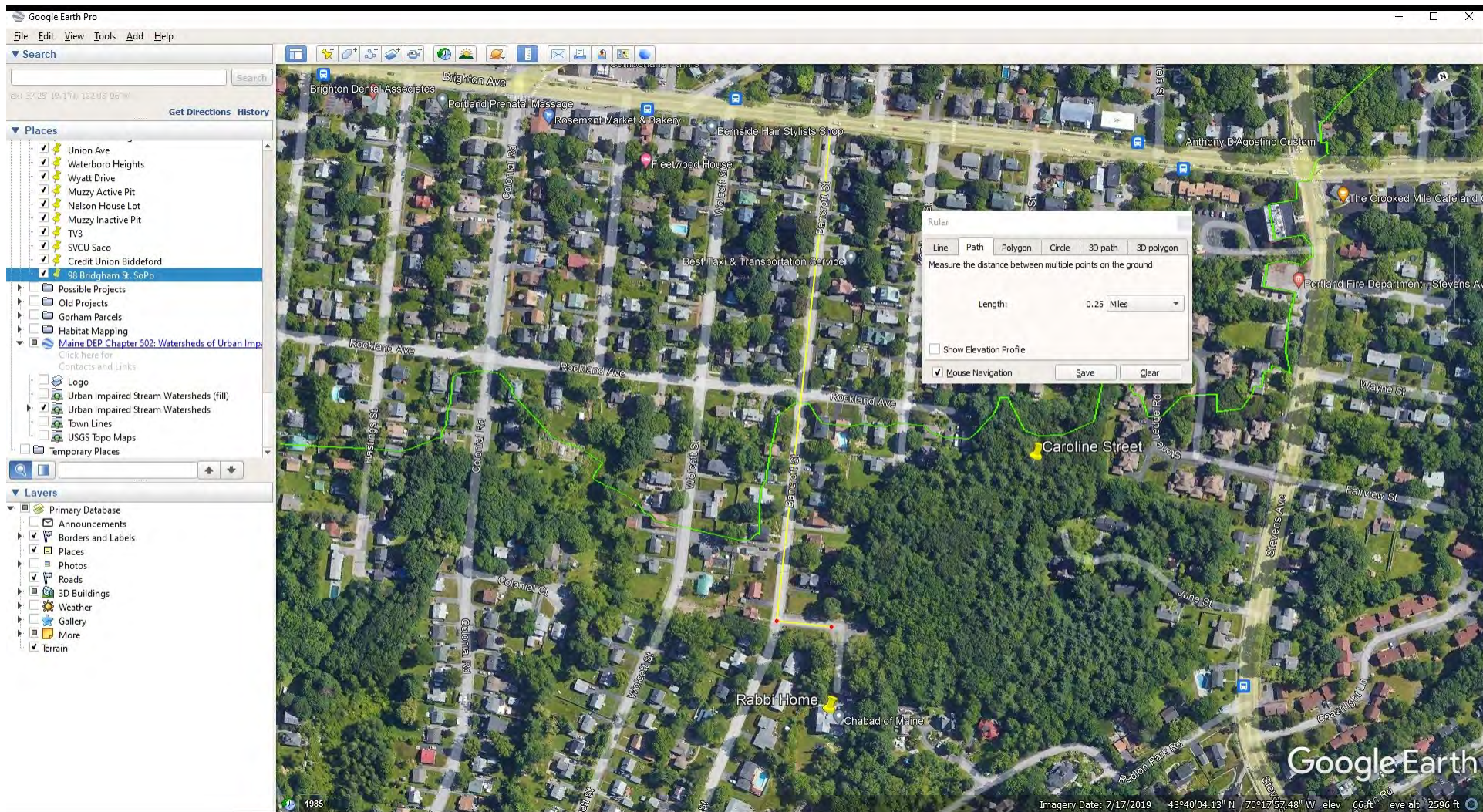
Peter Cutrer, CFPS #3319  
CFI-II, CFI-IAAI, CFPE



**Attachment 3**  
**Fixed Transit Route Proximity Measured Distance Figure**



# Attachment 3 - Distance to Fixed Route Transit Service



**Attachment 4**  
**Short-Term Rental Permitting Documentation**



## City of Portland

Permitting and Inspections Department

**Business Name:** MOSHE WILANSKY

**Classification:** Owner Occupied

**Business Location:** 11 POMEROY ST  
Portland, ME 04102

**Description:** Unit Suite (1) & Unit Bedroom (2)

**Owner:** CHABAD LUBAVITCH OF MAINE INC

**License Number:** STHR-002933-2021

**Number of Rental Units:** 2

**Issued Date:** 1/27/2021

**Expiration Date:** 12/31/2021

A handwritten signature in black ink that reads "Jessica Blais Hanscombe".

---

Jessica Blais Hanscombe, Director of Permitting and  
Inspections

THIS LICENSE IS NOT TRANSFERRABLE  
PLEASE POST IN A CONSPICUOUS PLACE

---

### BILLING CONTACT

CHABAD LUBAVITCH OF MAINE INC  
11 Pomeroy St  
Portland, Me 04102





Katlyn Sawyer &lt;ksawyer@portlandmaine.gov&gt;

## 11 Pomeroy St - STR Renewal

1 message

Fri, Mar 25, 2022 at 10:38 AM

Katlyn Sawyer &lt;ksawyer@portlandmaine.gov&gt;

To: Rabbi Moshe Wilansky &lt;rabbi@chabadofmaine.com&gt;

Good morning

I'm just following up for some clarification on this application.

Last year you were renting out 2 separate bedrooms at the same time to different parties.  
Is that the same case this year, except with 3 bedrooms?

For discounts - you claimed the "Fully Sprinkled Building". However, you have not in the past. In order to give you that discount, I need the valid verification document. This document would be:

-testing or maintenance report

or

-maintenance contract from preceding year

Also, your check is wrong. So once I have the above information, I can invoice you to pay directly online and I will shred your check or mail it back to you voided.

Please advise

Thank you

flu 4/4, mail back 4/8

Katlyn Sawyer  
Licensing & Registration Coordinator

City of Portland  
389 Congress St, Room 307  
Portland, ME 04101

Phone # 207-874-8742

Checks Unlimited 1-800-210-0450 www.checksunlimited.com

52 60/112

2506

CHABAD HOUSE LUBAVITCH OF MAINE  
11 POMEROY STREET  
PORTLAND, ME 04102

Pay to the  
order of

City of Portland

3/10 2022

\$ 463.00

Dollars

Security Features  
Included  
Details on Back

KEYBANK NATIONAL ASSOCIATION

MAINE  
1-800-KEY2YOU  
WWW.KEYBANK.COM

For

[Signature]

AT

⑆011200608⑆ 191334015226⑆ 2506

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Rec'd 3/23  
OO-renew

CITY OF PORTLAND  
Permitting and Inspections Department  
**SHORT TERM RENTAL UNIT REGISTRATION APPLICATION**

| SECTION 1: PROPERTY INFORMATION |             |                                                 |
|---------------------------------|-------------|-------------------------------------------------|
| Street Number                   | Street Name | CBL- Chart, Block, Lot Number (e.g. 001A__A001) |
| 11                              | Pomeroy     | 193 E 001 001                                   |

|                                    |               |
|------------------------------------|---------------|
| Type of Property*                  | SINGLE FAMILY |
| Total Number of Units in Building: | 1             |

\*If located in a condominium or homeowners association, you attest that the use of the unit as a short term rental is allowed. Yes ☐ No ☐

**SECTION 2: OWNER INFORMATION (COMPLETE AT LEAST ONE LISTED BELOW)**

**A. Individual Ownership:**

|                                                            |                               |                                             |
|------------------------------------------------------------|-------------------------------|---------------------------------------------|
| Owner First Name<br>CHABAD LOBAVITCH of<br>MINE IN         | Owner Last Name<br>Non-profit | Primary Telephone Numbers<br>(207) 871-8947 |
| Mailing Address<br>11 Pomeroy Street<br>Portland, ME 04101 |                               | Email Address<br>RABBI CHABAD of MINE IN    |

**B. Corporate Ownership:**

\*\*A completed Supplemental Corporation Sheet must be submitted with the application.

Ownership form (please circle): Partnership Corporation LLC Other (please explain)

|                                                            |                                           |
|------------------------------------------------------------|-------------------------------------------|
| Corporate Name<br>CHABAD LOBAVITCH of MINE INC             | Primary Telephone Numbers<br>207 871-8947 |
| Mailing Address<br>11 Pomeroy Street<br>Portland, ME 04101 | Email Address<br>RABBI CHABAD of MINE INC |





**CITY OF PORTLAND**  
Permitting and Inspections Department

**SECTION 3: AUTHORIZED AGENT (if different than owner)**

If property owner is a partnership, corporation, LLC or any other form of business entity, the authorized agent must be an individual who resides in the State of Maine.

|                                                               |                                            |                                           |
|---------------------------------------------------------------|--------------------------------------------|-------------------------------------------|
| Registered Agent First Name<br><i>WIKK ALLEN</i>              | Registered Agent Last Name<br><i>ALLEN</i> | Telephone Number<br><i>(207) 591-6436</i> |
| Mailing Address<br><i>70 CENTER STREET PORTLAND, ME 04101</i> |                                            | Email Address                             |

**SECTION 4: PROPERTY MANAGER (if different than owner)**

|                                          |                  |
|------------------------------------------|------------------|
| Property Manager Name<br><i>- NONE -</i> | Telephone Number |
| Mailing Address<br><i>OWNER OCCUPIED</i> | Email Address    |

**SECTION 5: EMERGENCY CONTACT FOR PROPERTY (if different than owner)**

|                                                          |                  |
|----------------------------------------------------------|------------------|
| Emergency Contact Name<br><i>CYNTHIA RABBIT WILANSKI</i> | Telephone Number |
| Address                                                  | Email Address    |

**SECTION 6: RENTAL UNIT REGISTRATION**

Please describe the rental unit(s) by indicating the following:

| Unit #<br>(Describe rooms*) | Number of nights<br>(Short Term)** | Number of nights<br>(Long Term)** | Mainland                            | Island | Owner<br>Occupied                   | Tenant<br>Occupied | Non Owner<br>Occupied |
|-----------------------------|------------------------------------|-----------------------------------|-------------------------------------|--------|-------------------------------------|--------------------|-----------------------|
| <i>Bedroom 1</i>            | <i>20 1/2</i>                      | <i>1</i>                          | <input checked="" type="checkbox"/> |        | <input checked="" type="checkbox"/> |                    |                       |
| <i>Bedroom 2</i>            | <i>20 1/2</i>                      | <i>1</i>                          | <input checked="" type="checkbox"/> |        | <input checked="" type="checkbox"/> |                    |                       |
| <i>Bedroom 3</i>            | <i>1</i>                           | <i>1</i>                          | <input checked="" type="checkbox"/> |        | <input checked="" type="checkbox"/> |                    |                       |
|                             |                                    |                                   |                                     |        |                                     |                    |                       |
|                             |                                    |                                   |                                     |        |                                     |                    |                       |

\*If renting a room(s), please describe as Guest bedroom A, Master bedroom, Basement bedroom, etc.

\*\*Report the number of nights rented the previous year from 11/1 through 10/31.

Note: Owner Occupied is defined as the unit the owner lives in for more than 6 months of the year.

389 Congress Street, Room 307 • Portland, Maine 04101 • 207-756-8131  
housingafety@portlandmaine.gov • www.portlandmaine.gov



**CITY OF PORTLAND**  
Permitting and Inspections Department

| SECTION 7: FEE DISCOUNTS*                                 |                                                                           |              |                        |
|-----------------------------------------------------------|---------------------------------------------------------------------------|--------------|------------------------|
| Type of Discount                                          | Valid Verification Documents                                              | Discount     | Number of Rental Units |
| Fully Sprinklered Building                                | Testing or Maintenance Report or Maintenance Contract from Preceding Year | \$10.00/unit | 3                      |
| Off-site Monitored Fire Alarm System                      | Fire Alarm System Monitoring Annual Contract                              | \$7.50/unit  |                        |
| Subsidized Housing<br>Housing Quality Standard (HQS)      | HQS Inspection Report from Preceding Year                                 | \$5.00/unit  |                        |
| Public Housing Uniform Physical Condition Standard (UPCS) | UPCS Inspection Report from Preceding Year                                | \$10.00/unit |                        |
| No Smoking Lease                                          | Copy of Signed Lease Language or Smoking Disclosure Form                  | \$2.50/unit  | 3                      |

\*Please note that there is a maximum \$20 discount per rental unit.

**SECTION 8: TOTAL ANNUAL CHARGES**

|                                        | <u>Short Term</u> |
|----------------------------------------|-------------------|
| Number of Rental Units Registering =   | 3                 |
| Rental Unit Fees =                     | 500               |
| Fee Discounts =                        | 37.50             |
| Total Annual Rental Registration Fee = | 463.00            |

**SECTION 9: Please list the addresses of any other short term rental you have ownership in**

|      |  |
|------|--|
| None |  |
|      |  |
|      |  |
|      |  |





**CITY OF PORTLAND**  
**Permitting and Inspections Department**

Did you complete?

- Rental Housing Registration Application
- Provide all fee discount verification documents.
- Provide a notarized Primary Residence Affidavit (unless a non-owner occupied unit).
- Provide a notarized Landlord Statement of Permission for a Tenant occupied unit.
- Corporate Disclosure
- Evidence of primary residence

Payment Information:

Pay the registration fee:

- in person by cash, check, or credit card;
- mail a check - Make checks payable to "City of Portland" and note the address on the check.

Please return completed application, documents and fees to:

Permitting and Inspections Department  
 Room 307  
 389 Congress St  
 Portland ME 04101

For More Information:

See [www.portlandmaine.gov/housingsafety](http://www.portlandmaine.gov/housingsafety)

To the best of my knowledge, I certify that the information being registered is true and correct.

|                                          |                       |                                                 |
|------------------------------------------|-----------------------|-------------------------------------------------|
| Signature <i>[Handwritten Signature]</i> |                       | Telephone Number<br><i>(207) 871 8947</i>       |
| Relationship to Property<br><i>owner</i> | Date<br><i>9/2/20</i> | Email Address<br><i>295510 C114322 of MAINE</i> |

Office Use Only

389 Congress Street, Room 307 • Portland, Maine 04101 • 207-756-8131  
[housingsafety@portlandmaine.gov](mailto:housingsafety@portlandmaine.gov) • [www.portlandmaine.gov](http://www.portlandmaine.gov)

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[housingsafety@portlandmaine.gov](mailto:housingsafety@portlandmaine.gov) • [www.portlandmaine.gov](http://www.portlandmaine.gov)



**CITY OF PORTLAND**  
Permitting and Inspections Department

**CORPORATE DISCLOSURE**

The answers to questions 1-4 must match the information on file with the Maine Secretary of State's office. Your certification must be in good standing. If you have questions regarding this information, please call the Secretary of State's office at (207) 624-7752. Please clearly complete this form in its entirety. Thank you.

1. Exact legal name: CHABAD LOB AVITCH OF MAINE Inc
2. Doing Business As, if any: CHABAD
3. Date of filing with Secretary of State: 6/27/2013 State in which you are formed: MAINE
4. If not a Maine business entity, date on which you were authorized to transact business in the State of Maine: 2/1

5. List the names, addresses, and titles of the officers and directors and list the percentage of ownership (attach additional sheets as needed):

| NAME                                     | CURRENT ADDRESS                           | TITLE | OWNERSHIP % |
|------------------------------------------|-------------------------------------------|-------|-------------|
| ZABBI Wilansky<br>(owner for non-profit) | 11 Pomroy Street<br>Portland, ME<br>04101 | owner | 100         |
|                                          |                                           |       |             |
|                                          |                                           |       |             |
|                                          |                                           |       |             |

(Stock ownership in non-publicly traded companies must add up to 100%.)

Signature:   
Signature of Owner or Corporate Officer

Date: 2/20/22

ZABBI Wilansky  
Print Name of Owner or Corporate Officer

389 Congress Street, Room 307 • Portland, Maine 04101 • 207-756-8131  
housingssafety@portlandmaine.gov • www.portlandmaine.gov



**CITY OF PORTLAND**  
**Permitting and Inspections Department**

**PRIMARY RESIDENCE AFFIDAVIT**

I, DAVID WILSON, represent under oath that the following statements are true and correct to my personal knowledge:

1. I reside at 11 Pomroy Street, Portland, Maine, CBL 193 E001001 (the "Residence").
2. The Residence is currently my legal residence for government purposes, including property taxes and exemptions, voting, vehicle taxes and registration, licensing, benefits, and others, as applicable.
3. I reside at the Residence for more than one-half of the calendar year.
4. The Residence will remain my legal residence for more than one-half of the calendar year.
5. I have provided one of the following documents:
  - a. Valid Driver's License or State issued Identification ✓
  - b. Valid motor vehicle registration
  - c. Proof of homestead exemption:
  - d. Other (please list):

Date: 2/26/22

[Signature]  
 Signature

Personally appeared before me the above-named affiant and made oath that the foregoing affidavit is true and correct to his/her personal knowledge.

Date: [Signature]  
 Notary Public/Attorney at Law

KING H. WENDELL  
 Notary Public, Maine  
 My Commission Expires May 10, 2024

\*\*\*\*\*

Staff Use Only:

|                                |  |                 |  |
|--------------------------------|--|-----------------|--|
| Type of Verification Document: |  | Staff Initials: |  |
|--------------------------------|--|-----------------|--|

389 Congress Street, Room 307 • Portland, Maine 04101 • 207-756-8131  
 housingsafety@portlandmaine.gov • www.portlandmaine.gov



## RENTAL UNITS | 2022 SUPPLEMENTAL INFORMATION

This information must be provided for all short-term and long-term rental units. A separate form must be completed for each individual rental unit.

| SECTION 1: APPLICANT CONTACT INFORMATION                                                                                                                     |                                           |                            |                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------------------------------------|
| <u>Name</u><br>LARSEN WILSON                                                                                                                                 | <u>E-mail</u><br>WILSON@LARSEN-WILSON.COM | <u>Phone #</u><br>871-8947 |                                                           |
| SECTION 2: PROPERTY INFORMATION                                                                                                                              |                                           |                            |                                                           |
| <u>Street #</u><br>11                                                                                                                                        | <u>Street Name</u><br>PINEY STREET        | <u>Unit #</u><br>1         | <u>Chart, Block, and Lot Number (CBL)</u><br>193 E001 E01 |
| SECTION 3: RENTAL UNIT INFORMATION                                                                                                                           |                                           |                            |                                                           |
| What rent was being charged for this unit as of June 1, 2020?                                                                                                |                                           |                            | vacant 2020 \$135 in 2021                                 |
| What was the amount of rent being charged for this unit as of January 1, 2021?                                                                               |                                           |                            | \$ 125 <sup>72</sup>                                      |
| What was the amount of rent being charged for this unit as of November 1, 2021?                                                                              |                                           |                            | \$ 125                                                    |
| What is the amount of Banked Rent?                                                                                                                           |                                           |                            | \$ -                                                      |
| What was the amount of security deposit collected?                                                                                                           |                                           |                            | \$ 4                                                      |
| Please provide the amount of any other payments collected from the existing tenant(s) as of January 1, 2021 (other than a security deposit or rent).         |                                           |                            | \$ 210                                                    |
| How many bedrooms are included in this unit?                                                                                                                 |                                           |                            | 1                                                         |
| How many bathrooms are included in this unit?                                                                                                                |                                           |                            | 1                                                         |
| Does this unit include a kitchen? Please circle one.                                                                                                         |                                           |                            | YES or <u>(NO)</u>                                        |
| Is this unit any of the following? Check the box for any that apply.                                                                                         |                                           |                            |                                                           |
| - Owned, operated, or otherwise managed by a municipal housing authority?                                                                                    |                                           |                            | no                                                        |
| - An accommodation provided in a hospital, convent, church, religious facility, or extended care facility?                                                   |                                           |                            | yes                                                       |
| - Dormitories owned and operated by an institution of higher education or by Portland Public Schools?                                                        |                                           |                            | no                                                        |
| - In a building containing only 2, 3, or 4 dwelling units, one of which the landlord currently occupies as his or her principal residence? <i>single bed</i> |                                           |                            | yes                                                       |
| - An accessory dwelling unit, as defined in Chapter 14 of City Code?                                                                                         |                                           |                            | no                                                        |
| - Publicly rent-controlled or subsidized (Section 8, GA, etc)?                                                                                               |                                           |                            | no                                                        |
| - None of the above                                                                                                                                          |                                           |                            |                                                           |

To the best of my knowledge, I certify that the information being registered is true and correct.

Name (print only): MWS Date: 2/20/22

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 housingsafety@portlandmaine.gov • www.portlandmaine.gov

## RENTAL UNITS | 2022 SUPPLEMENTAL INFORMATION

This information must be provided for all short-term and long-term rental units. A separate form must be completed for each individual rental unit.

| SECTION 1: APPLICANT CONTACT INFORMATION                                                                                                                        |                                            |                            |                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------|
| <u>Name</u><br>ROBERT WILANSKY                                                                                                                                  | <u>E-mail</u><br>robert.wilansky@maine.gov | <u>Phone #</u><br>207-594- |                                                           |
| SECTION 2: PROPERTY INFORMATION                                                                                                                                 |                                            |                            |                                                           |
| <u>Street #</u><br>11                                                                                                                                           | <u>Street Name</u><br>PINE STREET          | <u>Unit #</u><br>2         | <u>Chart, Block, and Lot Number (CBL)</u><br>193 E001 E01 |
| SECTION 3: RENTAL UNIT INFORMATION                                                                                                                              |                                            |                            |                                                           |
| What rent was being charged for this unit as of June 1, 2020? <i>rent 2020</i>                                                                                  |                                            |                            | \$ 0                                                      |
| What was the amount of rent being charged for this unit as of January 1, 2021?                                                                                  |                                            |                            | \$ 125 <sup>th</sup>                                      |
| What was the amount of rent being charged for this unit as of November 1, 2021?                                                                                 |                                            |                            | \$ 125 <sup>th</sup>                                      |
| What is the amount of Banked Rent?                                                                                                                              |                                            |                            | \$ -                                                      |
| What was the amount of security deposit collected?                                                                                                              |                                            |                            | \$ 0                                                      |
| Please provide the amount of any other payments collected from the existing tenant(s) as of January 1, 2021 (other than a security deposit or rent).            |                                            |                            | \$ 10                                                     |
| How many bedrooms are included in this unit?                                                                                                                    |                                            |                            | 1                                                         |
| How many bathrooms are included in this unit?                                                                                                                   |                                            |                            | 1                                                         |
| Does this unit include a kitchen? Please circle one.                                                                                                            |                                            |                            | YES or <u>NO</u>                                          |
| Is this unit any of the following? Check the box for any that apply.                                                                                            |                                            |                            |                                                           |
| - Owned, operated, or otherwise managed by a municipal housing authority?                                                                                       |                                            |                            | no                                                        |
| - An accommodation provided in a hospital, convent, church, religious facility, or extended care facility?                                                      |                                            |                            | yes                                                       |
| - Dormitories owned and operated by an institution of higher education or by Portland Public Schools?                                                           |                                            |                            | no                                                        |
| - In a building containing only 2, 3, or 4 dwelling units, one of which the landlord currently occupies as his or her principal residence? <i>single family</i> |                                            |                            | 1                                                         |
| - An accessory dwelling unit, as defined in Chapter 14 of City Code?                                                                                            |                                            |                            | no                                                        |
| - Publicly rent-controlled or subsidized (Section 8, GA, etc)?                                                                                                  |                                            |                            | no                                                        |
| - None of the above                                                                                                                                             |                                            |                            |                                                           |

To the best of my knowledge, I certify that the information being registered is true and correct.

Name (print only): ROBERT WILANSKY Date: 2/20/22

389 Congress Street, Room 307 • Portland, Maine 04101 • 207-756-8131



**Report of Inspection/Test**

Annual Sprinkler

04/11/2022

**Property**

11 Pomeroy St.

11 Pomeroy St.  
Portland, ME 04101Rabbi Moshe  
207-650-8295**Owner/Agent**

King Real Estate

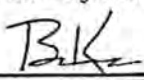
198 Saco Ave  
Old Orchard Beach, ME  
04064King Weinstein  
934-7622 x15**DEAN & ALLYN, INC.****FIRE PROTECTION • SPECIAL HAZARD**116 LEWISTON ROAD, GRAY, ME 04039-7524  
207-657-5646 • 1-888-775-5646

Conducted by: Barry Keisman

Inspection Ref: 200000049853

Print Date: 4/26/2022

**Signatures**

|                                                                |                                                                                                            |                           |                                                                                                                                                                                                                                            |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inspector - Printed<br>Barry Keisman                           | Inspector - Signature<br> | Date Completed<br>4/11/22 | I state that the information on this form is correct at the time and place of my inspection, and that all equipment tested at this time was left in operational condition upon completion of this inspection except as noted.              |
| Owner's Representative - Print<br>King Weinstein<br>Realestate | Owner's Representative - Signature                                                                         | Date Completed<br>4/11/22 | Except as noted, the building is occupied with the same occupancy classification and hazard of contents as last inspection. Also, the system has remained in service without modification and been free of actuation of devices or alarms. |

**Equipment Summary**

| Description                     | Site | Inspected |        | Unable to Inspect |      | Served<br>Repaired |      | Failed |        |
|---------------------------------|------|-----------|--------|-------------------|------|--------------------|------|--------|--------|
|                                 | Qty  | Qty       | %      | Qty               | %    | Qty                | %    | Qty    | %      |
| Sprinkler No System Valve Riser |      |           |        |                   |      |                    |      |        |        |
|                                 | 1    | 1         | 100.0% | 0                 | 0.0% | 0                  | 0.0% | 1      | 100.0% |

**Pressure Gauge Inspection List**

| Qty | Location / Description | Condition<br>Ok ? | Year Due for<br>Replacement<br>(5-Years) | Date Prior to<br>Required<br>Replacement ? | Quantity<br>Replaced |
|-----|------------------------|-------------------|------------------------------------------|--------------------------------------------|----------------------|
| 1   | Wet system             | Yes               | Unknown                                  | No                                         | 0                    |

**Long Cycle Items**

| Item Type | Location/Description | Required<br>Frequency | Last Performed | Next Due |
|-----------|----------------------|-----------------------|----------------|----------|
| Internal  | Wet system           | 5-Year                | Unknown        | 2022     |

**Pipe**

|     |                         |     |                                                                |
|-----|-------------------------|-----|----------------------------------------------------------------|
| Yes | In good condition ?     | Yes | Heat appears sufficient in riser area?                         |
| Yes | In good condition ?     | Yes | Free of mechanical damage and not leaking ?                    |
| Yes | No external corrosion ? | Yes | Properly aligned ?                                             |
| Yes | No external loads ?     | Yes | Visible pipe hangers and seismic braces not damaged or loose ? |

**Sprinklers**

|     |                                                                                       |     |                                                    |
|-----|---------------------------------------------------------------------------------------|-----|----------------------------------------------------|
| Yes | Extra high, very extra high and ultra high temperature sprinklers tested ?            | No  | Eng evaluation recommended for spacing?            |
| No  | Eng evaluation recommended for sprinkler type?                                        | Yes | Proper number and type of spare sprinklers?        |
| Yes | Sprinkler wrench(s) present ?                                                         | Yes | Free of corrosion?                                 |
| Yes | Free of obstructions to spray patterns?                                               | Yes | Free of foreign materials including paint?         |
| Yes | Free of physical damage?                                                              | Yes | Sprinklers free of loading and dirt?               |
| Yes | Escutcheons and coverplates for recessed, flush and concealed sprinklers not missing? | Yes | Are all sprinklers in service dated 1920 or later? |

Print Date: 4/26/2022

Page 1 of 4

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**Report of Inspection/Test**

Annual Sprinkler

04/11/2022

Property: 11 Pomeroy St.

Owner: King Real Estate

**DEAN & ALLYN, INC.****FIRE PROTECTION • SPECIAL HAZARD**

116 LEWISTON ROAD, GRAY, ME 04039-7524

207-657-5646 • 1-888-775-5646

Inspection Ref: 200000049853

**Sprinklers**

Yes Fast Response sprinklers in service for less than 20 years? If no test sample now and every 10 years.

Yes If sprinklers have been replaced, were they proper replacements?

Yes Standard sprinklers less than 50 years old? If no test sample now and every 10 years.

**Inspector's Suggestions**

In addition to the problems noted in this report the inspector suggests the following system changes/improvements, however, these suggestions are not the result of an engineering survey.

5 year internal investigation is due

**Flow Test**

| System     | Connection Flowed | Outlet Size | Pressure (psi) |       |        | Time To Restore | Results comparable to prior test |
|------------|-------------------|-------------|----------------|-------|--------|-----------------|----------------------------------|
|            |                   |             | Static         | Resid | Static |                 |                                  |
| Wet system | Main drain        | 1"          | 80             | 20    | 80     | 1               | Yes                              |

**Inspector's Test Valve**

| System/Location | Alarm Reported | Time to Alarm | Smooth Bore Orifice | Signage | Easily Accessible |
|-----------------|----------------|---------------|---------------------|---------|-------------------|
| At riser        | Yes            | 35            | Yes                 | Yes     | Yes               |

**Valve Inspection List**

| Location   | Valve Type | Size  | Secured    | Inspection |      |            |       | Maint.    |            |
|------------|------------|-------|------------|------------|------|------------|-------|-----------|------------|
|            |            |       |            | Leakage    | Open | Accessible | Signs | Exercised | # of Turns |
| Wet system | Ball       | 1-1/4 | Pad Locked | Ok         | Ok   | Ok         | Ok    | Ok        | 1/4        |

Ok - Passes Inspection S - Serviced on site X - Requires Service NA - Not Applicable



# Backflow Prevention Assembly Test and Maintenance Report

April 11, 2022

## Property

11 Pomeroy St.  
11 Pomeroy St.  
Portland, ME 04101

## Owner/Agent

King Real Estate  
198 Saco Ave  
Old Orchard Beach, ME  
04064

## Property Access

Rabbi Moshe  
207-650-8295

## Owner/Agent Contact

King Weinstein  
934-7622 x15

# DEAN & ALLYN, INC.

FIRE PROTECTION • SPECIAL HAZARD

116 LEWISTON ROAD, GRAY, ME 04039-7524  
207-657-5646 • 1-888-775-5646

## Water Company

|                                             |  |                       |  |                                               |  |                   |  |                             |  |
|---------------------------------------------|--|-----------------------|--|-----------------------------------------------|--|-------------------|--|-----------------------------|--|
| Alarm Company                               |  | Phone                 |  | Reference                                     |  | Date/Time Off     |  | Date/Time On                |  |
| Location of Assembly<br><b>Sprinkler Rm</b> |  |                       |  | Service Type-Class-Use<br><b>Fire service</b> |  |                   |  | Meter/Accl #                |  |
| Device Manufacturer<br><b>Ames</b>          |  | Model<br><b>2000B</b> |  | Size<br><b>1-1/4"</b>                         |  | Type<br><b>DC</b> |  | Serial No.<br><b>017019</b> |  |
| Gauge Manufacturer                          |  | Model                 |  | Type                                          |  | Purchase Date     |  | Serial No.                  |  |
|                                             |  |                       |  |                                               |  |                   |  |                             |  |
|                                             |  |                       |  |                                               |  |                   |  |                             |  |
|                                             |  |                       |  |                                               |  |                   |  |                             |  |

|                 | CHECK VALVE #1                                                                                                                                                                                                                                                                                                                                                                                                                            | CHECK VALVE #2                                                                                                                                                                                                                                                                                                                                                                                                                            | DIFFERENTIAL PRESSURE<br>RELIEF VALVE                                                                                                                                                                                                                                                                                                            | PRESSURE VACUUM<br>BREAKER                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INITIAL<br>TEST | <input type="checkbox"/> Leaked<br><input checked="" type="checkbox"/> Closed tight<br>Pressure drop<br>across check valve <u>1.5</u> psi                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Leaked<br><input checked="" type="checkbox"/> Closed tight<br>Pressure drop<br>across check valve <u>1.7</u> psi                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Did not open<br>Opened at: _____ psi                                                                                                                                                                                                                                                                                    | <input type="checkbox"/> Did not open<br>Air inlet opened: _____ psi<br><input type="checkbox"/> Leaked<br>Check held at: _____ psi                                                                                                                                                                                                                                                                                    |
| REPAIRS         | <input type="checkbox"/> Cleaned<br><input type="checkbox"/> REPLACED<br><input type="checkbox"/> CV Assembly<br>OR<br><input type="checkbox"/> Rubber Kit <input type="checkbox"/> Disc<br><input type="checkbox"/> O-Ring <input type="checkbox"/> Seat<br><input type="checkbox"/> Spring <input type="checkbox"/> Retainer<br><input type="checkbox"/> Stem/Guide <input type="checkbox"/> Locknuts<br><input type="checkbox"/> Other | <input type="checkbox"/> Cleaned<br><input type="checkbox"/> REPLACED<br><input type="checkbox"/> CV Assembly<br>OR<br><input type="checkbox"/> Rubber Kit <input type="checkbox"/> Disc<br><input type="checkbox"/> O-Ring <input type="checkbox"/> Seat<br><input type="checkbox"/> Spring <input type="checkbox"/> Retainer<br><input type="checkbox"/> Stem/Guide <input type="checkbox"/> Locknuts<br><input type="checkbox"/> Other | <input type="checkbox"/> Cleaned<br><input type="checkbox"/> REPLACED<br><input type="checkbox"/> RV Assembly<br>OR<br><input type="checkbox"/> Rubber Kit       Disc<br><input type="checkbox"/> Diaphragm       Seat<br><input type="checkbox"/> Spring             Guide<br><input type="checkbox"/> O-Ring<br><input type="checkbox"/> Other | <input type="checkbox"/> Cleaned<br><input type="checkbox"/> REPLACED<br><input type="checkbox"/> Air Inlet Disc<br><input type="checkbox"/> Air Inlet Spring<br><input type="checkbox"/> Diaphragm<br><input type="checkbox"/> CV Disc<br><input type="checkbox"/> Spring<br><input type="checkbox"/> Guide<br><input type="checkbox"/> Retainer<br><input type="checkbox"/> O-Ring<br><input type="checkbox"/> Other |
| FINAL<br>TEST   | <input checked="" type="checkbox"/> Closed Tight<br>Pressure drop<br>across check valve <u>1.5</u> psi                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> Closed Tight<br>Pressure drop<br>across check valve <u>1.7</u> psi                                                                                                                                                                                                                                                                                                                                    | Opened at: _____ psi                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Satisfactory                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                         |                                                                                             |                                                                      |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| RESULTS OF TEST: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail | CONTROL VALVE #2: <input checked="" type="checkbox"/> Tight <input type="checkbox"/> Leaked | LINE PRESSURE: <u>80</u> psi                                         |
| Witness to Assembly Test (Print)                                                        | Witness to Assembly Test Signature                                                          | Date<br><b>4/11/2022</b>                                             |
|                                                                                         |                                                                                             | I ACKNOWLEDGE THE CONTROL VALVES HAVE BEEN LEFT IN THE OPEN POSITION |

## APPROVALS

|                                                                                                        |                                           |                                         |                   |                                 |                        |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------|-------------------|---------------------------------|------------------------|
| I CERTIFY THAT THIS DATA IS ACCURATE AND REFLECTS THE PROPER OPERATION AND MAINTENANCE OF THE ASSEMBLY |                                           |                                         |                   |                                 |                        |
| INITIAL<br>TEST                                                                                        | Certified Tester (Print)<br>Barry Keisman | Certified Tester Signature<br><i>BK</i> | Date<br>4/11/2022 | Certified Tester #<br>8962NEWWA | Exp. Date<br>8/26/2024 |
| FINAL<br>TEST                                                                                          | Certified Tester (Print)<br>Barry Keisman | Certified Tester Signature<br><i>BK</i> | Date<br>4/11/2022 | Certified Tester #<br>8962NEWWA | Exp. Date<br>8/26/2024 |

Print Date: 4/26/2022

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Page 3 of 4

**Report of Inspection/Test**

Annual Sprinkler

04/11/2022

Property: 11 Pomeroy St.

Owner: King Real Estate

**DEAN & ALLYN, INC.****FIRE PROTECTION • SPECIAL HAZARD**

116 LEWISTON ROAD, GRAY, ME 04039-7524

207-657-5646 • 1-888-775-5646

Inspection Ref: 200000049853

**Deficiency / Recommendations Summary**

These items were deficient and do not meet the requirements of the applicable code at the time of the inspection. Items marked  
Recommendation are not required by the applicable code but are opportunities to improve the Life Safety of the property.

**Gauges Wet system**

No System Valve Riser Wet system

No

Date Prior to replacement year ?

**Pipe Int Assess Wet system**

No System Valve Riser Wet system

2022

Next Due

**Inspector's Suggestions**

Recommendations

In addition to the problems noted in this report the inspector suggests the following  
system changes/improvements, however, these suggestions are not the result of an  
engineering survey.

5 year internal investigation is due

Print Date: 4/26/2022

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Page 4 of 4

**PORTLAND WATER DISTRICT***Clean. Safe. Reliable.*

Inspection has been saved. Please use your browsers print function  
to print this page to keep for your records.

logged in as: Barry Keisman  
[logout](#)

Submittal Number: 1557

[Continue](#)

5/2/2022 11:37:34 AM

Work Order Number: -99999

PWDId:

Customer: King Real Estate

Address: 11 Pomeroy Street, Portland

Backflow Location Notes: Sprinkler Room- Fire Service

Manufacturer: Ames

Model: 2000B

Serial Number: 017019

BackFlow Size: 1.25

Check Valve1: 1.5

Check Valve2: 1.7

Relief Valve:

ClosedTight: Yes ☐

PassFail: Pass ☐

Inspection Date: 04/11/2022

For questions concerning the Backflow Results Form Process, please contact Ashley Olmsted @ 207-523-5420 or email: [backflow@pwd.org](mailto:backflow@pwd.org)

Portland Water District | 225 Douglass Street | PO Box 3553 | Portland, ME 04104-3553

September 12, 2018

To: Portland Planning Board  
Jon Jennings  
Greg Mitchell  
Tuck O'Brien  
Brian Batson

From: Douglas Babkirk, 55 Redlon Park Road

Re: Rabbi Wilansky's request for change of use permit (Plan # PL-000058-2018)

As a ten-year resident of Redlon Park, and neighbor to the Chabad House of Maine at 11 Pomeroy Street, I am writing to request that the change of use permit be denied. To approve the permit would sanction the expansion of scheduled worship, lodging and youth activities at the home that was approved as a private residence in 2014 in an R-3 zone that allows for conditional activities. Three areas of concern underlie my request:

### **Expansion to housing overnight guests**

1. The facility has expanded beyond a private residence to serving as a quasi hotel charging "donations" for overnight lodging as described on the Chabad House of Portland Maine website: [https://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/3338110/jewish/Reservations-at-Chabad.htm](https://www.chabadofmaine.com/templates/articlecco_cdo/aid/3338110/jewish/Reservations-at-Chabad.htm).
2. When I telephoned this spring to inquire about the number of guests the House could accommodate, Mrs. Wilansky informed me they could serve 15 and expand to 18 if needed. This was before the current two-story addition was under construction. The traffic, parking and outdoor activities relative to such a year-round lodging facility is unacceptable in a residential neighborhood.

### **Noise Levels of On-Site Activities**

3. Since the Chabad House arrival, we have experienced as neighbors living within 300 feet of the property:
  - Loud outdoor recreation noise after sunset by children playing basketball and other games outside of the Chabad House. The website outlines year-round youth activities: [https://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/2905574/jewish/Camp-Gan-Israel.htm](https://www.chabadofmaine.com/templates/articlecco_cdo/aid/2905574/jewish/Camp-Gan-Israel.htm)
  - Construction activity beginning at 7am on Sundays this summer that ceased upon my request
  - Children screaming and playing so loudly in the daytime that I sent a recording to Tuck O'Brien to confirm the noise. He said he would make a site visit to the property but I never heard back from him regarding his findings.

### **Traffic congestion**

4. It is my understanding that most of the Orthodox worshipers who attend services do not drive vehicles to the Chabad House, yet there have been events at the facility when cars have filled the parking area, both sides of the short, dead end Pomeroy Street and spilled

into Bancroft Street. Such congestion is a potential safety hazard if fire department vehicles had to maneuver on these streets.

By approving a change of use permit for the Chabad House, the Planning Board would condone these past and current practices that have significantly stretched, if not ignored, the approved conditional use in 2014 as a place of worship for 15 or fewer people. By expanding the religious events capacity and allowing the guest lodging and scheduled youth activities to continue, the Planning Board would set a poor precedent in the future for other taxpayers who request changes in use within the residential neighborhoods of Portland as well as open the door to possible future change of use requests by Rabbi Wilansky.

Please do not approve this change of use request so that we may maintain the residential Rosemont neighborhood that we have without expanded large group activities and guest lodging facilities.

---

## Chabad House application

---

**Judy Gailen** <judy@judygailendesigns.com>

Sep 6, 2018 11:39 AM

Posted in group: **Planning Board**

I am writing in response to the postcard I just received about the request for conditional use at the Chabad House on Pomeroy St.

I recently came across this brochure that I received (because I am Jewish and was a member of a temple and the JCA) as they were building the "house" (and I put that in quotations, because it was never meant to be just a single family house, no matter what they said).

I always meant to to submit it with the question, " Is this what you ask for when you are building a single family home? This is a temple, and it has always been the idea to build a temple, and I feel like it was deceptively presented from the very beginning. I cannot believe that the city did not realize what they were doing. The postcard says no changes to the structure are proposed, but they have been building all summer.





Chabad Lubavitch of Maine is celebrating 28 years of serving the Jewish communities of Maine with dedication and pride. Our programs, some of which are highlighted in this publication, are at the forefront of Jewish culture and learning. From educational programs to social services and everything in between, all of our activities are a reflection of our commitment to strengthen Judaism and Jewish families in Maine. We are an open and welcoming community. Our success in this mission is a direct result of your generosity, encouragement and participation.

As we look toward the future of Jewish life in Maine, we have recognized the need to expand our facilities in order to better serve the escalating needs of a growing population. We have nearly completed construction on a 2.2 acre property in Brighton Corner, a few blocks away from Stevens Avenue. The physical edifice is completed on a three story facility with a sanctuary and study hall, classrooms, hospitality suites, office space, activity rooms, a sukkah plaza and a full service kitchen and dining room. This Chabad House is set on a beautiful property surrounded by woods just off Bancroft Street.

This will be a new Center for Jewish Life in Maine. We are in the midst of applying for grants and donations to realize the fulfillment of this reality. This publication serves as a summary of our plan for the completed facility. We hope that you will consider supporting this important and exciting project by significantly contributing to our Building Campaign Fund. More importantly, we hope to see you and your family enjoying the warmth and beauty of Jewish life by participating in some of our enriching programs. We reach out to you as full time and also summer residents of Maine, visitors to Maine, and proactive Jewish community leaders who seek to strengthen and enrich Jewish communal life. By investing in the growth of Jewish life in Maine today, we are assured a strong foundation for tomorrow.

With warm wishes to you and your family,

Rabbi Moshe and Chana Wilansky

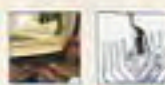


Let's Complete  
our dream  
Together

Dear Rabbi,

Please accept our small gift as a token of appreciation for an amazing work that you do and for helping us so many times. May you, your family and congregation have a joyous and healthy year.

— JS



Dear Rabbi Wilansky,

Thank you for volunteering your time to make candles with us. We liked using different waxes this year. The beeswax felt cool and smelled good. We used our candles in our menorahs and they burned beautifully.

Happy Chanukah!

Levey Day School  
Portland Maine



Dear Rabbi Wilansky,

Thank you for your time and dedication to our community here at the Cedars. We truly appreciate your presence with your family during Chanukah and all the Jewish holidays.

Cedars Nursing Home

## FEATURES

Imagine a place where Jews from all walks of life can come together and experience the joy of their heritage; where we can bask in the warmth of community life and share joyous occasions; where the environment is as welcoming as your own home, and the friendships formed last forever; where each person can learn, and grow as one chooses; where we can discover together what makes us unique and transmit this uniqueness to our children.

- 2,500 square feet of community space
- A large Social Hall that can accommodate community celebrations
- Meeting rooms for lectures, seminars and community gatherings
- Private study/library for individual and group learning
- Classrooms for adult education classes
- 500-square-foot space to house our extensive children's programs
- Kosher kitchen and Passover kitchen
- Administrative offices
- State of the Art Playground
- Sukkah Plaza

Let's Complete  
our dream  
Together



|                                               |           |                                               |          |                                                 |             |                                                 |             |
|-----------------------------------------------|-----------|-----------------------------------------------|----------|-------------------------------------------------|-------------|-------------------------------------------------|-------------|
| <input type="checkbox"/> Campus Dedication    | \$300,000 | <input type="checkbox"/> Sefer Torah          | \$36,000 | <input type="checkbox"/> Holy Ark               | \$18,000    | <input type="checkbox"/> Offices                | ea. \$5,000 |
| <input type="checkbox"/> Building Dedication  | \$250,000 | <input type="checkbox"/> Computer Lab         | \$36,000 | <input type="checkbox"/> Lobby Furniture        | \$12,000    | <input type="checkbox"/> Builder Sponsor        | \$3,600     |
| <input type="checkbox"/> Sanctuary            | \$100,000 | <input type="checkbox"/> Hospitality Room (2) | \$25,000 | <input type="checkbox"/> Study Furnishings      | \$10,000    | <input type="checkbox"/> Sanctuary Seating      | \$3,600     |
| <input type="checkbox"/> Library              | \$100,000 | <input type="checkbox"/> Playground           | \$25,000 | <input type="checkbox"/> Laver-Sanctuary        | \$10,000    | <input type="checkbox"/> Front Entrance Mezuzah | \$1,800     |
| <input type="checkbox"/> Main Entrance        | \$75,000  | <input type="checkbox"/> Passover Kitchen     | \$20,000 | <input type="checkbox"/> Yahrzeit Board         | \$10,000    | <input type="checkbox"/> Prayer Book Cabinet    | \$1,800     |
| <input type="checkbox"/> Social Hall          | \$72,000  | <input type="checkbox"/> Coat Room            | \$18,000 | <input type="checkbox"/> Founder Sponsor        | \$7,200     | <input type="checkbox"/> Sponsor                | ea. \$1,800 |
| <input type="checkbox"/> Kosher Kitchen       | \$50,000  | <input type="checkbox"/> Platforms (Bimah)    | \$18,000 | <input type="checkbox"/> Ner Tamid (Lamp)       | \$5,000     | <input type="checkbox"/> Supporter Sponsor      | ea. \$1,000 |
| <input type="checkbox"/> Hospitality Suite    | \$50,000  | <input type="checkbox"/> Landscaping          | \$18,000 | <input type="checkbox"/> Tallis Rack            | \$5,000     | <input type="checkbox"/> Tree of Life Leaf      | ea. \$360   |
| <input type="checkbox"/> Rabbi's Study        | \$50,000  | <input type="checkbox"/> Classroom            | \$18,000 | <input type="checkbox"/> Chazan's Lectern       | \$5,000     | <input type="checkbox"/> Memorial Plaque        | \$360       |
| <input type="checkbox"/> Tree of Life Display | \$36,000  | <input type="checkbox"/> Camp/Game Room       | \$18,000 | <input type="checkbox"/> Office Furnishings (4) | ea. \$5,000 | <input type="checkbox"/> Mezuzahs               | ea. \$250   |

✓ **Yes**, I am pleased to sponsor the above dedication (please select option(s) from above) in honor of: \_\_\_\_\_

I hereby pledge to pay a total of \$\_\_\_\_\_ (please select payment option:) ☐ in Full or ☐ in \_\_\_\_\_ installments over \_\_\_\_\_ months/years.  
(Maximum of 5 years for dedications over \$10,000; 3 years for dedications over \$3,600; 1 year for all other dedications)

Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Tel: (\_\_\_\_) \_\_\_\_\_ E-mail: \_\_\_\_\_

Credit Card #: \_\_\_\_\_ Exp Date: \_\_\_\_/\_\_\_\_ Security Code: \_\_\_\_\_

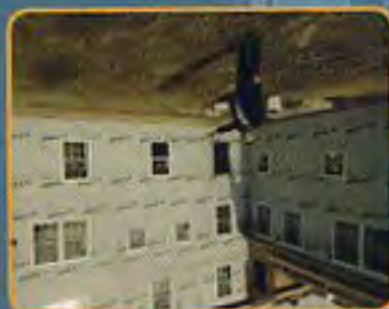
Billing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Amount: \$\_\_\_\_\_ Other Donation Your Choice: \$\_\_\_\_\_ Signature: \_\_\_\_\_

Let's Complete  
our dream  
Together

Please complete and detach this form and mail it to the address on the reverse.

**Chabad House Lubavitch of Maine**  
Address: 101 Craigie Street, Portland, ME 04102  
T: 207.871.8947 F: 760.875.8947  
E: rabbi@chabadofmaine.com W: Chabadofmaine.com



Let's Complete  
our dream  
Together

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**PL-000058-2018 11 Pomeroy Street Portland Maine**

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**KMRAJACOBS JACOBS** <kmrajacobs@outlook.com>

Sep 9, 2018 3:04 PM

Posted in group: **Planning Board**

Hello,

I would like to express my concerns before this plan is approved.

This is a quiet residenal neighborhood and I f eel that opening this up to a place of worship of 15+ individuals is a tremendous mistake.

There is enough traffic using Bancroft Street as a cut through between Brighton Avenue and Capisic Street without adding more.

The residents at 11 Pomeroy Street are plenful enough and ha ve already added 3 - 5 vehicles on an already crowded street.

I would ask that you consider the re-zoning carefully before approving.

Krisne & Rick

## Chabad of Maine Change of Use Request

Jeff D. Emerson <jdemerson@northendgroup.com>

Sep 11, 2018 5:02 AM

Posted in group: **Planning Board**

I am a resident of Redlon Park Road which is adjacent to the Chabad of Maine (Chabad) on Pomeroy Street. Chabad has applied to the City of Portland for a change of use permit. I oppose this application.

- The change of use application, for Chabad to expand its scope beyond the limit of 15 non-family members present at any one time on its site (a limit placed on it by the City of Portland (City) and in Section 14-90 of the Land Use Code), is precisely the "incrementalism" to which I referred in my December 1, 2017 e-mail to Tom Federle, Chabad's attorney. A copy of that e-mail is included in the attached collection of documents (it is the first document). As you can see, from this partial file of documents, there is a long history with Chabad and its incrementalism
- This incrementalism was entirely predictable once the City permitted the construction of a mixed use 8,000 square foot property in a residential neighborhood. Indeed, the first example of incrementalism was the increase in size of the structure to 10,000 square feet, also permitted by the City
- Chabad has been engaged in religious services, provision of kosher meals, lodging and summer camps as evidenced by its web site. None of these activities was specifically permitted by the City. None of these activities is appropriate to a residential neighborhood. All of these activities are examples of incrementalism
- If the City authorizes this change of use we reasonably can expect more examples of incrementalism which are unlikely to comport with a residential neighborhood
- Part of the application would include, as I understand it, a tax exempt status for Chabad. If granted, this would add insult to injury as I will be paying for Chabad's expansion and services in a residential neighborhood
- Less than one (1) mile from Chabad is a large Jewish Community Center, appropriately sited in a commercial area. Why do we need an expanded Chabad in a residential neighborhood?

Let me be very clear: I am Jewish. I understand Chabad and its mission. I support Chabad--but not in a residential neighborhood. In my e-mail to Tom Federle I noted that I want what all people want: a good neighbor. Chabad has not been a good neighbor; any expansion of Chabad in its facility or its services will change fundamentally the nature of its neighborhood and is inappropriate to a residential neighborhood. It is particularly inappropriate when there is a large Jewish Community Center at Congress and Stevens less than one (1) mile from Chabad. We cannot un-ring the bell for Chabad, its facility or its (current) services. But it would be totally inappropriate for the City to permit the change of use. The expansion of Chabad, in size and services, needs to stop now.



Jeff D. Emerson

President

NorthEnd Group LLC

18 Redlon Park Road

Portland, ME 04102

Tel: (240) 752-7143

Efax: (207) 221-1159

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## Jeff D. Emerson

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**From:** Jeff D. Emerson  
**Sent:** Friday, December 01, 2017 6:47 AM  
**To:** 'Tom Federle'  
**Cc:** 'Tuck O'Brien'; Doug Babkirk  
**Subject:** Chabad of Maine

Tom, thank you for visiting with me yesterday about Chabad of Maine (CM). It was a cordial, reasonable and productive discussion. As I told you, we cannot un-ring the bell for the construction of the Chabad House, its size or services which it provides, however inappropriate the City of Portland may have been in permitting it. I am willing to accept the status quo, albeit I do take exception to an 8,000 to 10,000 square foot dwelling, providing religious and commercial services, which is exempt from taxes (which means that I am paying for it).

You asked me what the Redlon Park Road neighbors want. I said that I am not in the habit of speaking for other people but, speaking for myself, I want what all people want: good neighbors. Specifically, as the *quid pro quo* for my acceptance of the Chabad House, I want

- No further increase in the size of CM beyond that which already is approved and permitted by the City of Portland
- No increase in the services which CM offers beyond those services (kosher meals, religious services, lodging and summer camp for kids) which CM currently offers
- A commitment not to purchase other homes in the CM neighborhood for the purposes of incorporating them in the CM activities
- Honoring the no more than 15 non-Wilansky family members at CM at any one-time restriction which was imposed by the City of Portland and as codified in, *inter alia*, Section 14-90 of the Land Use Code

We discussed the incrementalism which the Chabad of Maine seemingly has pursued: from an application to build a Single-Family Residence to a Chabad House with religious and commercial services to an application for Change of Use and tax-exempt status. I would not consider the Chabad of Maine to be a good neighbor if it continues down this path of incrementalism.

Finally, we discussed my suggestion that the Rabbi should invite his neighbors (not just from Redlon Park Road) to the Chabad House as a way to demystify it and as an opportunity for us to talk and exchange our respective thoughts and concerns. You thought that this was a good idea.

The Rebbe, Rabbi Menachim Schneerson, of righteous memory, would frequently quote the Maimonidean adage: Each person should see himself as though the entire world is in delicate balance and, with but **one deed**, he or she can tip the scales for good. Let's work together to tip the scales for good.

Jeff

Jeff D. Emerson

President



## Jeff D. Emerson

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**From:** Jeff D. Emerson  
**Sent:** Thursday, September 14, 2017 8:51 AM  
**To:** 'ARL@portlandmaine.gov'  
**Cc:** Doug Babkirk  
**Subject:** Chabad of Maine  
  
**Importance:** High

Dear Ms. LaChance,

It is my understanding that the City of Portland (City) is re-assessing its approval of an expansion of the facility of Chabad of Maine. I am the Treasurer of the Redlon Park Association (Association); several association members' homes abut the Chabad of Maine. I also am Jewish and well-informed about Chabads. So, let me be very clear about where I stand on this issue: it is inappropriate for the City to have permitted the construction of an 8,000 square foot facility in a residential neighborhood which is used for, inter alia, religious services, lodging and summer camps for children. Having done so, over the objection of the Association, the City attorneys parsed their way to a rationale by saying that the use of the Chabad of Maine facility would be limited to no more than fifteen (15) non-family members at any one time. It is unclear how, or even if, this limit is enforced.

Now the Association has learned that the City has approved an expansion of the Chabad of Maine facility by more than 2,000 square feet. This makes the facility (it is not a home) larger than any residential building in the area by at least a factor of two. That alone should have been sufficient reason for caution in permitting the expansion. However, if you go to the Chabad of Maine web site (<http://www.chabadofmaine.com>), you will observe that it advertises services for food, lodging, day care and other services not appropriate to a residential neighborhood.

The Chabad of Maine facility already is built. It already is serving people kosher meals, providing lodging and religious services. That bell cannot be un-rung. But I urge the City to reign in the activities of the Chabad of Maine now by declining the permit for expansion and by enforcing the City's determination that no more than fifteen non-family members can be there at any one time.



Jeff D. Emerson

President  
NorthEnd Group LLC  
18 Redlon Park Road  
Portland, ME 04102

tel: (240) 752-7143  
efax: (207) 221-1159  
e-mail: [jdemerson@northendgroup.com](mailto:jdemerson@northendgroup.com)

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## Jeff D. Emerson

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**From:** Jeff D. Emerson  
**Sent:** Thursday, July 20, 2017 2:20 PM  
**To:** 'jrioux@portlandmaine.gov'  
**Cc:** Doug Babkirk; 'bbatson@portlandmaine.gov'  
**Subject:** Portland Chabad House

**Importance:** High

Dear Jon,

This e-mail is a follow-up to Doug Babkirk's call to you this morning (and subsequent e-mail) inquiring about the permitted use of the City of Portland Chabad House property at 11 Pomeroy Street. Doug is President of the Redlon Park Road Association and I am its Treasurer.

Our concern focuses on the originally permitted use of the property as a single residence that now is advertised online and acting as a Chabad House with communal activities, a day youth camp and **paid accommodations** for visiting guests.

The URL for accommodations at the Portland Chabad House, which is in a residential neighborhood and which abuts homes in the Redlon Park Road Association neighborhood, is:

[http://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/304355/jewish/Accommodation-Info.htm](http://www.chabadofmaine.com/templates/articlecco_cdo/aid/304355/jewish/Accommodation-Info.htm)

We now understand that the City recently has permitted a two-story addition to the Chabad residence/Center which will increase daily activities and overnight lodging capacity and traffic in a residential zone of Portland.

This simply is outrageous. Initially the City issued a permit for an 8,000-square foot personal residence which already was several times larger than any other residence in the abutting neighborhoods. Then the City agreed to permit the use of 11 Pomeroy as a commercial and religious establishment provided that no more than 15 non-family members were present at the Chabad House at any one time. Now the City apparently is agreeing to permit the substantial expansion of the Chabad House which clearly, by its own web site, is a commercial and religious establishment.

This is an unacceptable use of a residentially zoned area. We expect the City to deny any further construction at 11 Pomeroy Street and to investigate the current use of the Chabad House in light of the City ordinances and zoning regulations. We will appreciate your prompt response to this request.

Jeff

Jeff D. Emerson

President  
NorthEnd Group LLC  
18 Redlon Park Road  
Portland, ME 04102



Jeff D. Emerson  
18 Redlon Park Road  
Portland, ME 04102

Helen Donaldson  
City of Portland  
389 Congress Street  
Portland, Maine 04101

April 16, 2016

**RE: Residence at 11 Pomeroy Street**

Dear Ms. Donaldson:

We write to you on behalf of the Redlon Park Association (the Association) and its members who are residents of Redlon Park Road in Portland. As you know, the Association has long been interested in the zoning for, and construction of, a single family home at 11 Pomeroy Street. That property abuts one or more existing homes in the Association.

The Association took no position with respect to the zoning for, or construction of, a single family home on that site, though we would note that it is an unusually large single family home relative to the size of homes in the neighborhood. However, the Association does note that the zoning in this neighborhood is limited to single family homes. We understand this limitation to mean that the home is for the principal residence of one family and is not intended for any other uses, especially commercial uses.

The Association has reason to believe that the property is being used as a Chabad House ([http://www.chabad.org/centers/default\\_cdo/aid/117638/jewish/Chabad-Lubavitch-of-Maine.htm](http://www.chabad.org/centers/default_cdo/aid/117638/jewish/Chabad-Lubavitch-of-Maine.htm)) which means that religious services are conducted there. We are concerned that the strain on neighborhood resources may become significant, including but not limited to, foot and vehicle traffic. In addition, since the road and driveway were built the amount of still water pooling in the woods from the construction has doubled due to poor drainage. This issue alone should require an inspection by the City. We request that the City of Portland take such steps as may be necessary and advisable to ensure that the use of this property is limited to a dwelling exclusively for use as a single family home.

We are happy to discuss this matter with you or your designate. You may contact me at (240) 752-7143 or at [jdemerson@northendgroup.com](mailto:jdemerson@northendgroup.com). If I have not heard from you within ten (10) days of the date of this letter I will call you.

Thank you.

Sincerely,



Jeff D. Emerson  
Treasurer  
Redlon Park Association

cc: Ed Suslovic

## Jeff D. Emerson

---

**From:** Doug Babkirk <doug.babkirk@maine.edu>  
**Sent:** Thursday, July 20, 2017 6:11 PM  
**To:** Jeff D. Emerson  
**Subject:** Fwd: 11 Pomeroy Street

She did not address the issue of running a hotel in a single residence  
Perhaps a meeting with the woman she recommended is in order

Sent from my iPhone

Begin forwarded message:

**From:** "Jeff D. Emerson" <jdemerson@northendgroup.com>  
**Date:** July 20, 2017 at 2:29:41 PM EDT  
**To:** Doug Babkirk <doug.babkirk@maine.edu>  
**Subject:** FW: 11 Pomeroy Street

**From:** Barbara Barhydt [mailto:BAR@portlandmaine.gov]  
**Sent:** Tuesday, June 24, 2014 11:50 AM  
**To:** Jeff D. Emerson <jdemerson@northendgroup.com>  
**Cc:** Ann Machado <AMACHADO@portlandmaine.gov>; Alex Jaegerman <AQJ@portlandmaine.gov>; Helen Donaldson <HCD@portlandmaine.gov>; Jeff Levine <JLEVINE@portlandmaine.gov>; Marge Schmuckal <MES@portlandmaine.gov>; Philip DiPierro <PD@portlandmaine.gov>  
**Subject:** Re: 11 Pomeroy Street

Dear Mr. Emerson:

Thank you for your e-mail regarding 11 Pomeroy Street.

The application approved for 11 Pomeroy Street is for a single family home and for the extension of Pomeroy Street to serve the home. The permits for construction were issued last week. The site is within the Residential R-3 zone, which permits single family homes and planned residential developments.

Please note that the R-3 zone does include other uses that are called conditional uses. Conditional uses require additional review by the Planning Board or the Zoning Board of Appeals. A place of assembly is one of the institutional uses that requires conditional use review by the Planning Board. If such a use were to be proposed for this site, the applicant would be required to submit an application and the request would be considered by the Planning Board at a public hearing. There are limitations regarding the size of such facilities that are proposed on local streets (refer to Section 14-90 in the Land Use Code, <http://www.portlandmaine.gov/DocumentCenter/Home/View/1080>) . Also, please note that the zoning ordinance defines a place of religious assembly as a gathering of more than 15 people beyond the immediate family. The definition is as follows:

*Place of assembly:* A building or portion of a building used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly. This definition shall not include buildings or portions of buildings used as a community hall, neighborhood center, private and fraternal organization or place of religious assembly



where fifteen (15) or fewer people, not including the permanent residents of a single family dwelling, assemble.

If you have concerns about the use of the property once construction is complete and the building is occupied, then you may submit your concerns and any evidence to Marge Schmuckal, Zoning Administrator, and to me.

Thank you.

Barbara

Barbara Barhydt  
Development Review Services Manager  
Planning Division  
389 Congress Street 4th Floor  
Portland, ME 04101  
(207) 874-8699  
Fax: (207) 756-8256  
[bab@portlandmaine.gov](mailto:bab@portlandmaine.gov)

>>> "Jeff D. Emerson" <[jdemerson@northendgroup.com](mailto:jdemerson@northendgroup.com)> Friday, June 20, 2014 5:06 PM >>>  
Dear Ms. Barhydt,

I write to you as a concerned citizen who owns property at 18 Redlon Park Road in an area near to 11 Pomeroy Street where Rabbi Moshe Wilansky apparently has been approved to construct a rather large dwelling. As you may know, Rabbi Wilansky heads Chabad of Maine in Portland. I met with Rabbi Wilansky last year and I have reason to believe, based on that meeting and other information and belief, that Rabbi Wilansky may intend to use the dwelling as a Chabad House, as well as his personal residence. A Chabad House would be used for religious services and to offer visiting Jews a place where they may have a kosher meal and stay overnight. I have no problem with Chabad House. But I do not think that it is appropriate in a residential community.

My understanding from Nell Donaldson is that the property at 11 Pomeroy Street is zoned for a single family dwelling. Consequently, I request that the City of Portland take such steps as may be necessary and advisable to ensure that any dwelling built on this property is limited exclusively to use as a single family home. Thank you.

Jeff D. Emerson

President  
NorthEnd Group LLC  
18 Redlon Park Road  
Portland, ME 04102

tel: (240) 752-7143  
efax: (207) 221-1159  
e-mail: [jdemerson@northendgroup.com](mailto:jdemerson@northendgroup.com)

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DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

# CITY OF PORTLAND BUILDING PERMIT



This is to certify that

CHABAD LUBAVITCH OF MAINE INC

Located at

11 POMEROY ST

PERMIT ID: 2017-00377    ISSUE DATE: 04/26/2017    CBL: 193 E001001

has permission to **Construction of two-story addition 21' x 26'**

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 hour notice is required.

A final inspection must be completed before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

N/A

Fire Official

/s/ Greg Gilbert

Building Official

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY  
THERE IS A PENALTY FOR REMOVING THIS CARD**

*Approved Property Use - Zoning*  
single family dwelling

*Building Inspections*

Use Group:                      Type:  
Single Family Residence  
ENTIRE  
MUBEC / 2009 IRC

*Fire Department*

PERMIT ID: 2017-00377

Located at: 11 POMEROY ST

CBL: 193 E001001



## BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703

or email: [buildinginspections@portlandmaine.gov](mailto:buildinginspections@portlandmaine.gov)

Check the Status of Permit or Schedule an Inspection at  
<http://www.portlandmaine.gov/planning/permitstatus.asp>

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the City of Portland Inspections Division for the inspections listed below. Appointments must be requested 48 to 72 hours in advance. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that are attached to this permit.
- Permits expire in 6 months if the project is not started or ceases for 6 months.
- If the inspection requirements below are not followed, then additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.
- Per Section 107.3.1 of the Maine Uniform Building and Energy Code (MUBEC), one set of printed approved stamped construction documents will be kept at the site of work and open to inspection by building officials.

### REQUIRED INSPECTIONS:

Setbacks and Footings Prior to Pouring

Foundation/Backfill

Close-in Plumbing/Framing

Electrical - Residential

Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue.

If the permit requires a certificate of occupancy, it must be paid and issued to the owner or designee before the space may be occupied.

**City of Portland, Maine - Building or Use Permit**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

| Permit No: | Date Applied For: | CBL:        |
|------------|-------------------|-------------|
| 2017-00377 | 03/23/2017        | 193 E001001 |

**Proposed Use:**

Same: Single Family

**Proposed Project Description:**

Construction of two-story addition 21' x 26'

**Dept:** Zoning**Status:** Approved w/Conditions**Reviewer:** Christina Stacey**Approval Date:** 04/07/2017**Note:** R-3 zone**Ok to Issue:** ✓

Front setback 25' min - addition &gt;150' scaled - OK

Rear setback 25' min - addition &gt;150' scaled - OK

Side setback 14' min - Left - addition &gt;70' scaled - OK

Right - addition &gt;100' scaled - OK

Lot coverage is &lt;35%

Max height 35' - addition 25' grade to peak - OK

**Conditions:**

- 1) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
- 2) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

**Dept:** Building Inspection **Status:** Approved w/Conditions**Reviewer:** Greg Gilbert**Approval Date:** 04/26/2017**Note:****Ok to Issue:** ✓**Conditions:**

- 1) For conditioned space- insulation shall comply with the IECC, 2009 (Maine State Energy Codes).
- 2) Roof Trusses may not be used unless engineered drawings are submitted to and approved by Inspections Department
- 3) R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403.  
Foundation Drainage: Fabric, Damp proofing shall comply with Section R405 & R406, see attachment.
- 4) All construction shall comply with City Code Chapter 10.  
All smoke detectors and smoke alarms shall be photoelectric.  
Hardwired Carbon Monoxide alarms with battery backup are required on each floor.  
A sprinkler system is recommended but not required.
- 5) Separate permits are required for any electrical: plumbing, sprinkler, fire alarm, HVAC systems, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
- 6) This permit is approved based upon information provided by the applicant or design professional. Any deviation from the final approved plans requires separate review and approval prior to work.

**PERMIT ID:** 2017-00377**Located at:** 11 POMEROY ST**CBL:** 193 E001001





Permitting and Inspections Department  
Michael A. Russell, MS, Director



Reviewed for Code Compliance  
Signed (Date/Design)  
Approved with Conditions  
Date: 04/26/17

## General Building Permit Application

Project Address: 11 Dummeroy Street

Tax Assessor's CBL: 193 E 1 Chart # Block # Lot # Cost of Work: \$ \$30,000

Proposed use (e.g., single-family, retail, restaurant, etc.): Single Family

Current use: Single Family Past use, if currently vacant: \_\_\_\_\_

☐ Commercial ☐ Multi-Family Residential ☐ One/Two Family Residential

Type of work (check all that apply):

- |                                                 |                                                        |                                                                 |
|-------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> New Structure          | <input type="checkbox"/> Foundation Only               | <input type="checkbox"/> Change of Ownership - Condo Conversion |
| <input checked="" type="checkbox"/> Addition    | <input type="checkbox"/> Fence                         | <input type="checkbox"/> Change of Use                          |
| <input type="checkbox"/> Alteration             | <input type="checkbox"/> Pool - Above Ground           | <input type="checkbox"/> Change of Use - Home Occupation        |
| <input type="checkbox"/> Amendment              | <input type="checkbox"/> Pool - In Ground              | <input type="checkbox"/> Radio/Telecommunications Equipment     |
| <input type="checkbox"/> Shed                   | <input type="checkbox"/> Retaining Wall                | <input type="checkbox"/> Radio/Telecommunications Tower         |
| <input type="checkbox"/> Demolition - Structure | <input type="checkbox"/> Replacement Windows           | <input type="checkbox"/> Tent/Stage                             |
| <input type="checkbox"/> Demolition - Interior  | <input type="checkbox"/> Commercial Hood System        | <input type="checkbox"/> Wind Tower                             |
| <input type="checkbox"/> Garage - Attached      | <input type="checkbox"/> Tank Installation/Replacement | <input type="checkbox"/> Solar Energy Installation              |
| <input type="checkbox"/> Garage - Detached      | <input type="checkbox"/> Tank Removal                  | <input type="checkbox"/> Site Alteration                        |

Project description/scope of work (attach additional pages if needed):

Construction of a 2 story addition - approximately 21' x 26'

Applicant Name: Chaband Cub Architects Phone: (207) 650-8295

Address: 11 Dummeroy Street Email: \_\_\_\_\_

Lessee/Owner Name (if different): \_\_\_\_\_ Phone: ( ) -

Address: Architect Email: \_\_\_\_\_

Contractor Name (if different): Gleason Architects Phone: (63) 772-7370

Address: P.O. Box 666 Stratham, NH Email: gleasonarchitects@gmail.com

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

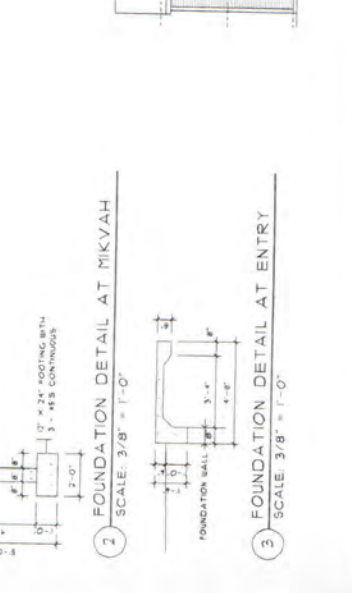
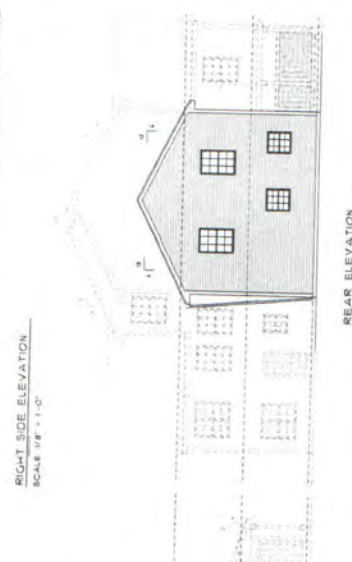
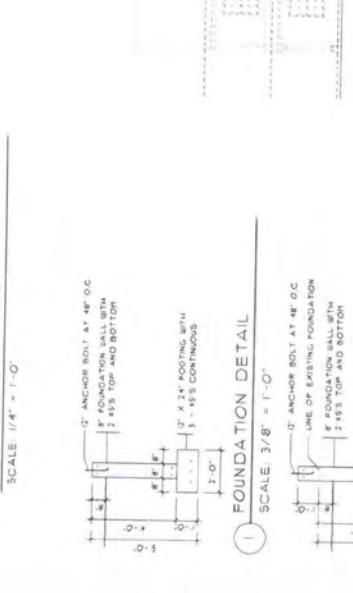
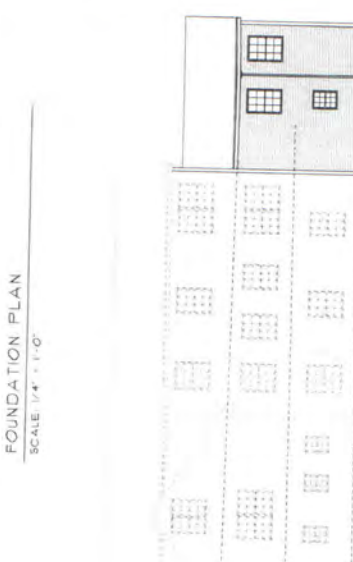
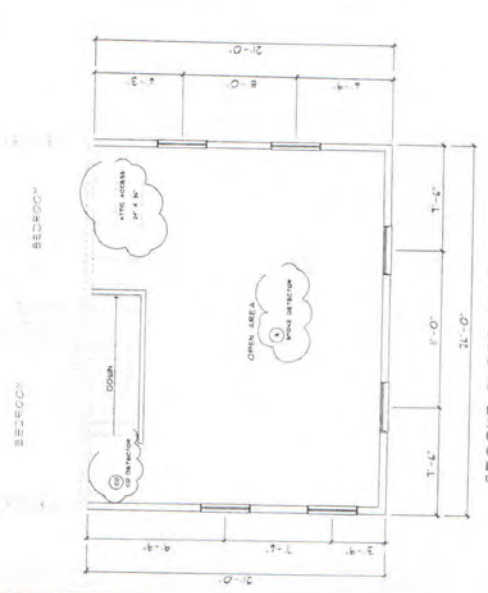
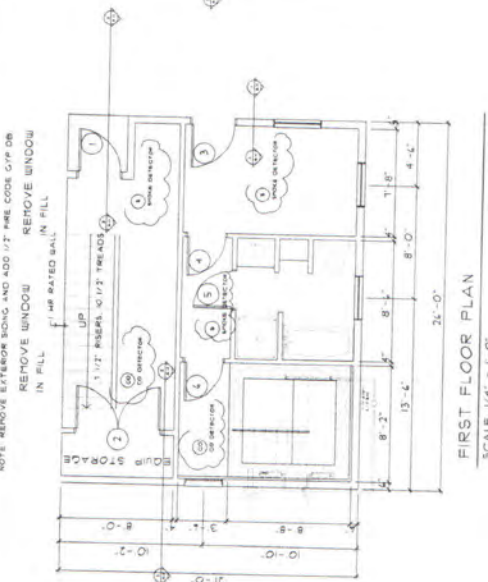
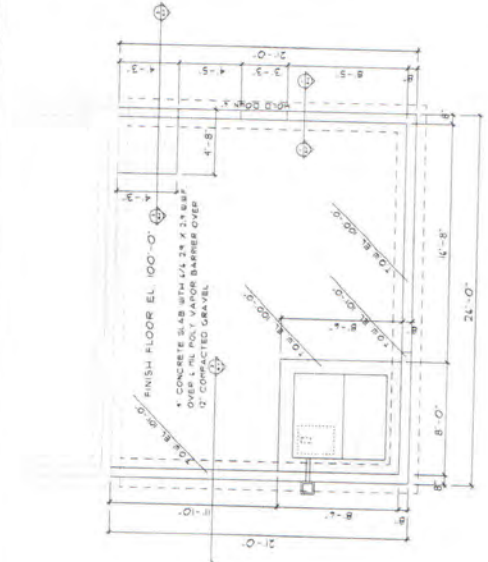
Signature: [Signature] architect for the owner Date: 3/22/17

Review of this application will not begin until the permit payment is received. This is not a permit. Work may not commence until the permit is issued.

389 Congress Street/Portland, Maine 04101/ <http://portlandmaine.gov> /tel: (207) 874-8703/fax: (207) 874-8716

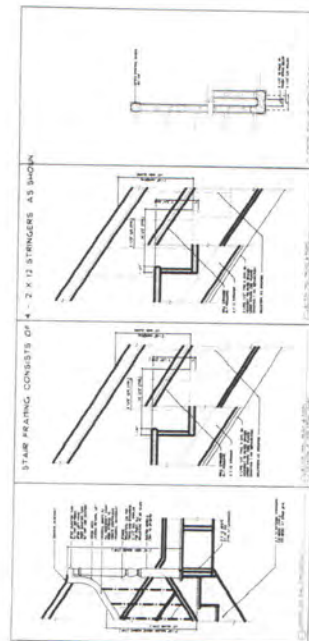
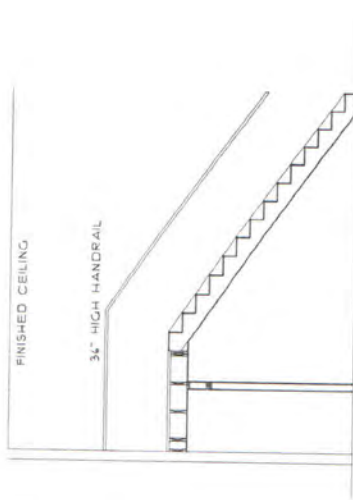








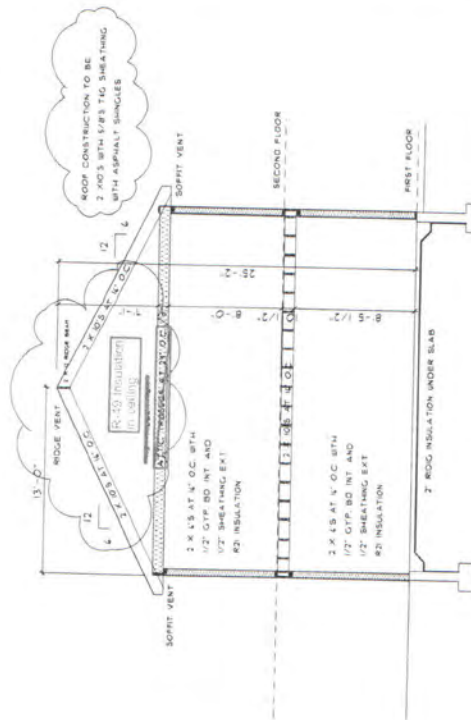
1. Perimeter foundations drainage was planned but illustrated on the drawings. The drains will be "extended 12" beyond the outside edge of the footings, 6" above the top of the footing covered with a filter membrane. These lines will drain to daylight or a downspout which will be located on site.
2. These will be a maximum of 6" on center, the plans reflect 4" on center and 12" from each corner. They will be 1/2" diameter, 12" steel bolts with a bend at the embedded end and be in the concrete foundation wall at least 7".
3. The design load of the roof is 50 psf ground snow load.
4. The roof framing will be 2 X 10s at 16" o.c. as is illustrated on the drawings, 12" o.c.
5. The sheathing will be 5/8" T & G, exterior grade plywood or equal and be nailed at center on the edges, 8" on center on support members.
6. The window schedule is illustrated on the drawings.
7. The roof will have ice and water shield 4" from the roof edges at the fascia and minimum of 15 pound felt under the architectural asphalt shingles.
8. The stair cross section is illustrated on the drawings.
9. The C/O monitor will be located in each bedroom and have a battery back-up. The fire separation detail for the wall between the garage and the house is illustrated on the drawings.
10. Windows to be ALLSIDE CUSTOM



ROOF FRAMING PLAN  
SCALE 1/4" = 1'-0"



SECOND FLOOR FRAMING PLAN  
SCALE 1/4" = 1'-0"



BUILDING SECTION  
SCALE 1/4" = 1'-0"

NEW RESIDENCE

11 POWEROY STREET  
PORTLAND, MAINE

Gleason Architects  
P.O. BOX 596  
STRATHAM, NEW HAMPSHIRE 03865  
603 772-7370

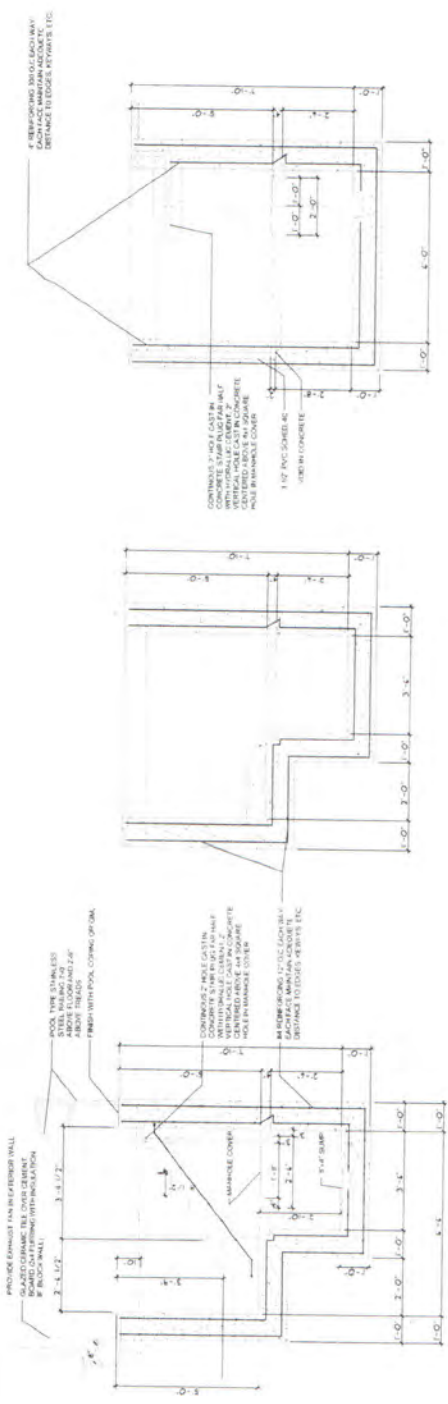
ARCHITECT

ENGINEER  
DATE 02/15/17  
PROJECT NO. 201518  
SHEET NO.

A-2

OF SHEETS



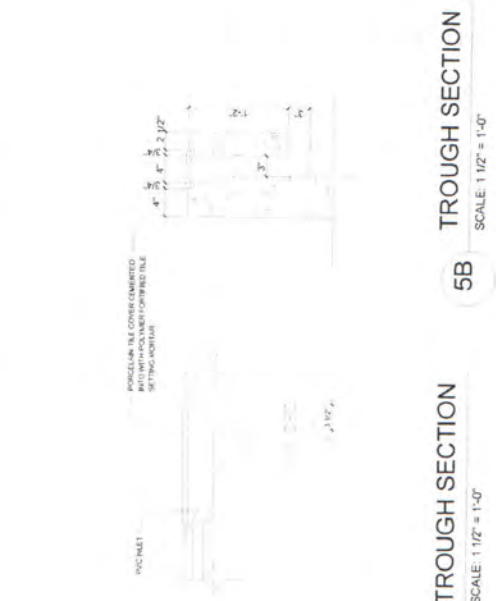
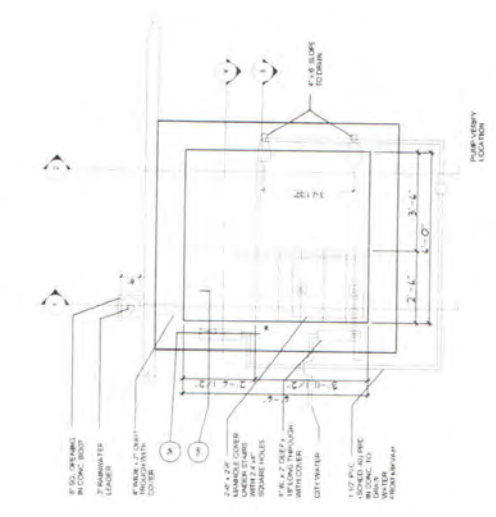
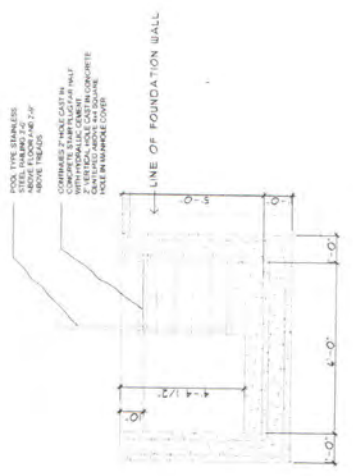


**3 MIKVAH SECTION**  
SCALE 1 1/2" = 1'-0"

**4 MIKVAH SECTION**  
SCALE 1 1/2" = 1'-0"

**5A TROUGH SECTION**  
SCALE 1 1/2" = 1'-0"

**5B TROUGH SECTION**  
SCALE 1 1/2" = 1'-0"



**MIKVAH PLAN**  
SCALE 1 1/2" = 1'-0"

**MIKVAH SECTION**  
SCALE 1 1/2" = 1'-0"

**5A TROUGH SECTION**  
SCALE 1 1/2" = 1'-0"

**5B TROUGH SECTION**  
SCALE 1 1/2" = 1'-0"

## Re: Comments regarding Rabbi Wilansky's change of use permit request for 11 Pomeroy Street

**Jonathan Matt** <jmatt001@maine.rr.com>

Sep 12, 2018 10:00 PM

Posted in group: **Planning Board**

Well done Doug! I like the fact that you recorded the noise.

On Sep 12, 2018, at 5:47 PM, Douglas Babkirk <doug.babkirk@maine.edu> wrote:

September 12, 2018

To: Portland Planning Board

Jon Jennings

Greg Mitchell

Tuck O'Brien

Brian Batson

From: Douglas Babkirk, 55 Redlon Park Road

Re: Rabbi Wilansky's request for change of use permit (Plan # PL-000058-2018)

As a ten-year resident of Redlon Park, and neighbor to the Chabad House of Maine at 11 Pomeroy Street, I am writing to request that the change of use permit be denied. To approve the permit would sanction the expansion of scheduled worship, lodging and youth activities at the home that was approved as a private residence in 2014 in an R-3 zone that allows for conditional activities. Three areas of concern underlie my request:

### Expansion to housing overnight guests

1. The facility has expanded beyond a private residence to serving as a quasi hotel charging "donations" for overnight lodging as described on the Chabad House of Portland Maine website: [https://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/3338110/jewish/Reservations-at-Chabad.htm](https://www.chabadofmaine.com/templates/articlecco_cdo/aid/3338110/jewish/Reservations-at-Chabad.htm).
2. When I telephoned this spring to inquire about the number of guests the House could accommodate, Mrs. Wilansky informed me they could serve 15 and expand to 18 if needed. This was before the current two-story addition was under construction. The traffic, parking and outdoor activities relative to such a year-round lodging facility is unacceptable in a residential neighborhood.

### Noise Levels of On-Site Activities

1. Since the Chabad House arrival, we have experienced as neighbors living within 300 feet of the property:
  - Loud outdoor recreation noise after sunset by children playing basketball and other games outside of the Chabad House. The website outlines year-round youth activities: [https://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/2905574/jewish/Camp-Gan-Israel.htm](https://www.chabadofmaine.com/templates/articlecco_cdo/aid/2905574/jewish/Camp-Gan-Israel.htm)
  - Construction activity beginning at 7am on Sundays this summer that ceased upon my request

- Children screaming and playing so loudly in the daytime that I sent a recording to Tuck O'Brien to confirm the noise. He said he would make a site visit to the property but I never heard back from him regarding his findings.

### **Traffic congestion**

1. It is my understanding that most of the Orthodox worshipers who attend services do not drive vehicles to the Chabad House, yet there have been events at the facility when cars have filled the parking area, both sides of the short, dead end Pomeroy Street and spilled into Bancroft Street. Such congestion is a potential safety hazard if fire department vehicles had to maneuver on these streets.

By approving a change of use permit for the Chabad House, the Planning Board would condone these past and current practices that have significantly stretched, if not ignored, the approved conditional use in 2014 as a place of worship for 15 or fewer people. By expanding the religious events capacity and allowing the guest lodging and scheduled youth activities to continue, the Planning Board would set a poor precedent in the future for other taxpayers who request changes in use within the residential neighborhoods of Portland as well as open the door to possible future change of use requests by Rabbi Wilansky.

Please do not approve this change of use request so that we may maintain the residential Rosemont neighborhood that we have without expanded large group activities and guest lodging facilities.

September 12, 2018

To: Portland Planning Board  
Jon Jennings  
Greg Mitchell  
Tuck O'Brien  
Brian Batson

From: Douglas Babkirk, 55 Redlon Park Road

Re: Rabbi Wilansky's request for change of use permit (Plan # PL-000058-2018)

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### **Expansion to housing overnight guests**

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  - Construction activity beginning at 7am on Sundays this summer that ceased upon my request
  - Children screaming and playing so loudly in the daytime that I sent a recording to Tuck O'Brien to confirm the noise. He said he would make a site visit to the property but I never heard back from him regarding his findings.

### **Traffic congestion**

4. It is my understanding that most of the Orthodox worshipers who attend services do not drive vehicles to the Chabad House, yet there have been events at the facility when cars have filled the parking area, both sides of the short, dead end Pomeroy Street and spilled

into Bancroft Street. Such congestion is a potential safety hazard if fire department vehicles had to maneuver on these streets.

By approving a change of use permit for the Chabad House, the Planning Board would condone these past and current practices that have significantly stretched, if not ignored, the approved conditional use in 2014 as a place of worship for 15 or fewer people. By expanding the religious events capacity and allowing the guest lodging and scheduled youth activities to continue, the Planning Board would set a poor precedent in the future for other taxpayers who request changes in use within the residential neighborhoods of Portland as well as open the door to possible future change of use requests by Rabbi Wilansky.

Please do not approve this change of use request so that we may maintain the residential Rosemont neighborhood that we have without expanded large group activities and guest lodging facilities.

## Pomeroy St. Proposal?

jessica teesdale <teamteesdale@me.com>

Sep 23, 2018 11:34 AM

Posted in group: **Planning Board**

When is the planning board meeting for the Pomeroy St. proposal# PL-000058-2018? The Citizen self serve portal is unavailable currently. I have not received any response from the questions I sent regarding this project.

RE: Pomeroy St. Level 1 site alteration and Conditional Use application plan # PL-000058-2018

I received a postcard notification that we are within 500 ft of the proposed site. Chabad of Maine was built as a "single family home" with 16 bedrooms and 14 bathrooms. The Chabad is advertised already online as a Hotel.

This is from the Chabad of Maine website:

[https://www.chabadofmaine.com/templates/articlecco\\_cdo/aid/304355/jewish/Accommodation-Info.htm](https://www.chabadofmaine.com/templates/articlecco_cdo/aid/304355/jewish/Accommodation-Info.htm)

This house is anything but a single family home.

Here are the questions I have:

- 1.What impact will this change have on the traffic and parking in our quiet neighborhood?
2. Will Pomeroy street remain Public access? Can anyone park there?
3. Is the application proposing to change the Zone status? Will this remain zone R-3?
4. will the approval of this application open any doors for zone change in the future?
5. How will this effect property taxes for the surrounding properties?
5. Is Chabad of Maine a business profiting from hotel style accommodations?
6. How large will the assemblies be? What is the maximum capacity for an assembly?
7. Does this effect the value of my home.
- 8.Will paving more of the woods have an environmental impact on the water in our basements?
- 9.When will final decision be made about this?

We live in a quiet residential neighborhood. This is not the ideal location for increased traffic, a hotel, or regular large assemblies. I was against such a large building going in that site back when it was proposed and built against the will of the neighborhood. The neighborhood knows that the Chabad of Maine is a place of Worship, and has been since the building was built. We have nothing against having religious neighbors. We have concerns about the size and scope of the business that is operating out of the "single family" home.

Every neighbor I spoke to so far would sign a petition to limit any changes that would increase traffic, effect property value, and bring business into our quiet pocket neighborhood.

This type of building/business model would be much better suited for Brighton Ave, or even Capisic St.

Thank you for taking the time to listen. Please advise on what steps you think we should take as a neighborhood to organize and get answers to our questions. Should I forward this directly to the planning board?

Jessica Teesdale



## IMPORTANT NOTICE FROM CITY OF PORTLAND PLANNING DIVISION

### IN THE VICINITY OF 11 POMEROY ST

To residents and property owners: Chabad of Maine, has submitted a Level I Site Alteration application and a Conditional Use application for a place of assembly at 11 Pomeroy Street. The applicant is seeking a conditional use review for a place of religious assembly serving over 15 people within the existing single family home. No changes to the existing structure are proposed. The site plan has an increase in impervious surface of 975 sf to accommodate parking for 6 vehicles. The 73,821 sf parcel is in the R-3 zone. The proposal is subject to Portland's conditional use review criteria and site plan standards. In accordance with the Portland Land Use Ordinance, notices of receipt of a Level I Site Alteration application must be sent to property owners located within 500 ft. of the subject property (or 1,000 ft. if the property is located in an Industrial Zone). This application will be reviewed administratively by City Staff. This is the only notice you will receive.

A project and plan summary is available for viewing on the Citizen Self Service Portal (<https://egweb.portlandmaine.gov/energoproduct/selfservice>), by referencing Plan Number PL-000058-2018. Written comments should be submitted to [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov). If you have any questions regarding the proposal, please contact Christian Roadman, Planner, by phone at 207-874-8984 or e-mail at [croadman@portlandmaine.gov](mailto:croadman@portlandmaine.gov)



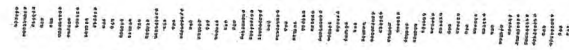




SO. MAINE P&DC 0410  
CITY OF PORTLAND  
PLANNING AND URBAN DEPARTMENT  
389 CONGRESS ST.  
PORTLAND ME 04101



TO: GREEN WILLIAM D VN VET & RUTH L GREEN JTS  
22 ROCKLAND AVE  
PORTLAND ME 04102



Sept. 19, 2018  
Pomeroy St

Sept. 19, 2018  
Pomeroy St



is needed to accurately reflect the increase to more than 15 worshippers at the site, which also offers lodging and summer camps. The home is in an R-3 zone, where places of assembly are allowed as a conditional use.

According to the application, more than 15 worshippers regularly attend services at Chabad of Maine, which is also expanding to two floors totaling 1,000 square feet.

The change of use will also require Chabad to add eight more parking spaces to meet parking standards, according to the application filed by Sevee & Mahar Engineers.

"However, even with the growth in worshippers there is no anticipated increase in impact to the surrounding street system, as attendees are prohibited from bringing a vehicle on days when attendance is at its highest," the application notes.

While Wilansky said relations with immediate neighbors are good, Chabad and its expansion have drawn objections from residents of the Redlon Park subdivision which sits behind the Pomeroy Street property.

Jeff Emerson, who is treasurer of the neighborhood association, said his communications with city officials have reflected his own concerns. What he worries about is the city allowing incremental growth by Chabad that is not consistent with the residential setting.

"Chabad has been engaged in religious services, kosher meals, lodging and summer camps as evidenced by its website," Emerson said in a Sept. 5 email. "None of these activities was specifically permitted by the city. All of these activities are examples of incrementalism."

Wilansky bought the property in 2004, according to the deed, and the home was completed in 2015.

While objecting to allowing the incremental growth, Emerson also said he was concerned because the religious place of assembly designation would make the site tax exempt. It is now valued at \$574,000, according to city records, and taxed at more than \$12,900.

"Which means that, as it grows in size and services, my neighbors and I are paying for it," he said.

David Harry can be reached at 781-3661 ext. 110 or [dharry@theforecaster.net](mailto:dharry@theforecaster.net). Follow him on Twitter: @DavidHarry8.

# the Portland FORECASTER

September 12, 2018

[www.theforecaster.net](http://www.theforecaster.net)

News of The City of Portland



DAVID HARRY / THE FORECASTER

Rabbi Moshe Wilansky of Chabad of Maine is seeking a zoning change to make this home at 11 Pomeroy St. in Portland a religious place of assembly.

## Neighbors wary about religious center's growth

By David Harry

PORTLAND — A single-family home in the Rosemont section of the city could be redesignated as a place of religious assembly.

Chabad of Maine, part of an Orthodox Jewish, Hasidic

movement known for its outreach, is based at 11 Pomeroy St. For nearly a year, it has considered seeking the conditional use change in its neighborhood.

The change will require Planning Board approval.

Rabbi Moshe Wilansky on Sept. 5 said the change will not mean an increase in activities, and said he wants to continue being a good neighbor.

The conditional use change  
*Chabad, Page 2.*



Bill Gilless

723-8619

407-6756

## Chabad of Maine

Jonathan Matt <Jonathan.Matt@rmsmortgage.com>

Sep 10, 2018 2:19 PM

Posted in group: **Planning Board**

Hello,

I live on Redlon Park Rd which is adjacent to the Chabad of Maine facility. I received notification that this facility has applied for a change of use. My response is "... well of course it has!". The permitting of this facility has been a charade from the beginning. No one who researched what "Chabad" is ever believed this was a private home and the change of use application confirms that it was never intended to be a private home. Any fair minded person looking at its website (<https://www.chabadofmaine.com/>) would agree that calling it anything other than a hotel is semantic hairsplitting.

This commercial facility has caused a great deal of stress and anger to the residents that surround it. I feel the city has been cowed by fear of being called anti-Semitic to detriment of this residential neighborhood. Only a mile away is the beautiful new Jewish Community Center which is situated as it should be in a commercial zone.

Please do not approve this change, stand up for the law and the people you serve.

Thank you,

Jonathan Matt



### Jonathan Matt

Data Warehouse Architect  
Residential Mortgage Services, Inc.  
24 Christopher Toppi Drive | South Portland, ME 04106

📞 207-775-6105 x20105

📞 207-808-4105

📞 207-358-2316

Jonathan.Matt@rmsmortgage.com

[www.RSMortgage.com](http://www.RSMortgage.com)

NMLS# 1760; Equal Housing Opportunity



**BEWARE OF WIRE FRAUD:** During your transaction with us, RMS will **NEVER** ask you, via email, text or mobile app to wire or send funds to **ANYONE**, including a title company. **DO NOT COMPLY WITH EMAIL, TEXT OR MOBILE APP BASED INSTRUCTIONS TO WIRE FUNDS!** Contact your RMS representative by telephone instead.

**croadman@portlandmaine.gov, sgo@portlandmaine.gov, gmitchell@portlandmaine.gov, bbatson@portlandmaine.gov, jpj@portlandmaine.gov, jdemerson@northendgroup.com, bab@portlandmaine.gov, jlevine@portlandmaine.gov**

**Douglas Babkirk** <doug.babkirk@maine.edu>

Nov 29, 2018 5:31 PM

Posted in group: **Planning Board**

November 29, 2018

To: City of Portland Planning Board & Staff  
 From: Douglas G. Babkirk, 55 Redlon Park Road, Portland  
 Re: Chabad of Maine request for change of use permit

I am writing to follow up my experience of the November 27<sup>th</sup> Planning Board workshop and to reaffirm my opposition to the request for change of use permit so that the current level of activities at the Chabad House remains intact without further expansion.

As a ten-year resident of Portland living within sight and sound of the Chabad House, I introduced myself and welcomed Rabbi Wilansky when he moved to 11 Pomeroy Street. Moreover, last spring I assisted him in troubleshooting a malfunctioning smoke alarm system when I heard his multiple alarms go off from my yard. We have been good neighbors.

Since the arrival of Chabad House and its sponsored activities I have experienced an increase in outdoor activity and noise level when children and older youth visiting the Chabad House were playing outdoors beyond 9PM on several occasions. I left a voice message on Rabbi Wilansky's phone asking that the play activity be confined to indoors or cease by 9 PM but never received a response.

Since the Chabad House construction, I have noticed an increase in standing water in the woods behind our home and the home of the Krieger family that abuts 11 Pomeroy Street. At the November 27<sup>th</sup> workshop, two individuals claimed that water runoff from the Redlon Park neighborhood was creating the problem, but our neighborhood drainage system built and approved by the City in 1999 directs water south of the Chabad property and not into our woods. The idea of six, additional, impervious surface parking spaces is problematic for increasing the amount of stagnant water from parking runoff and mosquitoes in our woods after a summer rain event.

I have noticed traffic congestion with cars parked on both sides of Bancroft Street and Pomeroy Street during periodic holy day and worship services at 11 Pomeroy Street; this has implications for public safety vehicles and their ability to respond to any crisis.

My specific requests of the Planning Board as you consider the Rabbi's request for change in use:

- Cap indoor worship services to no more than 20 non-resident individuals.
- Limit room and board guests to no more than 6 bedrooms and ensure the building meets all safety and short-term rental codes given the not for profit facility has expanded to more than just a private residence as described on the Chabad of Maine website.
- Ensure parking is restricted to one side of Bancroft and Pomeroy Streets during Chabad events.
- Require any new parking spaces to include improved and effectively maintained storm water runoff management.



- Restrict outdoor activities (youth camp, worship services and recreational activities, building construction) to operate only between 9AM-6PM.
- Develop procedures for the City to monitor any levels of activity at the Chabad House going forward.

At the workshop no one opposing a change of use requested that the current level of Chabad activities be curtailed. They asked that the Planning Board not approve any activity expansion beyond what is in place to maintain the residential nature of the neighborhood.

I found it offensive, shameful and disgraceful that several men including Paul Aronson, a former District Attorney, supporting the Rabbi's request for change of use implied that my neighbor, Jeff Emerson, and anyone else in opposition were anti Semitic. Mr. Aronson then went on to use this anti Semitic argument to caution the City in doing anything less than granting the change of use request. Mr. Emerson is Jewish and clearly articulated his concerns about the incremental and unmonitored nature of expanded activities, (room and board for up to 18 guests; youth camp activities, holy day gatherings involving more than the maximum allowed 15 worshipers), ever since the Chabad House of Maine was built on Pomeroy Street. Mr. Emerson's opposition to any expansion of activities was not formed with any religious bias to the Jewish faith as insinuated by supporters who spoke at the workshop.

I support the Chabad of Maine as a service to the Orthodox Jewish community and request that the Planning Board allow it to continue at its current level of activity and not approve any expansion of activity.

I look forward to the public hearing to discuss this in greater depth and appreciate your due diligence in comprehensively reviewing the Rabbi's request for change of use with its potential impact on the surrounding neighborhood.

## Chabad of Maine (11 Pomeroy Street)

Jeff D. Emerson <jdemerson@northendgroup.com>

Nov 28, 2018 11:38 AM

Posted in group: **Planning Board**

Dear Planning Board Members:

Last evening I testified at the Chabad of Maine (11 Pomeroy Street) (Chabad) Workshop in opposition to the grant of conditional use for expansion of Chabad facilities and activities. It was unfortunate that I was accused, by several speakers, of "fear of the Other" which is code for anti-Semitism. I elected not to state that I am Jewish since that should be irrelevant to my comments. Rabbi Wilansky knows that I am Jewish since, when I visited him at his Chabad on Craigie Street, he invited me to join his congregation to make a minion.

One of the rabbis who spoke last night made the point that there are so few Orthodox Jews in Portland that Rabbi Wilansky regularly has a problem making a minion (10 men). One might reasonably wonder why, if there are so few Orthodox Jews in Portland, Chabad would need a 10,000 square foot facility, much less an expansion of that facility in size, parking spaces, occupancy and activities.

The Chair of the Planning Board stated that the speakers had failed to identify any limits which they wanted on the conditional use permit for Chabad. Actually, I have done so repeatedly, in writing, to the Planning Board. The limits which my neighbors and I seek are these:

- No further increase in the size of Chabad
- No increase in the services which Chabad offers
- A commitment not to purchase other homes in the Chabad neighborhood for the purposes of incorporating them in the Chabad activities
- Honoring the no more than 15 (or 25 if that is approved) non-family members at Chabad at any one-time restriction and policing of that limit by the City of Portland

Chabad has been built and increased incrementally in size and scope of activities. That bell cannot be un-rung. But, as staff pointed out several times last night, if the size and scope of activities of Chabad increases further (beyond that which it seeks in the conditional use permit) the facility will be inappropriate for an R-3 zoned neighborhood.

The Rebbe, Rabbi Menachim Schneerson, of righteous memory, would frequently quote the Maimonidean adage: each person should see himself as though the entire world is in delicate balance and, with but **one deed**, he or she can tip the scales for good.

Let's work together to tip the scales for good.



Jeff D. Emerson

President

NorthEnd Group LLC

18 Redlon Park Road

Portland, ME 04102

Tel: (240) 752-7143

Efax: (207) 221-1159

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## Not if but when

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**KenCapron1** <kcapron1@maine.rr.com>

Nov 27, 2018 5:32 PM

Posted in group: **Planning Board**

Dear sirs,

Watching the discussion of the applicaon b y Chabad to expand 11 Pomeroy Street, my one observaon is tha t they seem to have taken a residenal home and over me added bits and pieces such tha t eventually the queson will come as to when they will make the decision to move to a larger facility in a non-residenal ar ea.

Having run and supported many non-profits, we all have reached that point of decision as to when to move out of the basement and cough up the money for a 'real' place of business.

Whether it is size of staff or need for meeng space, ther e are many things that can act as pping poin ts.

I would like to recommend that this would be a good me t o make such a move to be er accommodate the fluctuang number of patrons. If not this me, then when. Or will we see at some point in the future an effort to change the zoning for that specific property. Slow creep may be effectv e but at some point people will either need to change the zoning or simply say no to expansion.

I would also like to raise the issue of property tax exempon and the advantage of having a residence be idenfied "officially" as a non-profit in order to gain property exempon.

I also heard during the tesmon y that Chabad does occasionally have short term overnight guests – not unlike a BnB.

I hope this helps. All of us non-profits have to make the decision sooner or later to move and grow. Whatever the decision, I wish them well.

Sincerely,

**Kenneth A. Capron**  
**1375 Forest Avenue D-11**  
**Portland, Maine 04103**  
**Phone: 207-797-7891**  
**Email: kcapron1@maine.rr.com**



Virus-free. [www.avg.com](http://www.avg.com)

Judy Richard <judithrichard1@yahoo.com>  
to planningboard@portlandmaine.gov

Oct 6, 2021, 12:09:45 PM (13 days ago)

I am writing in response to the notice I received from the City regarding an application to facilitate site improvements at 11 Pomeroy Street.

I am opposed to the City approving and granting these permits.

This site is located in R-3 Residential Zoning and only residences should be allowed within this zone. This site has grown significantly in the amount of guests on a regular basis and is no longer conducive to residential zoning. The resident(s) had a large gathering earlier in the summer with lots of noise and loud music that was disruptive to the neighbors.

I am a resident in the neighborhood and stopped to chat with another neighbor out walking in the vicinity of Pomeroy Street on Bancroft Street and the amount of traffic that was entering and departing this area is not conducive to a residential area. They guests of 11 Pomeroy were barely stopping and whizzing right by my neighbor and her dog while she was standing on the side of the street (I was in my vehicle). By allowing driveway expansion and additional parking, it will allow for more guests and traffic. I do not wish to see this residence increase the amount of guests they have. This will translate into more traffic and more danger to the neighborhood.

I am not opposed to this staying the same as it is now but I am opposed to it expanding in driveway and parking spaces as well as clarifying as a place of Religious Assembly. This does not comply with current local zoning ordinances. I disagree with Attachment E Section 14.6.1A that states "it will not create or aggravate any significant hazard." It then goes on to state that "the project is in a neighborhood with relatively low traffic." I walk these streets daily and have seen the increase in traffic and do not wish to see a non-residential use in the neighborhood that wishes to be recognized as a place of Religious Assembly or any other non-residential use. Please keep this as a family friendly and safe neighborhood for those who wish to walk and bike without an increase in traffic.

Thank you for allowing me to voice my concerns.

Judy Richard



LRICHARD14@maine.rr.com <LRICHARD14@maine.rr.... Oct 6, 2021, 5:27:42 PM (11 days ago)  
to planningboard@portlandmaine.gov, lrichard14@maine.rr.com

I am writing in response to the postcard notice recently received from the City regarding an application to facilitate site improvements at 11 Pomeroy Street.

I am not in favor to have the city grant any permits.

It was my understanding when this location was constructed a few years back that it was for residential purposes only. The site is located in R-3 Residential Zoning and should stay residential only. As it is, there has been increased traffic to this location in recent months. The residents had a gathering of some sort earlier this summer with lots of noise and music that I could hear from a street away.

I do not wish to see this residence increase the amount of guests they have. That will only translate into more traffic. I am fine with the way it is now, but am opposed to an increase of the driveway and adding parking spaces as well as clarifying this as a place of Religious Assembly. This does not comply with current local zoning ordinances.

I disagree with attachment E Section 14.6.1A that states "it will not create or aggravate any significant hazard". It then states that "the project is in a neighborhood with relatively low traffic". I disagree with that as people are driving through to cut over to Capisic and/or Brighton Ave quite frequently. My family and I walk the neighborhood streets in this area quite often and have seen an increase of traffic and do not wish to see a non-residential use in the neighborhood that wishes to be recognized as a place of religious Assembly or any other non-residential use,

Regards,  
Lisa Richard

# 11 Pomeroy St 0 views



**Judy Gailen** <judy@judygailendesigns.com> Oct 16, 2021, 6:12:46 PM (yesterday)  
to planningboard@portlandmaine.gov

I am writing in response to a couple of postcards we received about the temple on Pomeroy St. I don't understand why you bother to send them. It doesn't seem to matter what anyone says about proposed building in the neighborhood...everything is already decided and whatever neighbors may have to say seems to be moot.

This never was intended to just be a single family home. Before it was even finished (because I belonged once to another temple and somehow got on their list), I received a glossy brochure fundraising for additional building for temple activities (which I have previously shared with you). They built an addition onto the building, and after that we received a card saying they wanted to expand their parking lot, and that no additional building was planned. Of course not...it was already done. And now they have applied for an "after the fact" permit? This is laughable. Everything they want to do will be done. How large is it going to be in the end? My property taxes are going up. Are they, as a religious organization, paying taxes?

To be honest, I don't really care about the temple at this point. It's a done deal. What is bothering me is the way the city approaches all of this. It was really brought into light with the 7-house development down the street. By the time there was a public meeting about that (in the developer's driveway at 4pm in the afternoon, which I and many others could not attend) the whole thing was designed and ready to go and the reps of the city seemed perfectly happy with it. There was no question it would be built, no matter how unhappy people were. So why pretend that what people want for their neighborhood really matters? And forget trying to make sense of the legalize of zoning.

I was never a person who felt it necessary to get embroiled in these matters. But now it just seems that the "planning board" is mostly about planning ways for developers and the city to make more money.

Thanks for listening to my rant, if you've made it this far.

Sincerely,  
Judy Gailen  
68 Bancroft St.

Matt Steege <matt.steege@gmail.com>  
to planningboard@portlandmaine.gov

Oct 20, 2021, 3:40:51 PM (16 hours ago)

PC16

Good afternoon board members,

My name is Matthew Steege and I the homeowner of 28 Benjamin Way, Portland, ME. The purpose of this correspondence is to notify the members of the City of Portland Planning Board of my opposition to the subject property's application (see subject line for reference) for the following reasons:

1. I purchased property in a neighborhood zoned for residential use, and after many discussions with neighboring homeowners, the overwhelming consensus is that we would like it to remain that way. *Note: I have not spoken to anyone who feels differently on this matter.*
2. The Chabad at 11 Pomeroy Street backs up to my lot. Over the last year, I have personally witnessed many gatherings exceeding their approved capacity limits that have taken place both indoors and outdoors. These events include: an outdoor children's summer camp with a large tent shelter, multiple large tables, and outdoor seating; frequent religious ceremonies; and general celebrations. These events were often loud enough that they could be heard from inside my residence from the farthest upstairs bedroom with the doors and windows all closed. I am unaware if permits were issued for these gatherings, and I have not complained to the city in any instance. That said, I have absolutely no interest in these becoming a regular occurrence or growing larger in size increasing in noise disturbance. I believe that approving any increased use of The Chabad will make these minor nuisances more common and more invasive of my personal space and legal property.
3. It is my belief that if the property owners at 11 Pomeroy Street seek to establish a place of religious worship, that they should legally do so in an area zoned for such commercial use. I'm quite certain that if I were to submit an application to turn my property into an auto body shop, the City of Portland would receive numerous complaints and quickly deny my application. The Chabad's application should not be treated differently because it is religious in nature.

I would like to close by saying that I firmly believe our neighborhood is extremely tolerant of religious beliefs and practices, however we are also staunch in our trust that each of us respect the privacy and zoning rights regulated by the city. Based on their history of violating city ordinance and ignoring code enforcements, it is clear that The Chabad at 11 Pomeroy Street feels differently on the latter count, and I respectfully request that The City of Portland Planning Board deny their application.

Thank you for your time,

Matthew Steege

Richard Funnell <[richard.funnell@me.com](mailto:richard.funnell@me.com)>  
to [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov)

Oct 20, 2021, 4:36:36 PM (16 hours ago)

PC17

Hello,

My name is Richard Funnell, and I live at 130 Bancroft St in Rosemont.

I would like to voice my opposition to the application by the owners of 11 Pomeroy Street to operate as a place of assembly.

This neighborhood is safe and quiet for our residents: families, pedestrians, cyclists, and pets, and this change would bring large numbers of non-residents to a street that can ill afford additional cars and traffic.

Bancroft Street is the only way to reach Pomeroy St, and with its lack of sidewalks is susceptible to crowding from the already large gatherings which take place at 11 Pomeroy. Many of these vehicles do not respect street signs or speed limits, which shows a disregard for the safety of current residents of this neighborhood.

As a dog owner, I've noticed the increase in street traffic on my regular walks, and these conditions will only get worse when snow and ice set in. I do not feel comfortable seeing an increase in the number of vehicles on Bancroft St.

Additionally, as a homeowner who has dealt with stormwater and drainage issues stemming from the wetlands that are part of this community, I am very opposed to adding additional impermeable surfaces which can and will affect drainage in our neighborhood. This is an area that needs more green spaces, not additional parking lots.

The fact that this application is being requested "after the fact" shows a disregard for the codes and regulations which the City of Portland already has in place, and does not signal future intent to follow the rules which all residents must abide by.

I would hope that the city considers a history of past violations and no longer allows these and future violations to occur.

I would respectfully ask that this application for a place of assembly at 11 Pomeroy Street be denied.

Thank you for your time and consideration.

Richard Funnell  
130 Bancroft St  
Portland ME 04102  
[714-625-1222](tel:714-625-1222)

Heather Shields <hshields@legacysir.com>

10:49 AM (3 minutes ago)

PC18

to planningboard@portlandmaine.gov

Dear Planning Board Members,

My name is Heather Shields. I am a resident and homeowner at 20 Benjamin Way — my home sits right behind 11 Pomeroy Street. Their backyard borders ours.

Please accept this email in strong opposition to the application for 11 Pomeroy Street to operate a place of assembly (Application PL-000058-2018 / Plan Number CU-001763-202). Our neighborhood is a residential neighborhood. Our streets and our neighborhood cannot support this change of use as well as the increased traffic and noise that ensue.

Furthermore, the Chabad at 11 Pomeroy Street is already in violation of City of Portland Code of Ordinances by operating illegal Short Term Rental Units, and operating an unlicensed commercial kitchen on premise and has yet to rectify these violations. With the Chabad already violating these ordinances, we as neighbors are subject to countless large outdoor gatherings, a summer camp and numerous out of state short term visitors. These visitors rarely obey the traffic signs or respect the fact that this is a residential neighborhood.

In discussion with many of our neighbors, I believe that I am not alone in opposing this change. We respectfully request that you deny the application for the place of assembly at 11 Pomeroy Street and associated applications, and direct the owners to address their outstanding code violations.

Thank you.

Heather Shields  
20 Benjamin Way  
Portland



Jeff D. Emerson <jdemerson@northendgroup.com>  
to planningboard@portlandmaine.gov

8:14 AM (3 hours ago)

PC19

In advance of your workshop on October 26 please read the attached.

Jeff D. Emerson

President

NorthEnd Group LLC

18 Redlon Park Road

Portland, ME 04102

Tel: (240) 752-7143

Efax: (207) 221-1159

**Jeff D. Emerson**  
18 Redlon Park Road  
Portland, ME 04102

Christine Grimando  
Department Director  
Planning and Urban Development Department  
City of Portland  
389 Congress Street 4<sup>th</sup> Floor  
Portland, Maine 04101

October 5, 2021

Re: Chabad Lubavitch of Maine  
Change of Use and Minor Site Plan Applications

Dear Ms. Grimando,

The neighbors of Chabad Lubavitch of Maine (Chabad) received a Notice that Chabad has applied for an "after the fact" Conditional Use Permit for its operations at 11 Pomeroy Street. Setting aside that an "after the fact" application is an oxymoron, as a neighbor of Chabad, I oppose any permit to continue, much less expand, its violations of City of Portland regulations.

By her letter dated August 4, 2020 Anne Torregrossa, Associate Counsel for the City, detailed the violations by Chabad of the City of Portland Code of Ordinances. None of those violations would be cured by granting an "after the fact" permit to Chabad. Such a grant would merely institutionalize the violations and permit Chabad to expand its operations which it has done since its original construction. The amount of traffic and noise created by Chabad, including but not limited to Jewish holidays, is significant and a disruption to the quiet enjoyment of the neighborhood by its neighbors.

Since 2018 I have been clear with the City and its Planning Board that the limits on Chabad which my neighbors and I seek are these:

- No further increase in the size of Chabad
- No increase in the services which Chabad offers
- A commitment not to purchase other homes in the Chabad neighborhood for the purposes of incorporating them into the Chabad activities
- Honoring the no more than 15 non-family members at Chabad at any one-time restriction originally imposed by the City and policing of that limit by the City of Portland

Chabad has been built and increased incrementally in its size and the scope of activities over the years. That bell cannot be un-rung. But, as the Planning Commission pointed out (in 2018), if the size and scope of activities of Chabad increases further (beyond that which it seeks in the conditional use permit) the facility will be inappropriate for an R-3 zoned neighborhood.

Arguably, Chabad already is inappropriate for a residential neighborhood.

Sincerely,



To the Planning Board,

*My name is Sarah Delisle and I am a resident and homeowner at 32 Benjamin way, previous to Benjamin way I lived on Bancroft Street for over 10 years. We have seen this residence violate residential Zoning since the erection of the building. They have a website for people to pay and stay, events with hundreds of people and have been in violation with the city for over a year. I have seen the city be Strick in all other areas of housing and I am still baffled as to how this has continued.*

*I'm writing to oppose the Applications under review for 11 Pomeroy Street to operate a place of assembly, Application PL-000058-2018 / Plan Number CU-001763-2021. My reasons for opposing the changes include the following:*

- We purchased property in a neighborhood zoned for residential use only, and expected as such only residential neighbors. We are not interested in changing the character of the neighborhood by increasing traffic due to the proposed place of assembly.*
- The Chabad at 11 Pomeroy Street is already in violation of City of Portland Code of Ordinances by operating illegal Short Term Rental Units, and operating an unlicensed commercial kitchen on premise and has yet to rectify these violations.*
- An official place of assembly designation would increase traffic on Bancroft Street and result in more street parking making driving more dangerous in the neighborhood. We bought in a neighborhood to avoid this.*

*In discussion with many of our neighbors, I am not alone in opposing this change. We respectfully request that you deny the application for the place of assembly at 11 Pomeroy Street and associated applications, and direct the owners to address their outstanding code violations.*

*Thank you.*

*Sarah & Jon Delisle  
32 benjamin way*

Richie Garcia <rich62684@gmail.com>

2:34 PM (1 hour ago)

to planningboard@portlandmaine.gov

To the Portland Planning Board,

My name is Joseph Garcia, a homeowner and resident near 11 Pomeroy Street.

I am opposed to the applications under review for 11 Pomeroy Street to operate a place of assembly (Application PL-000058-2018 / Plan Number CU-001763-2021).

My reasons for opposing the changes include the following:

- We prefer to live in a "residential-use only" area of town and would like to retain the charm and character of our neighborhood.

- It is my understanding that 11 Pomeroy street is already in violation of many ordinances including operating an unlicensed commercial kitchen and the use of illegal short-term rental units.

- Increasing traffic on Bancroft street would make walking in the neighborhood more dangerous. There are also no sidewalks on Bancroft St, so pedestrians must use the road.

I have discussed this with some of my neighbors and I am not alone in my opposition to their application. I request that the board deny the applications for 11 Pomeroy Street and direct the owners to rectify their current violations.

Thank you for your consideration,

Joseph Richard Garcia  
21 Benjamin Way, Portland, ME 04102

Lee Lindenau <leelindenau@gmail.com>  
to planningboard@portlandmaine.gov

Oct 21, 2021, 8:23:32 PM (12 hours ago)

PC22

Dear Planning Board Members,

My name is Lee Lindenau and I am a resident and homeowner at 20 Benjamin Way. My home sits right behind 11 Pomeroy Street and we share bordering backyards.

I am strongly in opposition to the application by the occupants of 11 Pomeroy Street to expand the capacity as a place of assembly (Application PL-000058-2018 / Plan Number CU-001763-2021). To my knowledge they are already in violation of City of Portland Code of Ordinances by operating illegal Short Term Rental Units and operating an unlicensed commercial kitchen on site. The increased traffic and noise will most certainly go from being a nuisance to a real problem for many of my neighbors. Over the last year, I have personally witnessed many gatherings exceeding their approved capacity limits that have taken place both indoors and outdoors. These events include: an outdoor children's summer camp with a large tent shelter, multiple large tables, and outdoor seating; frequent religious ceremonies; and general celebrations. These events were often loud enough that they could be heard from inside my residence from the farthest upstairs bedroom with the doors and windows all closed. I am unaware if permits were issued for these gatherings, and I have not complained to the city in any instance. Many of us in the neighborhood have witnessed both in and out of state short term visitors who rarely obey traffic signs or speed limits on our streets.

I have absolutely no interest in these events becoming a more regular occurrence or growing larger in size leading to more frequent noise disturbances. I believe that approving any expansion and associated increased use of the Chabad will make these minor nuisances more common and more invasive of my personal space and legal property.

I would like to point out that our neighborhood, while extremely tolerant of religious beliefs, are also united in our expectation that all of us respect the privacy and zoning rights of a residential neighborhood properly regulated by the city of Portland. Based on their history of violating past ordinances and ignoring code enforcements, it is clear that the Chabad at 11 Pomeroy Street does not share the same view of what it means to own in a residential neighborhood. I respectfully request the City of Portland deny the Chabad's application.

Thank you.

Lee Lindenau  
20 Benjamin Way  
Portland



Ali Goldstein <alison.goldstein@gmail.com>

10:01 AM (27 minutes ago)

to planningboard@portlandmaine.gov, Daniel Norup

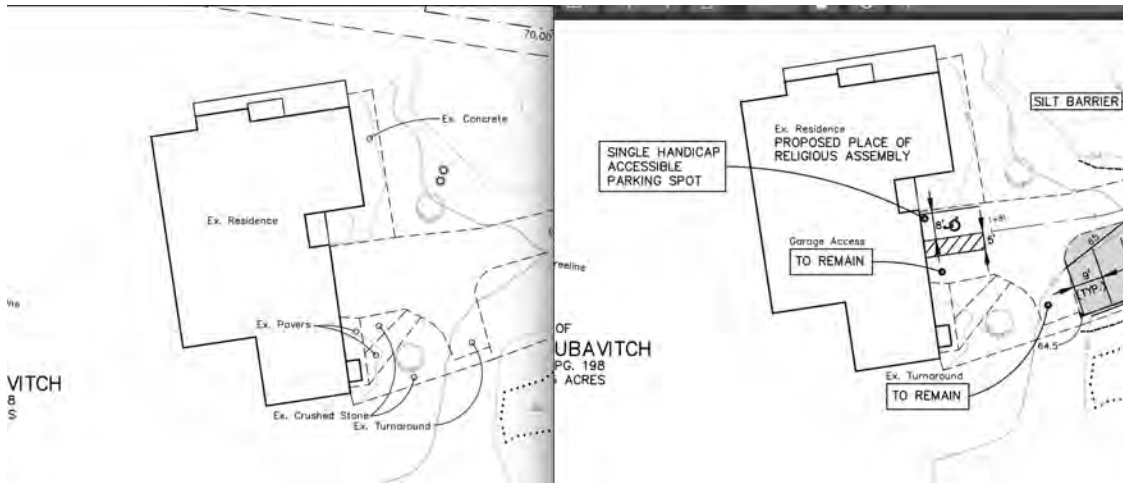
*Subject: 11 Pomeroy Street Application PL-000058-2018 / Plan Number CU-001763-2021*

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*To the Planning Board,*

*Our names are Daniel and Alison Norup, and we are residents and homeowners at 14 Benjamin Way - direct neighbors and within the immediate vicinity of 11 Pomeroy Street.*

*We write to oppose the Applications under review for 11 Pomeroy Street to operate a place of assembly, Application PL-000058-2018 / Plan Number CU-001763-2021. This is a distinct change of use as seen below:*



*Our reasons for opposing the changes include the following:*

- **Change of Use:** We purchased property in a neighborhood zoned for residential use only. In that purchase, we expected as such only residential neighbors and pulled the original permitting for the Chabbaad to confirm that. We are not interested in changing the residential nature of the neighborhood.
- **Preserving a Residential Neighborhood:** An official place of assembly designation would increase traffic in the area even more than what we have seen since purchasing on July 27, 2020, especially on Bancroft Street. We already witnessed an uptick in traffic since The Chabbaad at 11 Pomeroy Street's "after the fact" Conditional Use Permit for Short Term Rental Units was approved on January 27, 2021. The increased traffic deters and makes it less safe for residents to walk as families, with their dogs, and with their children as well as cyclist to bike in the neighborhood.

*In discussion with many of our neighbors, we believe that we are not alone in opposing this change. We respectfully request that you deny the application for the place of assembly at 11 Pomeroy Street and associated applications.*

*Thank you.*

*Daniel and Alison Norup  
14 Benjamin Way  
Portland, ME 04102*

Douglas Dempsey <douglas.dempsey@gmail.com>  
to planningboard@portlandmaine.gov, Laurel McCosham

10:04 AM (25 minutes ago)

Good Day,

Please see the attached document which serves as our comments regarding the after-the-fact conditional use permit application for 11 Pomeroy Street (CU-001763-2021).

Thank you for your time.

Sincerely,

Douglas Dempsey & Laurel McCosham

Douglas Dempsey & Laurel McCosham  
25 Benjamin Way  
Portland, ME 04102

October 22, 2021

Planning Board  
City of Portland  
389 Congress Street  
Portland, ME 04101

**Re: Conditional Use Application, 11 Pomeroy Street  
Place of Assembly CU and Minor SP  
CU-001763-2021**

Dear Planning Board Members,

As the homeowners of 25 Benjamin Way here in Portland, ME, we wish to register our opposition to the above noted application on the following grounds:

Our neighborhood is residential. It is why we and our neighbors chose to live here. We feel that maintaining it as residential will ensure our community retains the qualities that drew us here.

We have observed that the property at 11 Pomeroy Street is not a single-family residence. We understand that under local zoning ordinances, an R-3 neighborhood such as ours is characterized by single-family homes on individual lots. In no way can the property accurately be described as a single-family dwelling.

The non-residential character of 11 Pomeroy Street has revealed itself on a number of occasions. Several very large gatherings and organized religious events have frequently been held, especially in the summer months. While we respect the right of anyone to practise their faith, many of these events were large and loud enough to easily be heard from our home across the street. The application to operate a place of assembly only stands to increase the volume and frequency of these gatherings. It will also further diminish our neighborhood's residential character. We respectfully suggest that such gatherings would be more appropriately held in a non-residential or mixed-use area of the city.

We trust you will consider our concerns and those of our neighbors who share our perspective. We care deeply about preserving this neighborhood as a quiet, residential space where privacy is respected. We hope you will look carefully at the non-residential uses of 11 Pomeroy Street and the suitability of their application to this residential neighborhood. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, reading "Douglas R. Dempsey & Laurel McCosham". The signature is written in a cursive, flowing style.

Douglas Dempsey & Laurel McCosham

Emily Raisch <emily.raisch@gmail.com>  
to planningboard@portlandmaine.gov, jdealaman

10:16 AM (14 minutes ago)

PC25

To the Planning Board,

My name is Emily Raisch and I'm a homeowner at 130 Bancroft Street. I'm writing in opposition to the application at 11 Pomeroy Street Application PL-000058-2018 / Plan Number CU-001763-2021 for the following reasons:

1. We purchased our property in a neighborhood zoned for residential use, and my feeling, as well as the sentiment expressed by all of the neighbors to whom I have spoken, is that we want it to remain residential. Any place of assembly should be built/established in a more appropriately zoned area.
2. The application proposes to convert a section of the property to a place of assembly. This would increase the amount of traffic coming down Bancroft Street and the number of vehicles parked on Bancroft and Pomeroy Street. We already see large numbers of vehicles parked on both streets around religious services and holidays, and more cars passing through on the days surrounding those days. More traffic and parked cars makes it more difficult and dangerous for pedestrians. We have many families with young children who play in yards in the area, as well as dogs and recreational walkers. Most importantly, Bancroft and Pomeroy Street both lack sidewalks as alternatives for pedestrians to use when the street is full of cars. In short, this is a residential neighborhood ill equipped to safely handle both the increase in traffic that would result from additional services and the additional parking needs generated when congregants park for extended periods of time during holidays.
3. The property owners at 11 Pomeroy Street have already been documented by the city as being in violation of a number of city ordinances, including operating Short Term Rentals without a permit and operating an unlicensed commercial kitchen. To me, this makes me concerned that they will not respect additional codes and ordinances in the future, which makes me especially wary of expanding their presence.
4. The Chabad already regularly hosts large gatherings which are audible from my property. I assume that approval of this application would further increase the frequency and size of these gatherings, compounding my concerns above.

It is my firm belief that religious organizations should be held to the same code that commercial organizations and private citizens are subject to, and I would hope that this application is reviewed accordingly. Thank you for your time!

Colin Wilke <wilke.colin@gmail.com>  
to planningboard@portlandmaine.gov

10:16 AM (6 hours ago)

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Good Morning Planning Board,

I would like to submit questions and comment on the after-the-fact Conditional Use permit application, CU-001763-2021. If this needs to be revised or sent to a different party, please let me know and I'll be happy to do so!

### Questions

1. If the CU permit is granted, what is the new upper limit on people assembling?
2. What enforcement mechanisms are in place for existing issues (noise, parking, current attendance (<15), hours of operation, light) and future compliance (>15).
3. Is there awareness that the property was purchased and operated intentionally for years in breach of numerous zoning regulations (parking, unregistered short-term renting pre-2020, assembly) that all other surrounding properties are required to follow, and is there consideration for the precedent that granting this CU permit would set?
4. Is the "No Parking" sign that currently stands on the applicant's streetside basketball court a private sign or required by the Portland Fire Department? If the latter, who enforces it?
5. In Attachment G. Design and Operation, is the sentence "No signage is proposed, outside of the "No Parking" signs as required by the City Fire Department" referring to a new restriction on parking on the north side of Pomeroy Street? If so, what entity will be enforcing that and will that change be implemented regardless of permit outcome considering the *current* both-sides parking on Pomeroy creates a safety issue that PFD and applicant have documented in this application?

### Comment

This past April, my wife and I moved to 88 Bancroft St, directly across Pomeroy Street from the applicant. While we adore meeting our neighbors (including their pets!), taking advantage of the beautiful parks and local cafes, and spending time in our yard, we have run into one unexpected, constant, and very unfortunate challenge we do not have any control over. The traffic, parking, noise, and light generated from the 11 Pomeroy; a significant and frustrating issue that impacts every household around it.

In our short time living here, some (certainly not all) of the disruptions we experience include:

1. 35+ vehicles parked at the property, filling Pomeroy Street and spilling out onto Bancroft Street (6/17/21, Portland Police responded)
2. A charter bus parked on Pomeroy Street (730p) in the evening with dozens of high school children who were allowed unsupervised to be yelling and playing in the street for hours (6/29/21, Portland Police responded)
3. Three 20-ft tall high intensity driveway lights that do not have shielding (which would appropriately block illumination from spilling to neighboring properties like ours), often left on well past midnight multiple nights per week
4. Disruptive horn playing for over an hour (8/15/21, stopped after we called twice to ask them)
5. Regular parking by visitors all along Pomeroy street, often blocking access to the back of our property (weekly)
6. Loud, unchaperoned non-resident summer campers in the street - a safety risk for the kids (multiple evenings in June)

These directly conflict with some of the claims made in the CU applications, notably:

1. No anticipated increase in impact to the surrounding street system as attendees are prohibited from bringing vehicles on days when attendance is at its highest (Site Plan App, 20180813)
2. Chabad of Maine's hours of operation are not out of keeping with those of surrounding uses (Site Plan App, 20180813)
3. Per discussions with PFD (Portland Fire Department), on street parking is proposed to be excluded for the opposite (North) side of Pomeroy Street to allow a fire truck sweep into the driveway (Attachment F)

Finally, I am concerned that this application uses nonspecific language ("no increase...is anticipated" - Site Plan App 20180813, "nor does it project any increased use" - A. Cover Letter [2021]) when referring to future expansion or



use. Considering current conditions and the applicant's past actions ignoring zoning and code requirements, this subjective assertion does not carry weight.

None of these would be insurmountable problems if the applicant made even a cursory effort to reach out to the neighbors in advance, build relationships, solicit concerns and come up with solutions. In fact, this would be welcomed! However, I am unaware of any outreach or attempts to proactively solve these clear, long-term (2015-present) issues, which implicitly removes any semblance of choice or agency from those of us who live around this place of business.

In light of this consistent, documented behavior, we ask that you help all of the residents of our neighborhood regain control of our homes by not granting the CU permit and enforcing existing zoning and code requirements.

Thank you for your time and consideration, and if you have questions or would like additional clarification or documentation please do not hesitate to reach out.

Best,  
Colin Wilke & Kate Allen

**From:** Jeff D. Emerson <[jdemerson@northendgroup.com](mailto:jdemerson@northendgroup.com)>

**Sent:** Thursday, October 28, 2021 4:43 PM

**To:** Brandon J. Mazer <[bmazer@perkinsthompson.com](mailto:bmazer@perkinsthompson.com)>

**Subject:** Chabad Lubavitch of Maine

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7

In all of the Planning Board Workshops and Hearings about Chabad Lubavitch of Maine (Chabad) which I have attended, including the one Tuesday night, speakers in favor of Chabad expansion have cited the small Orthodox Jewish population in Portland. When I visited with Rabbi Wilansky he confirmed this when he asked me to join his congregation to make a minyan (in Judaism, the minimum number of males (10) required to constitute a representative "community of Israel" for liturgical purposes). So the Planning Board should ask itself: if the number of Orthodox Jews in Portland is so small that even the supporters of Chabad admit that the Rabbi's congregation cannot make a minyan, then why does Chabad need to be 10,000 square feet? One answer suggested by several speakers is that the Rabbi and his wife have a large family. That is true. But then they should have no problem restricting the number of non-family members at Chabad at any one time to 15 or fewer; this is a restriction which the City of Portland imposed on Chabad years ago but which the City has never enforced.

The City has failed to enforce its limitation of 15 non-family members at Chabad at any one time; the violations of City code which Anne Torregrossa cited in her August 4, 2020 cease and desist letter to Chabad; and the City has failed to curtail the incremental increases in Chabad's size and scope of services since it moved to Pomeroy Street. The neighbors of Chabad think that it is time to curtail the inappropriate activities of Chabad and to ensure that it conforms to City code.



Jeff D. Emerson  
President  
NorthEnd Group LLC  
18 Redlon Park Road  
Portland, ME 04102

Judy Richard <judithrichard1@yahoo.com>  
to planningboard@portlandmaine.gov

Oct 28, 2021, 3:57:19 PM (3 days ago)

The Tuesday evening meeting (10/26/21) regarding the above-mentioned property was a great opportunity for the City of Portland to hear the concerns of the neighborhood regarding the use of this property. There were several valid concerns from the neighborhood in opposition to this after the fact conditional use permit application. There was some support of the project but all from people that had an interest in the project or were tied to it or the family. Note that I did not hear one neighbor in close proximity to the property in support of it as is very important because there are A LOT of abutters to the property.

The meeting also brought up more questions which we hope the City is looking into. I was not in the neighborhood at the time the property was built but I am wondering how this got approved in the first place. How does a single family home with 900 sq ft of assembly space get approval in a R-3 zone? How can the City even consider a permit application when the subject property is not currently in compliance with City codes? How has this not been enforced and allowed to go on this long without remediation? I looked up the property on the Assessor's site and it shows a 12-bedroom home. That just supports the research spoken of at the meeting that the Chabad is renting out rooms. Is this permissible in a R-3 zone? I would think that would have to be zoned the same as other hotel properties in the City, would it not? It also noted on the Assessor's site that the legal use needed to be verified with the inspections division. Has this been done? What was the outcome of that?

When I asked what qualifies for a place of assembly, the City stated that if there are less than 15 people, it doesn't qualify for a place of assembly. The attorney for the Chabad, Mr. Tinkle, stated that there would be 3 weeks of summer camps and larger gatherings of 25-35 people approximately 8 times a year. That exceeds, by far, the limit set by the City defining a place of assembly as less than 15 people. A place of assembly is not conducive to R-3 zoning in a residential neighborhood.

Also brought up was the maximum occupancy allowance - what is the maximum occupancy allowance for 900 sf of worship space in a single family home?

I think further thought needs to be given to the past violations and why were they ignored/not remedied at the time of notification? Are they willing to remedy them now because they need City approval for their after the fact conditional use permit application?

I also feel that the applicants have been misleading with their past representation and future intent of the use of the property. The Chabad has significantly increased the traffic and noise in the neighborhood. They qualified it similar to book clubs and poker games which is a gross misrepresentation. They have vans at the property for transportation as well as numerous vehicles in and out of the site. If they state that it's the size of a book club or poker game, that would be < 15 people so they would not need to be applying for an after the fact conditional use permit to facilitate the operation of a place of assembly. There were several inconsistencies in their representation which makes it disingenuous.

I urge you to reject the conditional use permit application. It is not right for a residential neighborhood.

Thank you.

Judy Richard  
31 Benjamin Way

Judy Gailen <judy@judygailendesigns.com>  
to planningboard@portlandmaine.gov

Apr 2, 2022, 11:24:18 PM (5 days ago)

Hello,

Since we have recently received yet another postcard concerning the Chabad House expansion, I feel compelled to write...again. I am unable to attend the April 12th meeting online.

I'm writing even though I swore after the last time I wouldn't, because it seemed like an exercise in futility. However, this one is beyond understanding. In the previous postcard we received, they were asking to expand their parking lot, and it said no new construction was planned. Of course...because they had already spent the whole summer building an addition onto the house, which of course we heard nothing about, only witnessed.

Now they are asking for an "after the fact" conditional use permit? Is that even a thing? It is a sneaky way to get what they want. THIS WAS NEVER MEANT TO BE JUST A SINGLE FAMILY HOME! I don't know why you keep calling it that. It was always meant to be a synagogue, and anyone who has ever known them knows that. They can call it Chabad House, but it is meant to be more than a house.

I previously sent you a scan of the glossy brochure I received before they had even finished building the original house asking to raise about a million and a half dollars for their "campus", with a list of all the things your donation would be going towards. That doesn't sound like a single family home to me. (I am enclosing it here again, just in case you missed it). I fear that they will incrementally expand until they have filled their 73,281 sq. feet and then what? The Chabad in other places are known for buying up homes in a neighborhood to expand their campus...will they be allowed to do this here as well? It appears that they have violations already on the books that they have ignored, But they should be given this "after the fact" permit? It appears then they will have to enlarge the parking lot as well, correct? I tried looking up the Plan # on your site, but it didn't say anything about what they are actually doing...very confusing for non-developers.

I am sure every step of this has been planned.

Do they pay taxes, or are they exempt as a religious organization? Are we paying their taxes, as well?

Does this mean that we can build a little house on our double lot and THEN ask for the permits to have it there? That never occurred to me! I always thought you had to get the permits before you build, and follow the rules. But then again, I can't make any sense out of the zoning rules...it's all legal gobbledygook.

We are among the many in this neighborhood who are opposed to this expansion, and wish that to go on the record. It is not appropriate for this neighborhood.

Thank you,  
Judy Gailen  
Michael Trautman  
68 Bancroft St  
Portland.





Chabad Lubavitch of Maine is celebrating 28 years of serving the Jewish communities of Maine with dedication and pride. Our programs, some of which are highlighted in this publication, are at the forefront of Jewish culture and learning. From educational programs to social services and everything in between, all of our activities are a reflection of our commitment to strengthen Judaism and Jewish families in Maine. We are an open and welcoming community. Our success in this mission is a direct result of your generosity, encouragement and participation.

As we look toward the future of Jewish life in Maine, we have recognized the need to expand our facilities in order to better serve the escalating needs of a growing population. We have nearly completed construction on a 2.2 acre property in Brighton Corner, a few blocks away from Stevens Avenue. The physical edifice is completed on a three story facility with a sanctuary and study hall, classrooms, hospitality suites, office space, activity rooms, a sukkah plaza and a full service kitchen and dining room. This Chabad House is set on a beautiful property surrounded by woods just off Bancroft Street.

This will be a new Center for Jewish Life in Maine. We are in the midst of applying for grants and donations to realize the fulfillment of this reality. This publication serves as a summary of our plan for the completed facility. We hope that you will consider supporting this important and exciting project by significantly contributing to our Building Campaign Fund. More importantly, we hope to see you and your family enjoying the warmth and beauty of Jewish life by participating in some of our enriching programs. We reach out to you as full time and also summer residents of Maine, visitors to Maine, and proactive Jewish community leaders who seek to strengthen and enrich Jewish communal life. By investing in the growth of Jewish life in Maine today, we are assured a strong foundation for tomorrow.

With warm wishes to you and your family,

Rabbi Moshe and Chana Wilansky



Let's Complete  
our dream  
Together

Dear Rabbi,

Please accept our small gift as a token of appreciation for an amazing work that you do and for helping us so many times. May you, your family and congregation have a joyous and healthy year.

— JS



Dear Rabbi Wilansky,

Thank you for volunteering your time to make candles with us. We liked using different waxes this year. The beeswax felt cool and smelled good. We used our candles in our menorahs and they burned beautifully.

Happy Chanukah!

Levey Day School  
Portland Maine



Dear Rabbi Wilansky,

Thank you for your time and dedication to our community here at the Cedars. We truly appreciate your presence with your family during Chanukah and all the Jewish holidays.

Cedars Housing Home

## FEATURES

Imagine a place where Jews from all walks of life can come together and experience the joy of their heritage; where we can bask in the warmth of community life and share joyous occasions; where the environment is as welcoming as your own home, and the friendships formed last forever; where each person can learn, and grow as one chooses; where we can discover together what makes us unique and transmit this uniqueness to our children.

- 2,500 square feet of community space
- A large Social Hall that can accommodate community celebrations
- Meeting rooms for lectures, seminars and community gatherings
- Private study/library for individual and group learning
- Classrooms for adult education classes
- 500-square-foot space to house our extensive children's programs
- Kosher kitchen and Passover kitchen
- Administrative offices
- State of the Art Playground
- Sukkah Plaza

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|                                               |           |                                               |          |                                                 |             |                                                 |             |
|-----------------------------------------------|-----------|-----------------------------------------------|----------|-------------------------------------------------|-------------|-------------------------------------------------|-------------|
| <input type="checkbox"/> Campus Dedication    | \$300,000 | <input type="checkbox"/> Sefer Torah          | \$36,000 | <input type="checkbox"/> Holy Ark               | \$18,000    | <input type="checkbox"/> Offices                | ea. \$5,000 |
| <input type="checkbox"/> Building Dedication  | \$250,000 | <input type="checkbox"/> Computer Lab         | \$36,000 | <input type="checkbox"/> Lobby Furniture        | \$12,000    | <input type="checkbox"/> Builder Sponsor        | \$3,600     |
| <input type="checkbox"/> Sanctuary            | \$100,000 | <input type="checkbox"/> Hospitality Room (2) | \$25,000 | <input type="checkbox"/> Study Furnishings      | \$10,000    | <input type="checkbox"/> Sanctuary Seating      | \$3,600     |
| <input type="checkbox"/> Library              | \$100,000 | <input type="checkbox"/> Playground           | \$25,000 | <input type="checkbox"/> Laver-Sanctuary        | \$10,000    | <input type="checkbox"/> Front Entrance Mezuzah | \$1,800     |
| <input type="checkbox"/> Main Entrance        | \$75,000  | <input type="checkbox"/> Passover Kitchen     | \$20,000 | <input type="checkbox"/> Yahrzeit Board         | \$10,000    | <input type="checkbox"/> Prayer Book Cabinet    | \$1,800     |
| <input type="checkbox"/> Social Hall          | \$72,000  | <input type="checkbox"/> Coat Room            | \$18,000 | <input type="checkbox"/> Founder Sponsor        | \$7,200     | <input type="checkbox"/> Sponsor                | ea. \$1,800 |
| <input type="checkbox"/> Kosher Kitchen       | \$50,000  | <input type="checkbox"/> Platforms (Bimah)    | \$18,000 | <input type="checkbox"/> Ner Tamid (Lamp)       | \$5,000     | <input type="checkbox"/> Supporter Sponsor      | ea. \$1,000 |
| <input type="checkbox"/> Hospitality Suite    | \$50,000  | <input type="checkbox"/> Landscaping          | \$18,000 | <input type="checkbox"/> Tallis Rack            | \$5,000     | <input type="checkbox"/> Tree of Life Leaf      | ea. \$360   |
| <input type="checkbox"/> Rabbi's Study        | \$50,000  | <input type="checkbox"/> Classroom            | \$18,000 | <input type="checkbox"/> Chazan's Lectern       | \$5,000     | <input type="checkbox"/> Memorial Plaque        | \$360       |
| <input type="checkbox"/> Tree of Life Display | \$36,000  | <input type="checkbox"/> Camp/Game Room       | \$18,000 | <input type="checkbox"/> Office Furnishings (4) | ea. \$5,000 | <input type="checkbox"/> Mezuzahs               | ea. \$250   |

✓ **Yes**, I am pleased to sponsor the above dedication (please select option(s) from above) in honor of: \_\_\_\_\_

I hereby pledge to pay a total of \$\_\_\_\_\_ (please select payment option:) ☐ in Full or ☐ in \_\_\_\_\_ installments over \_\_\_\_\_ months/years.  
(Maximum of 5 years for dedications over \$10,000; 3 years for dedications over \$3,600; 1 year for all other dedications)

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Tel: (\_\_\_\_) \_\_\_\_\_ E-mail: \_\_\_\_\_

Credit Card #: \_\_\_\_\_ Exp Date: \_\_\_\_/\_\_\_\_ Security Code: \_\_\_\_\_

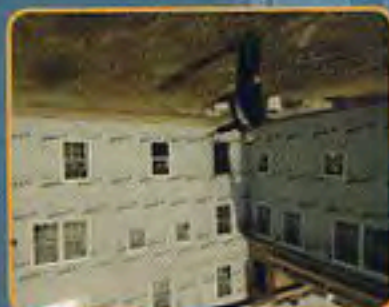
Billing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Amount: \$\_\_\_\_\_ Other Donation Your Choice: \$\_\_\_\_\_ Signature: \_\_\_\_\_

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Please complete and detach this form and mail it to the address on the reverse.

**Chabad House Lubavitch of Maine**  
Address: 101 Craigie Street, Portland, ME 04102  
T: 207.871.8947 E: 760.875.8947  
E: rabbi@chabadofmaine.com W: Chabadofmaine.com



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# 11 Pomeroy Street - Application PL-000058-2018 | Plan Number CU-001763-2021

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Richard Funnell <richard.funnell@me.com> Apr 8, 2022, 11:22:50 AM (2 days ago)

to planningboard@portlandmaine.gov

Hello,

I would like to follow up in regards to the application at 11 Pomeroy Street, specifically about the site plan application.

I live at 130 Bancroft St, in immediate vicinity to 11 Pomeroy St. In the attached photos, you can see the existing issues with drainage in this neighborhood. I took these pictures from my back yard, and 11 Pomeroy is clearly visible in the background. One photo was taken in January, and the other was taken today (April 8th).

As you can see, we have problems with runoff water in our yard, and adding more impermeable surfaces will only aggravate the situation. As a concerned homeowner, I have planted additional trees and shrubs, and will continue to do so in order to attempt to help the drainage situation. I have replaced all of our gutters to better catch and manage our water, and still deal with a wet lawn on a regular basis. I strongly urge you to deny the application at 11 Pomeroy St, since it will only create a worse situation for drainage in our neighborhood.

I've already voiced my opposition to the application to the application for a place of assembly, and continue to be against this request as well. Please consider the opinions of our neighborhood's residents when reviewing these applications.

Thank you,  
Richard Funnell

130 Bancroft St  
Portland ME 04012











Douglas Dempsey & Laurel McCosham  
25 Benjamin Way  
Portland, ME 04102

April 8, 2022

Planning Board  
City of Portland  
389 Congress Street  
Portland, ME 04101

**Re: After-the-Fact Conditional Use Application, 11 Pomeroy Street  
Place of Assembly CU and Minor SP  
CU-001763-2021**

Dear Planning Board Members,

As the homeowners of 25 Benjamin Way here in Portland, ME, we wish to register our opposition to the above noted application based on the following:

Our neighborhood is residential. It is why we and our neighbors chose to live here. We feel that maintaining it as residential will ensure our community retains the qualities that drew us here.

We have observed that the property at 11 Pomeroy Street is not a single-family residence. We understand that under local zoning ordinances, an R-3 neighborhood such as ours is characterized by single-family homes on individual lots. The structure on this property is markedly larger than any other home in our neighborhood with a large parking lot equipped with floodlights. In no way can it be accurately be described as a single-family dwelling. This would become immediately clear after a simple site visit or city inspection.

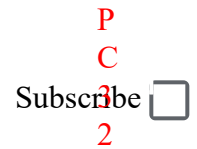
The non-residential character of 11 Pomeroy Street has revealed itself on a number of occasions. Several very large gatherings and organized religious events have frequently been held, especially in the summer months. While we respect the right of anyone to practise their faith, many of these events were large and loud enough to easily be heard from our home across the street. The application to operate a place of assembly only stands to increase the volume and frequency of these gatherings. It will also further diminish our neighborhood's residential character. We respectfully suggest that such gatherings would be more appropriately held in a non-residential or mixed-use area of the city.

We trust you will consider our concerns and those of our neighbors who share our perspective. We care deeply about preserving this neighborhood as a quiet, residential space where privacy is respected. We hope you will look carefully at the non-residential uses of 11 Pomeroy Street and the suitability of their application to this residential neighborhood. Thank you for the opportunity to comment.

Sincerely,

Douglas Dempsey & Laurel McCosham

# 11 Pomeroy Street Permit Application



0 views



Judy Richard <judithrichard1@yahoo.com> Apr 8, 2022, 11:46:15 AM (2 days ago)  
to planningboard@portlandmaine.gov

To the Planning Board:

I am writing in response to the recent notice I received from the City regarding a hearing to consider an after the fact conditional use permit application to facilitate the operation of a place of assembly use in the R-3 Residential Zone.

I previously wrote to the city last fall concerning this matter and I am wondering why it has taken this long to have another hearing.

My position in opposition of granting this permit has not changed.

I am questioning how it has been allowed to get this far already when the site is in a R-3 Residential Zone. The current use does not comply with residential zoning nor does the proposed usage. The site brings constant vehicles and traffic through the neighborhood.

At the hearing last fall, the Chabad minimized the impact to the neighborhood as well as the amount of gatherings, etc. Since the last meeting, they have made no effort to engage with neighbors by the Chabad. They continue to do whatever they want without any regard for the neighbors they impact. The Chabad only complies with requests when it is in their best interests and they need something. They have not even paid their expenses for the Legal Ads and Notices that were due last November.

I walk these streets almost daily for exercise and have seen a lot of traffic going in and out of Pomeroy Street. This is not in the best interests of the residents in the surrounding areas. Please keep this as a family friendly and safe neighborhood for those who wish to walk and bike without an increase in traffic.

I am asking the Planning Board to deny the request for the 11 Pomeroy Street after the fact conditional use permit application.

Thank you for allowing me to voice my concerns.

Judy Richard  
31 Benjamin Way  
Portland, ME 04102



Ali Goldstein <alison.goldstein@gmail.com>  
to planningboard@portlandmaine.gov, Daniel Norup

Apr 8, 2022, 8:56:14 AM (2 days ago)

PC33

*Subject: 11 Pomeroy Street Application PL-000058-2018 / Plan Number CU-001763-2021*

*To the Planning Board,*

*Our names are Daniel and Alison Norup, and we are residents and homeowners at 14 Benjamin Way - direct neighbors and within the immediate vicinity of 11 Pomeroy Street.*

*In 2021, we wrote to you on October 22nd (seen below) and then attended the November meeting. The big takeaway on that meeting for us and many of our neighbors - our community here in Rosemont - was that there needs to be a Community hearing and Community engagement by the Chabad of Maine. We can confirm that there has been no engagement by the Chabad of Maine. As we wrote in October, the reason that we moved to Rosemont was for the neighborhood, which is zoned for residential not commercial use.*

*In addition to our continued claims that the property at 11 Pomeroy is zoned for residential use and a change to commercial would harm the neighborhood now and into the future, we wanted it entered into the record that the Chabad of Maine does not take its application seriously. The Chabad has yet to pay its October 2021 Cost Legal Ad and Cost of Notices fees that were due in November 2021- please see the screenshot below. This blatant disregard for procedure furthers our neighborly and community concern around the Chabad of Maine's request for commercial zoning, which was rejected originally.*

*We will be in attendance on April 12th.*

*Thank you.*

*Daniel and Alison Norup  
14 Benjamin Way  
Portland, ME 04102*

## Re: Chabad House 0 views

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Judy Gailen <judy@judygailendesigns.com>

12:46 PM (2 hours ago)

to planningboard@portlandmaine.gov

Hello,

I am unable to attend the meeting today, as I will be working. I have already written to you on several occasions about the Chabad House expansion.

I just want to note that the sign they put up about this meeting is not visible from Bancroft Street. I only saw it because I read the PPH article today, and wondered where it was, as I had never noticed it. It is sitting sideways at their little parking lot at the bend of Pomeroy street, so the only way to see it is if you are already going to their "house", as no one else has reason to go that far up the street. Yet another dishonest attempt at being a law-abiding and "good neighbor".

Again, the "after the fact" permit is contested by more than a "one or two people rousing people up". There are many in the neighborhood who are against the campus (their words) that they are trying to build. If the planning board is recommending this be granted, they are ignoring the facts.

Thank you  
Judy Gailen  
68 Bancroft St.

Kate A <kateallendvm@gmail.com>

May 18, 2022, 11:28:04 PM (9 hours ago)

to planningboard@portlandmaine.gov, jdealaman

Hi Planning Board,

We would like to submit the following letter (see attached) to the Planning Board in regards to Plan Number CU-001763-2021 - after the fact conditional use permit application at 11 Pomeroy Street. We feel it contains data crucial to the Planning Board's decision-making process. Should you have any questions or would like more information, we would be happy to oblige.

Many thanks,

Kate Allen and Colin Wilke  
88 Bancroft St  
Portland, ME 04102

Kate Allen and Colin Wilke  
88 Bancroft Street  
Portland, ME 04102

City of Portland Planning Board  
planningboard@portlandmaine.gov

Wednesday, May 18th, 2022

To The Planning Board,

We reside at 88 Bancroft Street, a parcel of land situated along the north side of Pomeroy Street and across from 11 Pomeroy Street. We wish to provide information pertaining to the Conditional Use Application (Plan Number CU-001763-2021) presented by The Applicant at 11 Pomeroy Street.

### **1. Traffic**

The following is an excerpt from the Planning Board Report: Planning and Urban Development: Place of Assembly Use, 11 Pomeroy Street Conditional Use Application prepared by Jimmy Dealaman on April 8, 2022 (pages 208 - 210). It was prepared for and presented at the remote meeting held by the Planning Board on Tuesday April 12, 2022. See report for full text.

(begin quote:)

#### **C. GENERAL CONDITIONAL USE STANDARDS - Sec. 6.5.2**

*The review authority shall[...] approve a conditional use upon a finding that the proposed conditional use[...] will not have substantially greater negative impacts than would normally occur from surrounding uses or other allowable uses in the same zone. The review authority shall find that this standard is satisfied if it finds that:*

*A. The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.*

**Applicant Response:** "The project does not generate vehicle volume substantially greater than the surrounding uses[...]"

#### **Staff comment**

The City's consulting traffic engineer has reviewed the applicant's trip generation estimate and additional information provided [...] and finds that[...] On a daily basis the site would expect approximately 12 place of assembly related trips (6 entering/6 exiting) for worship services and 6 miscellaneous trips by the single-family household, the latter of which are separate from the assembly use.

Further, if lectures are held, the daily trip level has the potential to increase by 12 daily trips for a maximum daily trip load of 24 trips and 6 household trips. However, [...] the number of daily trips is expectedly less than the 24 trips on days when lectures will occur.

[..] Based on the information provided above, the City's consulting traffic engineer finds that the maximum level of traffic would not be expected to create mobility or safety issues and is not substantially greater than other nonresidential uses in the zone (Attachment 1).

(End quote.)

We respectfully present that the City's consulting traffic engineer and Mr. Dealaman have been given inaccurate information by the Applicant in regard to Section 6.5.2 Subsection A.

Our household at 88 Bancroft owns a Google Nest camera and recording system. We typically use it to watch our family pets and wildlife visitors to our garden. From April 9, 2022 to May 15th, 2022, we positioned the camera to also have a full view of Pomeroy Street. This camera tracked trips entering into and departing from Pomeroy Street from and to Bancroft Street; parking on Pomeroy Street; and entering and departing 11 Pomeroy Street. 11 Pomeroy Street is the only domicile / facility / dwelling / gathering place on the street; there are no other addresses. Upon reviewing the data collected, 99% of cars traveling on Pomeroy Street were related to activity at 11 Pomeroy Street.

To analyze the data, we adopted the same convention as Mr. Dealaman in the above quotation, in that a 'trip' was a single passage of a car in a single direction; therefore, a car that both entered and then later left Pomeroy Street the way it came in would generate two trips.

#### *RESULTS:*

Over a span of 37 days, a total of 1334 trips on Pomeroy Street were observed. This equates to an **average of 36 trips per day**, seven days a week, 365 days year-round (if we infer continuous, similar use at the property).

The date of highest number of trips was Thursday, April 14th, at a total of **89 trips** throughout the day.

The lowest number of trips was observed on Saturday, April 14th, at **11 trips**.

It is important also to note the distribution of trips throughout the 37 days: for example, how many days had a relatively 'light' trip load, and how many had a 'heavy' trip load? The following table addresses this question. We binned the number of trips per day into integrals of 10, and evaluated what percentage of days (number of days divided by 37) experienced those number of trips.



| Number of trips per day     | Number of days |
|-----------------------------|----------------|
| 0 - 9 trips per day         | 0%             |
| 10 - 19 total trips per day | 19%            |
| 20 - 29 total trips per day | 24%            |
| 30 - 39 total trips per day | 22%            |
| 40 - 49 total trips per day | 16%            |
| 50 - 59 total trips per day | 8%             |
| 60 - 69 trips per day       | 5%             |
| 70 - 79 total trips per day | 0%             |
| 80 - 89 total trips per day | 5%             |

## 2. Parking

Page 215 of the Planning Board Report Agenda Packet is an email correspondence from Tom Errico, PE, Senior Associate, Traffic Engineering Director, to Mr. Dealaman. In it, Mr. Errico provides answers to the clarifying questions posited by Mr. Dealaman.

(begin quote:)

*While the parking supply is based on zoning requirements, I am concerned that parking demand will exceed supply and thus will require vehicles parking off site. The applicant shall consider the estimate for trip generation (and number of attendees) in estimating parking demand.*

Status: The applicant has noted that under a worst-case scenario, there will be a need for 6 parked vehicles during either worship services or lectures which do not occur at the same time. The required two residential parking spaces will be provided in the garage or in the spaces in front of the garage. I have reviewed the site plan and find the circulation and layout to be acceptable for the demand noted. It is assumed that the project will be providing parking accommodations on-site and not utilizing on-street parking spaces or the turnaround area at the end of Pomeroy Street.

(end quote.)

It is worth reminding that, while the language uses the future tense ('will be providing,') this application is after-the-fact. 11 Pomeroy Street is currently and has previously been utilizing all of the on-site parking they 'propose' to use.

Our observations show that the parking associated with 11 Pomeroy Street is NOT confined to onsite parking, but rather takes up much of the street space of Pomeroy Street. While the 'Additional parking for 7 vehicles' onsite may seem adequate for the number of cars reported to the Planning Board by the Applicant, it is inadequate for the number of cars that we have shown park on Pomeroy Street to visit the site on an average daily basis.

In regards to parking, we observed cars parking on Pomeroy Street on every Thursday, Friday, Saturday, and Sunday throughout the 37 day period from April 9th to May 15th. These days were selected as they are when the highest number of visitations to 11 Pomeroy Street occur (we did not have time to analyze all 37 days' data). This constituted a total of 22 days studied.

### **RESULTS:**

100% of cars parked on Pomeroy Street during those days were associated with visitors to 11 Pomeroy Street.

Cars parked on Pomeroy on 16 out of 22 days (72% of days studied).

Cars would arrive and park on Pomeroy as early as 6:49 am. The latest parked cars stayed on Pomeroy during that time was 11:15 pm.

We analyzed the length of time parked cars would be present for a stretch of time on Pomeroy Street. To demonstrate the overflow of parking from onsite parking onto the street, we observed both cars that were parked on Pomeroy Street ('on-street') as well as cars parked onsite at 11 Pomeroy Street ('onsite').

Compared to Thursdays, Fridays, and Sundays, a significantly higher number of cars were parked for a significantly longer period of time on Saturdays.

### **Car parking on Pomeroy Street on Saturdays:**

| <b>Date</b> | <b>Continuous length of time with on-street parked cars</b> | <b>Peak number of on-street parked cars for this date</b> | <b>Peak number of onsite parked cars for this date</b> |
|-------------|-------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
| 4/9         | 5.6 hours                                                   | 7                                                         | 5                                                      |
| 4/16        | 5.7 hours                                                   | 6                                                         | 4                                                      |
| 4/23        | 5.5 hours                                                   | 11                                                        | 8                                                      |
| 4/30        | 6.3 hours                                                   | 8                                                         | 4                                                      |
| 5/7         | 6 hours                                                     | 8                                                         | 7                                                      |
| 5/14        | 6.7 hours                                                   | 3                                                         | 4                                                      |
| <b>Avg</b>  | <b>6.0 hours</b>                                            | <b>7.2 cars</b>                                           | <b>5.3 cars</b>                                        |

### Car parking on Pomeroy Street on Thursdays, Fridays, and Sundays:

|                 | Continuous length of time with on-street parked cars | Peak number of on-street cars parked for this date | Peak number of onsite parked cars for this date |
|-----------------|------------------------------------------------------|----------------------------------------------------|-------------------------------------------------|
| Average (n=16): | 3.0 hours                                            | 2 cars                                             | 6.1 cars                                        |

(detailed data available upon request)

### **Conclusions regarding traffic and parking:**

The Applicant's provided estimates of daily trip numbers - approximately 12 place of assembly related trips and 6 miscellaneous trips by the single-family household, totalling 18 trips - is significantly underreported compared to the observable average of 36 trips per day. The Applicant also attested that 'rare circumstances' such as lectures or high holidays would generate an uncommon maximum daily trip load of 30 trips. The observable average daily number of trips (36) *exceeds the estimated highest number of trips possible on rare occasions*. Furthermore, 'binning' of the data shows that only 19% of days experienced fewer than 20 trips per day. This means that 81% of all days exceeded the Applicant's estimate of 'an average number of trips per day.'

The Applicant's provided estimate of parked cars during services and lectures (6) is underestimated for the amount of parked cars that currently visit Pomeroy Street. While The Applicant and their visitors are utilizing 'proposed' parking spaces onsite, there are routinely several cars (on average, about 7 cars) each Saturday parked on Pomeroy. 11 Pomeroy Street cannot, does not, and will not provide parking accommodations on-site for all of its visitors.

Based on this recorded, documented information, we would speculate that the City's consulting traffic engineer would **find the Applicant's conditional use to be substantially greater** than other nonresidential uses in the zone. We would also posit that this amount of traffic (much of which is parked *on Pomeroy Street and NOT within the parking provided by 11 Pomeroy*) may indeed create mobility and safety issues.

### **3. Light Pollution**

The following is an excerpt from the same Planning Board Report as quoted above, and continues directly after the termination of the above quote (P. 210). In regards to the General Conditional Use Standards (begin quote):

*B. The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.*

**Applicant Response:** “The project does not generate harmful or unsanitary conditions. The existing building utilizes municipal water and sewer, hosting worshippers with no negative effects. No additional lighting or emissions are proposed with the use, and with the majority of activities occurring inside the building, no harmful generation of noise is anticipated.”

**Staff comment:**

Staff have reviewed the applicant’s proposal and do not believe the project will generate harmful or unsanitary conditions. The applicant has provided additional information on their site plan (Plan 2) identifying existing lighting locations showing low-level lighting fixtures. Given that there are no proposed exterior building changes and based on the information provided by the applicant, staff do not find there are any substantially greater negative impacts related to the categories under this section that would result by this change in use and accompanying site work.

(end quote.)

A note of clarification on the language here: recall that this application is for a conditional use permit **after-the-fact**; therefore, it is important to distinguish what is ‘proposed’ from ‘what is already in place, but is proposed to fall into compliance with this conditional use permit.’ While the Applicant states that ‘no additional lighting or emissions are proposed with the use,’ they already have lighting in place that, in our observation, violates the General Conditional Use Standards.

There are three exterior lighting fixtures that are installed along the west side of the existing driveway of 11 Pomeroy Street. On Page 210, Figure 4 labels them as “Pole Mounted LED Light Fixtures - See Note 14.” (We could not locate this note for reference.) These fixtures are approximately 20 feet tall. They are too tall for their illumination to be effectively blocked from the west neighbor (100 Bancroft) by any stand of trees or fencing. They are not blocked to the north, and their light directly enters the south-facing windows of our house at 88 Bancroft Street.

In addition to being exceedingly tall, these lights are also incredibly bright and unshielded.

For reference: these photos were taken from the south-facing first floor window of our house. The Chabad is in the center of the images. In each photo, the rear of the house at 100 Bancroft Street can also be seen on the right-hand side.



Photo 1. (taken 5:23 am, 11/29/21)





Photo 2. (taken 6:47 pm, 1/29/22)



Photo 3 (taken 12:04 am, 2/9/22)

Observations we have made that we hope these photos convey:

- The level of illumination violates zone site lighting standards as set out in the City of Portland Technical Manual, Section 12 (attached for reference).
- This light trespass is not limited to our property, but affects all abutting properties. We would encourage the Planning Board to query our Bancroft neighbors as to their personal experiences with these lights.
- Any claim of 'shielding' of these lights to the surrounding property is inaccurate. Not only does any shielding by foliage not reach high enough, but the lack of foliage through the winter months along the western border of the property means that there is no foliage *present* by which to shield.
- The lights are not constructed with "Full Cut-Off" design, as the lenses, refractors, and lamp sources extend well below the surface of the fixture housing, in violation of Section 12 (referenced above and attached).

Of special aggravation is the time of day at which these lights trespass onto our property. Typically, the lights were turned on at dusk. Over 37 days, the Google Nest allowed observation of the time at which the lights were turned off. A summary is in the following table:

| <b>When were the lights turned off?</b> | <b>Frequency (percentage of days observed)</b> |
|-----------------------------------------|------------------------------------------------|
| They were never turned on               | 8%                                             |
| Between 10:30 and 12:30 pm              | 28%                                            |
| Between 12:30pm and 2:30am              | 34%                                            |
| Between 2:30 and 4:30 am                | 6%                                             |
| They were left on until dawn            | 24%                                            |

We attempted to pinpoint when these external light fixtures were installed, and to find out more about their approval for the site. An article published in the Portland Press Herald on September 11, 2018 contains a photo showing the Applicant standing at the head of the driveway. In this photo, the exterior lighting fixtures are not present.





<https://www.pressherald.com/2018/09/11/portland-neighbors-wary-about-religious-centers-growt-h/>

These lights were present when we moved into 88 Bancroft in April of 2021; therefore, they were installed sometime between September 2018 and April 2021.

A search of the City of Portland Citizen Self Service portal public records reveals 14 permits on record for 11 Pomeroy Street. A permit was found dated 7/24/2018 (PERMIT ID: ELEC2018-00297); however, the listed electrical installations did not include items matching the description of these outdoor fixtures. We are unable to find a permit for the construction of these light fixtures.

### **Conclusions regarding lighting pollution:**

The Applicant doesn't mention lighting in their application for a conditional use permit, but they have indeed installed significant exterior lighting between September 2018 and April 2021. We cannot locate documentation of their legal permiture and installation.

While we do not possess the tools to measure foot candles in order to compare to the city guidelines, we are reasonably certain these lights violate residential lighting standards and emit

significant amounts of lighting trespass to the neighbors of 11 Pomeroy Street. In addition, these lights emit light pollution during normal 'resting' hours of the day 92% of the days.

On a personal note, these lights are significantly negatively impacting our quality-of-life, as we have had to install blackout curtains in our bedrooms in order to sleep. In the summer, we cannot open windows to catch a breeze, as we also catch the glare of these lights. The Applicant has been approached multiple times about these lights. Multiple times throughout the year, we have requested him to turn them off after 10 pm; we have not observed any change for the better.

Rather, in the response written by the Project Manager Christopher R MacDonald on January 24, 2021 to the Planning Board's request for more information, it is stated that "rather than lighting directly on site being an issue, it is likely that the lighting concern comes from the municipal street lights at the intersection, which were required to be installed at the time the street was constructed." (P. 290 of the Agenda Packet). We hope the information we have provided here demonstrates without argument the source of said lighting pollution to be 11 Pomeroy Street.

### **Final Statements**

We sincerely thank the Planning Board for their time and attention in the review of these matters. As residents of the Bancroft-Pomeroy neighborhood, we wished to share concrete evidence of ongoing traffic, parking, and light at 11 Pomeroy Street. The heavy flow of traffic, large number of cars parked, and intense amount of light pollution from the site affects us on a daily basis, and anecdotes from our neighbors suggest similar experiences. We wish no harm to the family nor community at 11 Pomeroy Street, and we have made several personal attempts to come to a reasonable compromise on matters of traffic and light, to no avail.

Given the above findings, we feel the after-the-fact application for conditional use at 11 Pomeroy Street is not only inappropriate, but demonstrably harmful to the community. The amount of traffic and light pollution violate the city's residential zone standards and should cease and desist.

We would be glad to provide any further information at the Board's request.

Sincerely,

Kate Allen and Colin Wilke



## 12. SITE LIGHTING STANDARDS

### 12.1. PURPOSE

The requirements set forth in this chapter are intended to promote and protect public health, safety and general welfare, and encourage the preservation of the natural nighttime outdoor environment. Specifically, the intent of this chapter is to limit light trespass, glare and light pollution to safeguard adequate safety, night vision, and comfort of the neighboring properties.

### 12.2. APPLICABILITY

The following types of development proposals are required to submit a lighting management plan for review and approval:

- All developments subject to site lighting standards of Section 14.6.4 of the Land Use Code.
- Other projects where the Reviewing Authority determines that special conditions warrant a lighting management plan.

### 12.3. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

1. Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)
2. Illumination Levels: Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:

|                |                        |
|----------------|------------------------|
| <b>Minimum</b> | 0.2 foot candles (fc)  |
| <b>Maximum</b> | 5.0 foot candles (fc)  |
| <b>Average</b> | 1.25 foot candles (fc) |

Average illuminance levels for exterior areas specified below, measured in foot candles (fc) at ground level unless noted, shall not exceed the following levels:

| Uses                                                                             | Average<br>(Foot candle) | Uniformity Ratio<br>(average-to-minimum) | Maximum<br>(Foot candle) |
|----------------------------------------------------------------------------------|--------------------------|------------------------------------------|--------------------------|
| <b>Automated Teller Machine (ATM)<br/>Surrounding Area<br/>(10 ft perimeter)</b> | 10.0                     | 3:1                                      | 20.0                     |
| <b>Drive-through Canopy</b>                                                      | 10.0                     | 3:1                                      | 20.0                     |
| <b>Auto Service Station</b>                                                      |                          |                                          |                          |
| • <b>Approaches and Drives</b>                                                   | 1.5                      | 3:1                                      | 3.0                      |
| • <b>Service Areas</b>                                                           | 2.0                      | 3:1                                      | 4.0                      |
| • <b>Pump Island Areas</b>                                                       | 10.0                     | 3:1                                      | 20.0                     |
| <b>Parking Lot</b>                                                               |                          |                                          |                          |
| • <b>Surface</b>                                                                 | 0.5                      | 3:1                                      | 4.0                      |
| • <b>Structure</b>                                                               | 0.8                      | 3:1                                      | 2.0                      |

3. Lumens: No fixture shall exceed 20,000 lumens ( $\pm 3\%$ ).

| Types of Lighting                          | Maximum Lumens Allowed     |
|--------------------------------------------|----------------------------|
| <b>Path lighting</b>                       | 1,500 lumens               |
| <b>Building Entrance</b>                   | 3,500 lumens               |
| <b>Residential/ Commercial Pole at 20'</b> | 15,000 Lumens              |
| <b>Industrial Pole at 30'</b>              | 20,000 lumens              |
| <b>ATM Drive-Through Canopy</b>            | 6,000 lumens               |
| <b>Auto Service Station</b>                |                            |
| • <b>Approaches and Drives</b>             | 4,000 lumens               |
| • <b>Service Areas</b>                     | 6,000 lumens               |
| • <b>Pump Island Areas</b>                 | 8,000 lumens per fuel pump |

4. Light Trespass: The maximum illumination level at a property line shall not exceed 0.1-foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses. When a commercial or industrial use abuts a public right-of-way, or another commercial or industrial use, lighting must be designed so that the illumination at the property boundary line does not exceed 1.0 foot-candles.

All residential uses and natural resource protection areas are to be considered sensitive to light trespass. In certain instances where a proposed

development is adjacent to a sensitive use, house-side shielding (see 12.3.5.1) may be necessary to comply with this standard.

5. Luminaire Types: All fixtures must be LED and shall not exceed 3000K Correlated Color Temperature (CCT). Screw in light fixtures must have LED lamps specified to be maximum of 3000K CCT.
6. Full Cut-off Fixtures and Shielding Required: All outdoor lighting fixtures, including pole mounted and wall mounted luminaires, shall be constructed Full "cut-off" or with full shielding, type where lenses, refractors or lamp sources do not extend below the surface of the fixture housing and no direct light shall be directed at or above the horizontal plane.

Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit.

Light fixtures mounted under a canopy shall be recessed so that the lens cover is recessed into, or flush with, the underside (ceiling) of the canopy.

7. Pedestrian Walkway Lighting: Pedestrian walkway light fixtures can be a combination of freestanding pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the proposed fixture type will be in scale with the building elevation on which it is to be installed and meet the fixture height provisions of 12.3.8. Pedestrian lighting (bollards) shall meet the technical manual standards for full cut-off or an exception may be considered under 12.2.11.
8. Fixture Height: Fixtures shall be mounted at the lowest height necessary to meet city standards and the height is measured from grade to the bottom of the lighting fixture.

| Type of Lighting                                                   | Maximum Fixture Height                                            |
|--------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Residential (Pedestrian) Uses</b>                               | 20 feet                                                           |
| <b>Commercial/ Office Uses</b>                                     | 20 feet                                                           |
| <b>Large Industrial Uses (50,000 sf or more- gross floor area)</b> | 30 feet                                                           |
| <b>Building Mounted/ Entrances</b>                                 | below the roof eave and not to exceed 20 feet, whichever is lower |
| <b>Bollard Fixtures</b>                                            | 42 inches (3.5 feet)                                              |

9. Lighting Curfew: For surface and structured parking, lighting in vehicle parking areas containing twenty (20) or more parking spaces shall be reduced to 50% of permitted levels from one hour after the business closing

to one hour before business opening. If lighting levels are already below 50% of permitted levels, no curfew adjustment is required. Motion sensor activated lighting shall be permitted during closed hours to activate additional lighting above the 50% permitted, for the purposes of public safety.

10. Continued Maintenance: Lighting installations must be maintained in good repair to meet the provision of this ordinance on an on-going basis.
11. General Exceptions: Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use. The Planning Authority may grant exceptions to the lighting standards with the finding that the light impacts do not create a public nuisance for abutting residential property. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-14, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.
12. Historic District, Architectural and Pedestrian Walkway Exception: Sites which are part of an historic district or require specific decorative lighting fixtures as means to achieve compatibility within an existing architectural context must meet the following standards:
  - a. Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.
  - b. Low pressure sodium and metal halide lamps are prohibited.

**12.4. Reserved.**

**12.5. ARCHITECTURAL AND SPECIALTY LIGHTING AND UPLIGHTING**

1. Lighting shall be designed to minimize lighting of night sky and shall accentuate individual architectural or aesthetic elements, not the entire structure.
2. Lighting shall be directed downward unless the development is located in an area of the city where uplighting is permitted as described in Section 14.6.4

of the Land Use Code. Where permitted, upward aimed lighting (uplighting) shall not exceed 4,000 mean lumens per accent feature, shall be placed as close as possible to the base of the building or feature that is being illuminated, shall be fully shielded from view off-site, and shall use a narrow cone of light for the purpose of confining the light to the object.

3. Building façade lighting. The exterior of a building may be lighted provided the following standards are met:
  - a. The lighting is done to accentuate an architectural or aesthetic element of the building, not the entire building.
  - b. The light must only be directed onto the building façade and not spillover beyond the plane of the building.
  - c. Upward aimed lighting must not exceed 4,000 mean lumens per accent feature, must be fully shielded, and mounted as flush to the wall as possible.
  - d. Lighting exceeding 4,000 mean lumens per accent feature must be aimed downward, fully shielded, and mounted as flush to the wall as possible.
  - e. Stripe Lighting: Stripe lighting along building structures as articulation may be approved as specialty architectural lighting, provided that it does not create nuisance.
4. Flag poles, statues and similar monuments. A flag pole bearing a state flag, a flag of the United States or a flag of a foreign nation may be illuminated, provided the following standards are met:
  - a. The luminaires must be fully shielded.
  - b. Upward aiming luminaires must be placed as close to the base as possible.
  - c. The luminaires must not collectively exceed 20,000 mean lumens. Public statues, memorials or other similar monuments may also be lighted upon approval by the Historic Preservation authority, provided the above standards are met.

#### **12.6. SUBMISSION REQUIREMENTS, PHOTOMETRIC PLANS**

1. The Lighting Plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture with projected hours of use. This plan will need to be stamped and certified by a licensed professional, such as an architect or engineer. The lighting plan must include a KEY to the proposed lighting that provides the following information:
  - a. Type and number of luminaire equipment (fixtures), including the "cut off characteristics", indicating manufacturer and model number(s).
  - b. Lamp source type (bulb type, i.e. LED), lumen output, and wattage.



- c. Mounting height with distance noted to the nearest property line for each luminaire.
  - d. Types of timing devices used to control the hours set for illumination, as well as the proposed hours when each fixture will be operated.
  - e. Lighting manufacturer-supplied specifications ("cut sheets") that include photographs of the fixtures, indicating the certified "cut off characteristics" of the fixture.
2. A photometric plan shall be provided at 20 scale or larger which shall show the extent of the areas designed and intended for lighting, and within those specific areas show a photometric grid of maximum 10' point spacing, and within those areas provide foot candle calculations of maximum, average, minimum, maximum to minimum ratio, and average to minimum ratio. On the same or additional plan, a photometric plot shall extend to all lot lines and as necessary to reach illumination levels of 0 (zero) foot candles. Additionally, the applicant shall provide descriptive information, including manufacturers catalog excerpts, for all proposed light fixtures, lamps, and poles.

# CHANGE OF USE & MINOR SITE PLAN

11 POMEROY STREET, PORTLAND, MAINE

For  
CHABAD LUBAVICH OF MAINE INC.  
11 POMEROY STREET  
PORTLAND, MAINE

PLAN INDEX

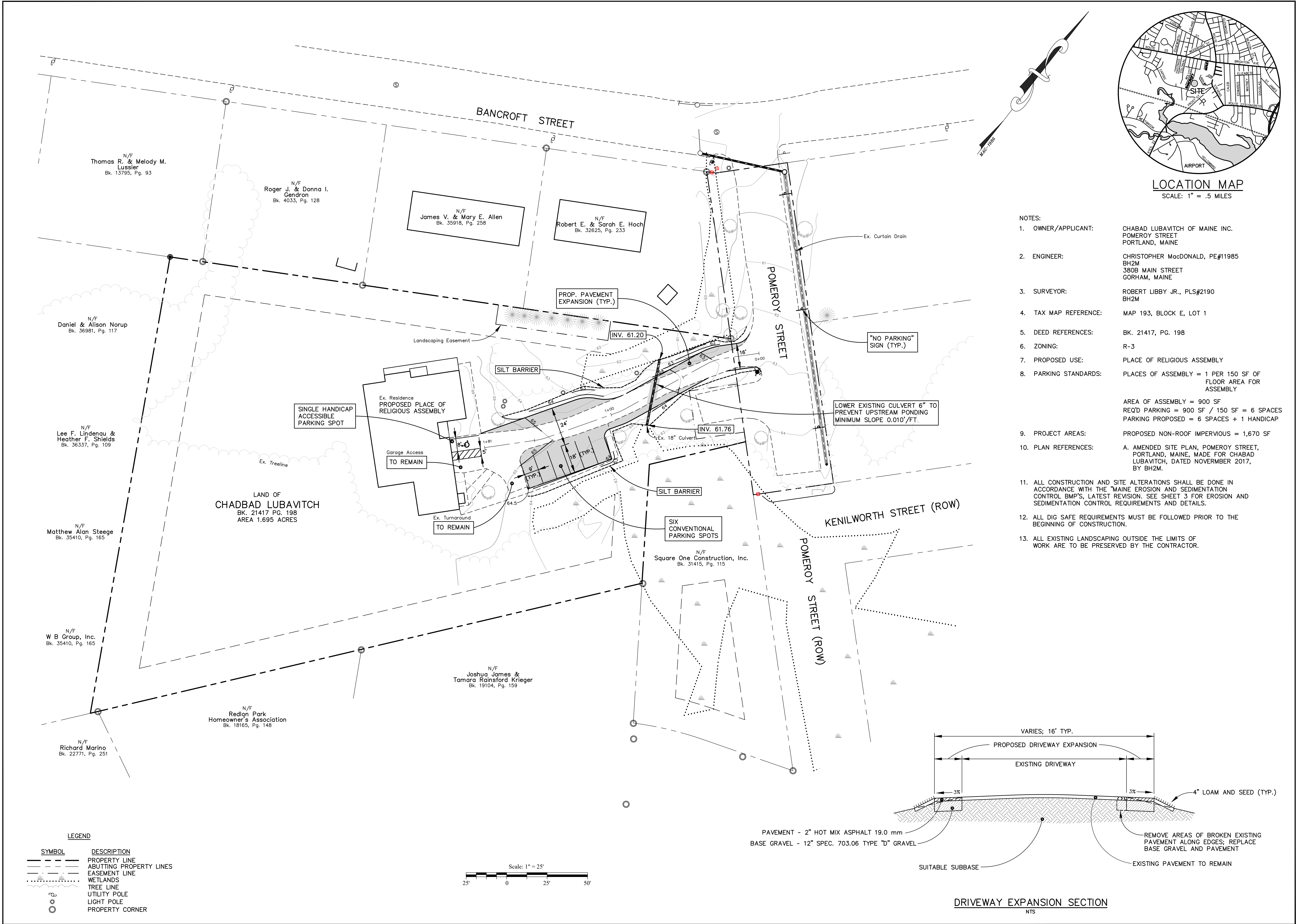
- 1 SITE PLAN
- 2 EXISTING CONDITIONS
- 3 EROSION CONTROL DETAILS
- A STORMWATER PRE DEVELOPMENT CONDITIONS
- B STORMWATER POST DEVELOPMENT CONDITIONS



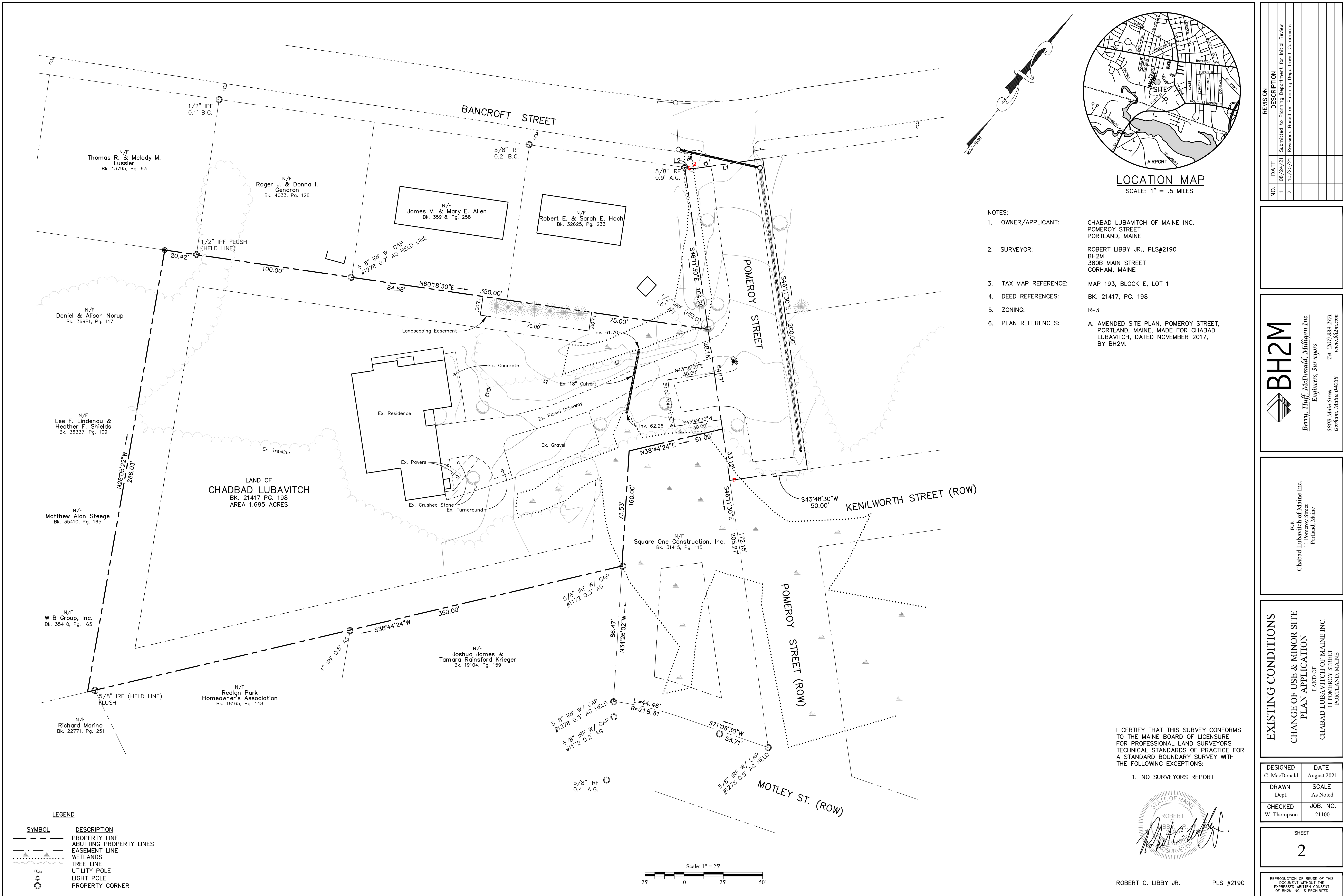
*Berry, Huff, McDonald, Milligan Inc.*  
Engineers, Surveyors

380B Main Street  
Gorham, Maine 04038  
Tel. (207) 839-2771  
www.bh2m.com



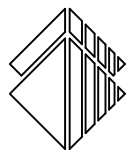






| NO. | DATE     | REVISION | DESCRIPTION                                         |
|-----|----------|----------|-----------------------------------------------------|
| 1   | 08/24/21 |          | Submitted to Planning Department for Initial Review |
| 2   | 10/20/21 |          | Revisions Based on Planning Department Comments     |
|     |          |          |                                                     |
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**BH2M**

Barry, Huff, McDonald, Milfigan Inc.  
Engineers, Surveyors

380B Main Street  
Gorham, Maine 04038

Tel. (207) 839-2771  
www.bh2m.com

|                                                                        |
|------------------------------------------------------------------------|
| FOR                                                                    |
| Chabad Lubavitch of Maine Inc.<br>11 Pomeroy Street<br>Portland, Maine |

|                                                                                |
|--------------------------------------------------------------------------------|
| EXISTING CONDITIONS                                                            |
| CHANGE OF USE & MINOR SITE PLAN APPLICATION                                    |
| LAND OF CHABAD LUBAVITCH OF MAINE INC.<br>11 POMEROY STREET<br>PORTLAND, MAINE |

|                          |                     |
|--------------------------|---------------------|
| DESIGNED<br>C. MacDonald | DATE<br>August 2021 |
| DRAWN<br>Dept.           | SCALE<br>As Noted   |
| CHECKED<br>W. Thompson   | JOB. NO.<br>21100   |

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EROSION AND SEDIMENT CONTROL PLAN

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE LATEST REVISION OF TO THE 2016 MAINE EROSION AND SEDIMENT CONTROL BMP'S MANUAL FOR DESIGNERS AND ENGINEERS, AND THE LATEST REVISION TO THE 2014 MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS. SEE MANUALS FOR ADDITIONAL INFORMATION AND DETAILS.

DURING CONSTRUCTION THE DEVELOPER/APPLICANT OR THEIR REPRESENTATIVES WILL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL BMP'S AS WELL ROUTINE INSPECTIONS AND MAINTENANCE OF THE BMP'S.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

- ALL CONSTRUCTION INSPECTIONS SHALL BE CONDUCTED BY SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING STANDARDS AND PERMIT CONDITIONS. CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ONCE A WEEK, AND PRIOR TO AND 24 HOURS AFTER A WET WEATHER EVENT (1 INCH OR MORE IN A 24 HOUR PERIOD). CONSTRUCTION INSPECTION AND CORRECTIVE ACTION DOCUMENTATION RECORDS SHALL BE MAINTAINED FOR A MINIMUM OF 5 YEARS.
- THE SCOPE OF CONSTRUCTION INSPECTIONS INCLUDE THE EROSION AND SEDIMENTATION CONTROL MEASURES AS WELL AS DISTURBED AREAS, MATERIAL STORAGE AREAS, AND LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S", DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST REVISION.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 75 FEET OF A WETLAND OR WATERBODY, THE AREA SHALL BE STABILIZED WITHIN 2 DAYS OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY.
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO MORE THAN ONE ACRE OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION.
- SEDIMENT BARRIERS (EROSION CONTROL MIX, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCE, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
- INSTALL EROSION CONTROL MIX AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE E.C. MIX DETAIL FOR PROPER INSTALLATION. EROSION CONTROL MIX WILL REMAIN IN PLACE PER NOTE #7. THE USE OF AN EROSION CONTROL MIX BERM IS PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 3:1 OR WHERE THERE IS FLOWING WATER.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED, AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY BEFORE AND FOLLOWING ANY SIGNIFICANT RAINFALL (0.5 INCH OR MORE IN A 24-HOUR PERIOD) OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE END OF THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF. EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION. PERMANENT STABILIZATION IS BOX GRASS CATCH IN VEGETATED AREAS.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5:1).
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED BY AUG. 15 OR 45 DAYS PRIOR TO THE FIRST KILLING FROST (OCT. 1) TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ON OPEN AREAS. POST SEEDING SEDIMENT, IF ANY WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
  - FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
  - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P20S-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
  - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1,000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED. SEED MIX SHALL CONTAIN 10% ANNUAL RYE GRASS.
  - HAY MULCH AT THE RATE OF 70-90 LBS PER 1,000 SQUARE FEET FOR OVER 75% COVERAGE. FOR UNPROTECTED OR WINDY AREAS, ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD./BLOCK). HYDRAULIC MULCHES MAY ALSO BE USED, APPLIED AT A RATE OF 5 LBS PER 1,000 SQUARE FEET FOR PAPER MULCH OR 40 LBS PER 1,000 SQUARE FEET OR AS DIRECTED BY THE MANUFACTURER. ON SLOPES GREATER THAN 3:1 EROSION CONTROL MIX MAY BE USED, SEE EROSION CONTROL MIX NOTES BELOW.
  - FOR DISTURBED AREAS TO BE MAINTAINED IN POST-CONSTRUCTION AS A MEADOW BUFFER, APPLY NEW ENGLAND CONSERVATION WILDLIFE MIX BY NEW ENGLAND WETLAND PLANTS, INC., OF AMHERST, MASSACHUSETTS OR APPROVED EQUAL.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS ONCE THE SITE IS STABILIZED WITH 90% GRASS CATCH IN VEGETATED AREAS. TEMPORARY EROSION AND SEDIMENT CONTROL BLANKET SHALL BE USED IN ALL DITCHES AND SWALES AS SHOWN IN DETAILS.
- WETLANDS WILL BE PROTECTED WITH EROSION CONTROL MIX OR SILT FENCE INSTALLED AT THE EDGE FOR THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE. ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS DURING WINTER CONSTRUCTION.
- ALL STORMWATER WILL BE PREVENTED FROM RUNNING ONTO STOCKPILES. SEDIMENT BARRIERS WILL BE INSTALLED DOWNGRADIENT OF ALL STOCKPILES.

- PERMANENT POST-CONSTRUCTION BMP'S (VEGETATED SWALES, WET PONDS, ETC.) WILL NOT BE USED TO MANAGE FLOWS DURING CONSTRUCTION WITHOUT SPECIAL PROTECTION AND/OR RESTORATION.

ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS).

| SEASON                               | SEED                  | RATE          |
|--------------------------------------|-----------------------|---------------|
| SUMMER (5/15 - 8/15)                 | SUDANGRASS            | 40 LBS/ACRE   |
| LATE SUMMER/EARLY FALL (8/15 - 9/15) | OATS                  | 80 LBS/ACRE   |
| FALL (9/15 - 11/1)                   | WINTER RYE            | 112 LBS/ACRE  |
| WINTER (11/1 - 4/1)                  | MULCH W/ DORMANT SEED | 80 LBS/ACRE** |
| SPRING (4/1 - 7/1)                   | OATS                  | 80 LBS/ACRE   |
|                                      | ANNUAL RYEGRASS       | 40 LBS/ACRE   |

\*\*SEED RATE ONLY

EROSION CONTROL MIX

EROSION CONTROL MIX (ECM) SHALL MEET THE REQUIREMENTS PROVIDED IN THE LATEST REVISION OF MAINE DEP'S EROSION AND SEDIMENTATION CONTROL BMP MANUAL. ECM IS ACCEPTABLE FOR USE ON SLOPES OF GREATER THAN 3:1 BUT LESS THAN 2:1. ECM SHALL CONSIST OF WELL-GRADED ORGANIC COMPONENT 50% - 100% OF DRY WEIGHT, AND COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. ECM SHALL BE FREE FROM REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR CONSTRUCTION DEBRIS. ECM SHALL BE EVENLY DISTRIBUTED AND APPLIED AT A THICKNESS OF 2" ON 3:1 SLOPES, WITH AN ADDITIONAL 1/2" PER 20' OF SLOPE FOR A MAXIMUM OF 100' IN LENGTH. SLOPES GREATER THAN 3:1, ECM SHALL BE APPLIED AT THICKNESS OF 4" OR 5" FOR SLOPES GREATER THAN 60' IN LENGTH.

NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5:1). EROSION CONTROL MIX IS AN ACCEPTABLE STABILIZATION MEASURE FOR SLOPES UP TO 3:1, WITH LIMITS THAT ARE COVERED BY NOTES ON THIS SHEET. SLOPES BETWEEN 3:1 AND 2:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS, AND ALL SLOPES GREATER THAN 2:1 SHALL BE STABILIZED WITH RIPRAP. SEE SLOPE STABILIZATION DETAIL FOR ADDITIONAL INFORMATION.

EROSION CONTROL DURING CONSTRUCTION

WINTER CONSTRUCTION

- WINTER CONSTRUCTION PERIOD: NOVEMBER 15 THROUGH APRIL 15
- OVERWINTER STABILIZATION OF DITCHES AND CHANNELS:

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

- INSTALL A SOD LINING IN THE DITCH:

A DITCH MUST BE LINED WITH STONE RIPRAP BY OCTOBER 1. PROPER INSTALLATION INCLUDES: 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 SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLIDING DURING FLOW CONDITIONS. SEE THE PERMANENT VEGETATION BMP SECTION.
- INSTALL A STONE LINING IN THE DITCH:

A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

- OVERWINTER STABILIZATION OF DISTURBED SLOPES:

ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDING AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 1:5 TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS. BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDING WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.

- STABILIZE THE SOIL WITH SOD:

THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 1:5 (2:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX:

EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GREATER THAN SOD (2:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. SEE THE EROSION CONTROL MIX NOTES FOR ADDITIONAL CRITERIA.
- STABILIZE THE SOIL WITH STONE RIPRAP:

PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

- OVERWINTER STABILIZATION OF DISTURBED SOILS:

BY SEPTEMBER 15, ALL DISTURBED SOILS OR AREAS HAVING A SLOPE LESS THAN 1:5% MUST BE SEEDING AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION:

BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDS WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 80% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.

- STABILIZE THE SOIL WITH SOD:

STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH:

BY NOVEMBER 15, 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. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL. PROVIDE NETTING ON ALL SLOPES GREATER THAN 3:1.

- MAINTENANCE:

IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE END OF THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. ONCE A CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION, FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STABILIZATION SCHEDULE BEFORE WINTER:

- SEPTEMBER 15: ALL DISTURBED AREAS MUST BE SEEDING AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDING AND MULCHED. ALL GRASS LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.

- OCTOBER 1: IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDING, ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDING AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED.

- NOVEMBER 15: ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

- DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

- AREAS WITHIN 75 FEET OF STREAMS, WETLANDS, AND OTHER PROTECTED NATURAL RESOURCES THAT ARE NOT STABILIZED WITH VEGETATION BY DEC. 1 SHALL BE MULCHED AND ANCHORED WITH NETTING. IF WORK CONTINUES IN THIS AREA DURING THE WINTER, A DOUBLE LINE OF SEDIMENT BARRIERS MUST BE USED.

HOUSEKEEPING

- SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS 1. ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

- GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY, AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DYES, BERMES, SUMPES, AND OTHER FORMS OF SECONDARY CONTAMINANTS THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

- ERODIBLE 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. ANY OFFSITE TRACKING OF MUD OR SEDIMENT SHALL BE VACUUMED IMMEDIATELY AND PRIOR TO THE NEXT SIGNIFICANT STORM EVENT.

- DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

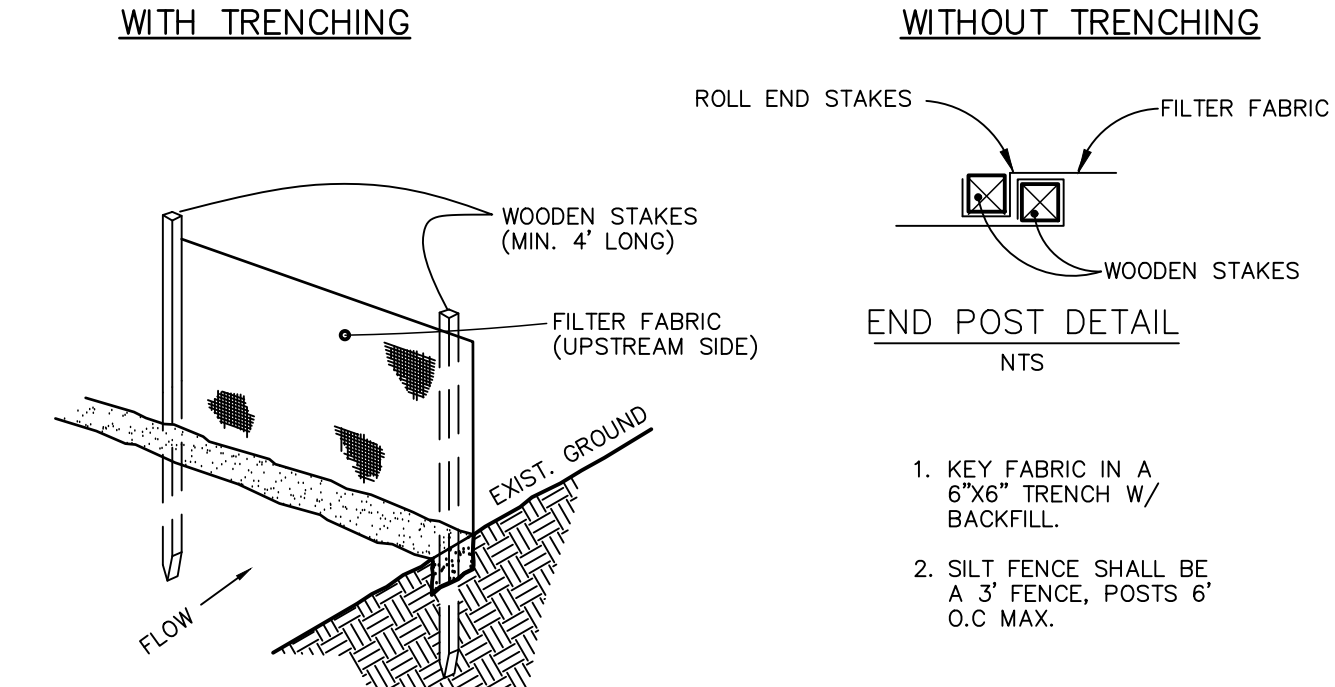
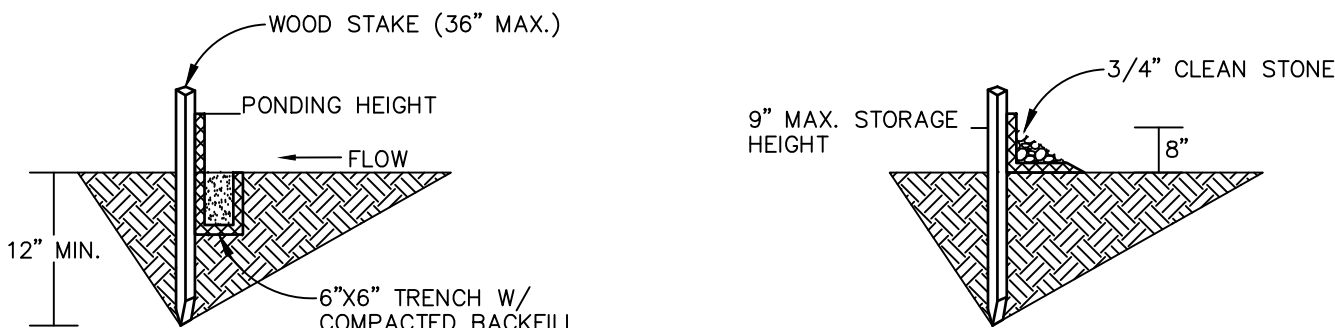
- TRENCH OR FOUNDATION DE-WATERING: TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, POND, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT SAFE CONSTRUCTION PRACTICES. 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 FLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

- NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES, WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST. THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
  - DISCHARGES FROM FIREFIGHTING ACTIVITY;
  - FIRE HYDRANT FLUSHINGS;
  - VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
  - DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX C(3) OF MAINE DEP 06-096 CHAPTER 500;
  - ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
  - PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
  - UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
  - UNCONTAMINATED GROUNDWATER OR SPRING WATER;
  - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
  - UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5) MAINE DEP 06-096 CHAPTER 500);
  - POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
  - 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) MAINE DEP 06-096 CHAPTER 500. SPECIFICALLY, THE DEPARTMENTS APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

- WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
- FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
- TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

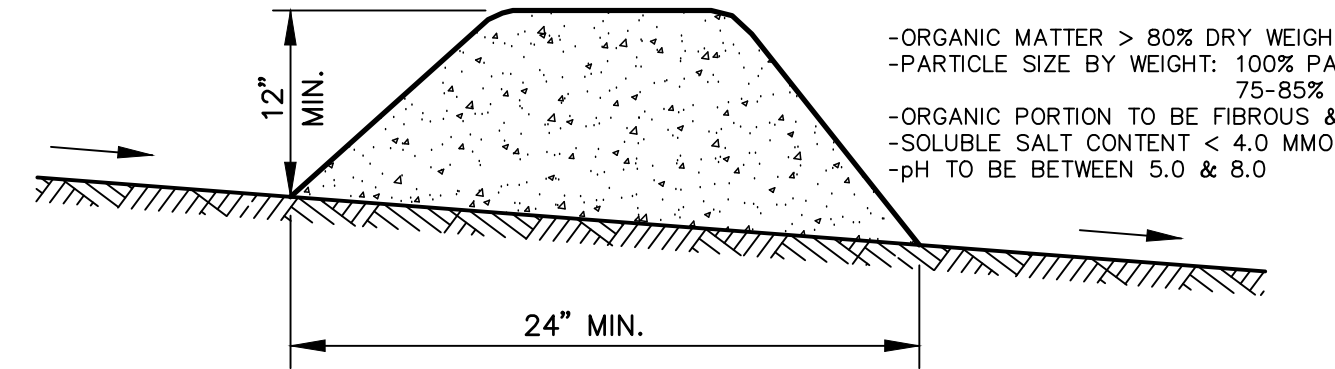
- ADDITIONAL REQUIREMENTS: ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.



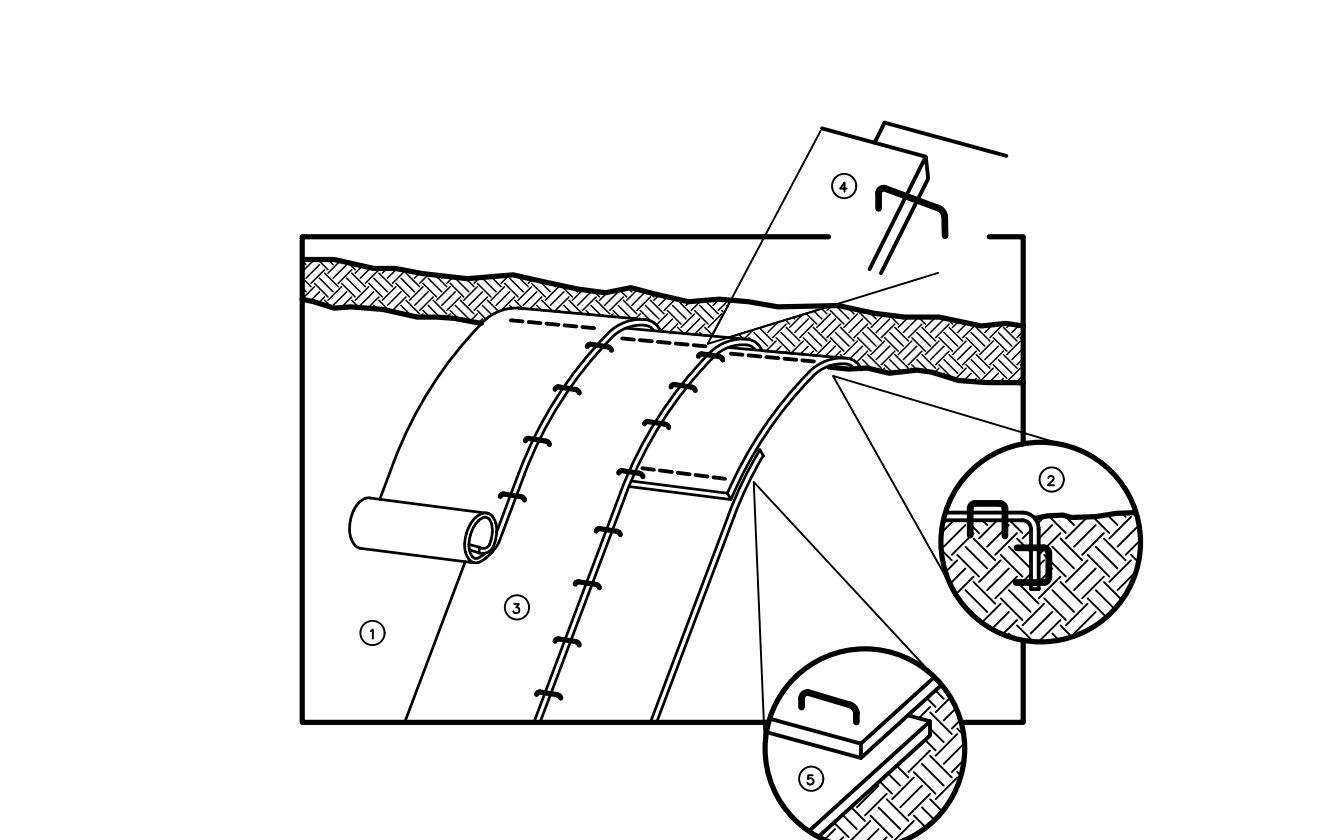
SILT FENCE DETAIL N.T.S.

NOTE: SILT FENCE OR EROSION CONTROL BERM CAN BE USED FOR SILT BARRIERS INTERCHANGEABLY OR AS CONDITIONS WARRANT, WITH THE EXCEPTION OF AREAS DIRECTLY UPGRADIENT OF WETLANDS WHERE THEY SHALL BE USED IN CONJUNCTION TO PROVIDE A DOUBLE-ROW OF SILT BARRIER.

PLACE BARRIER ALONG RELATIVELY LEVEL CONTOUR. EROSION CONTROL MIX SHOULD CONTAIN A WELL GRADED MIXTURE OF PARTICLE SIZES AND MAY OF SLOPES > 8% OR WHERE THERE IS FLOWING WATER. SEE MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS FOR INSTALLATION INSTRUCTIONS.



EROSION CONTROL MIX BERM N.T.S.



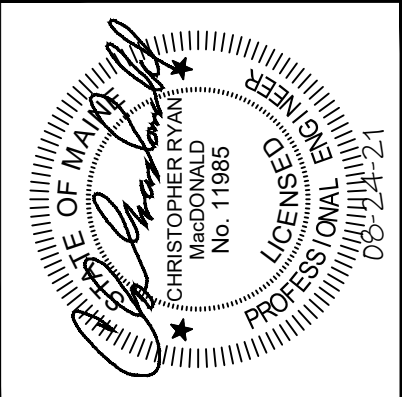
- Prepare soil before installing blankets.
- Begin at top of slope by anchoring blanket in 6" x 6" trench. Backfill & compact trench after staking.
- Roll blankets down or horizontally across slope.
- The edges of parallel blankets must be stapled with approx. 2" overlap.
- When blankets must be spliced down the slope, place blankets end over end (shingle style) with approx. 4" overlap. Staple through overlapped area, approx. 12" apart.
- Erosion control blankets shall be used on slopes steeper than 3:1 but limited to a max. of 2:1.

Slope Stabilization: Erosion Control Blanket shall be in accordance with M.D.O.T. standard specifications, Section 6.13, Temporary Erosion Control Blankets and Extended Use Erosion Control Blankets.

Slope Stabilization Detail N.T.S.

LOW POINT SEDIMENT CONTROL BARRIER N.T.S.

| REVISION                                            | DESCRIPTION |
|-----------------------------------------------------|-------------|
| NO.                                                 | DATE        |
| 1                                                   | 08/24/21    |
| Submitted to Planning Department for Initial Review |             |



**BH2M**

**Berry Huff, MacDonald, Milfigan Inc.**  
Engineers, Surveyors

28 State Street  
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Fax: (207) 839-8250

FOR  
Chabad Lubavitch of Maine Inc.  
11 Pomeroy Street  
Portland, Maine

**EROSION CONTROL DETAILS**

**CHANGE OF USE & MINOR SITE PLAN APPLICATION**

LAND OF  
CHABAD LUBAVITCH OF MAINE INC.  
11 POMEROY STREET  
PORTLAND, MAINE

| DESIGNED     | DATE        |
|--------------|-------------|
| C. MacDonald | August 2021 |
| DRAWN        | SCALE       |
| B. Monsen    | As Noted    |
| CHECKED      | JOB. NO.    |
| C. MacDonald | 21100       |

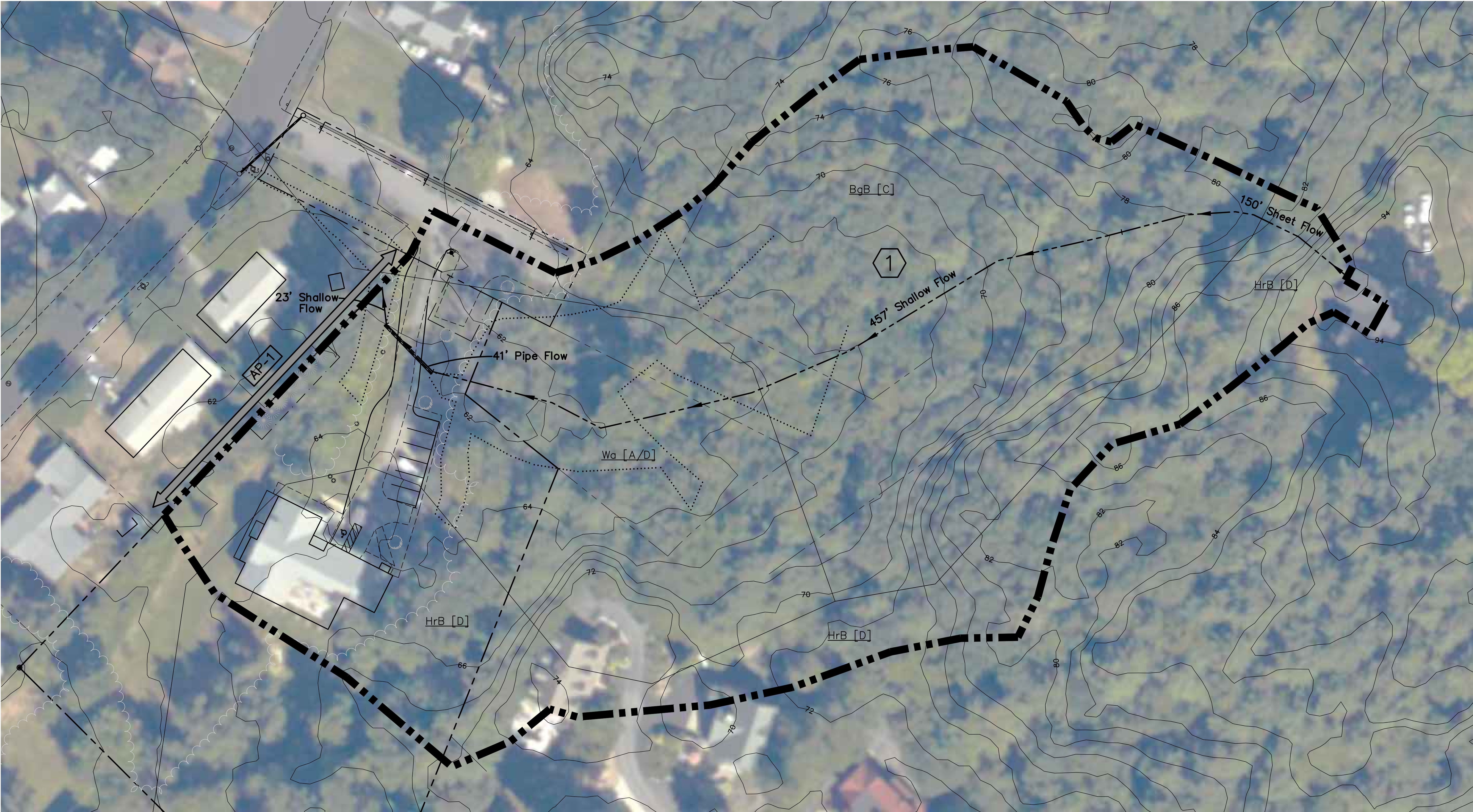
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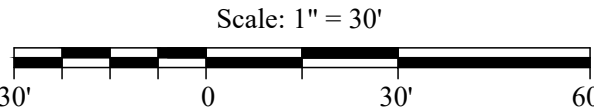
| SYMBOL | DESCRIPTION                 |
|--------|-----------------------------|
|        | DRAINAGE SUB AREA           |
|        | DRAINAGE AREA BOUNDARY      |
|        | TIME OF CONCENTRATION ROUTE |

| ANALYSIS POINT | 2 YR. STORM | 10 YR. STORM | 25 YR. STORM |
|----------------|-------------|--------------|--------------|
| AP-1           | 1.57 CFS    | 4.37 CFS     | 7.02 CFS     |

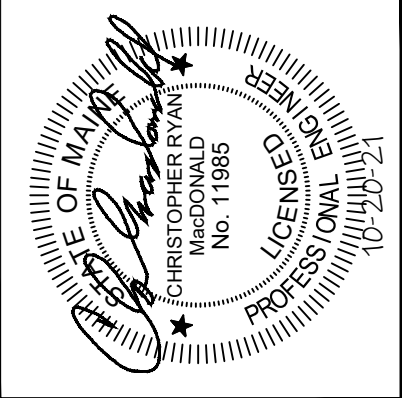
| SYMBOL | DESCRIPTION         |
|--------|---------------------|
|        | SOIL BOUNDARY LINES |
|        | LIMIT OF WETLANDS   |

| SYMBOL | SOIL                   | GROUP |
|--------|------------------------|-------|
| BgB    | NICHOLVILLE (0-8%)     | C     |
| HrB    | LYMAN-TUNBRIDGE (0-8%) | D     |
| Wa     | WALPOLE                | A/D   |

\* SOILS INFORMATION PROVIDED BY NRCS FROM USDA WEB SOIL SURVEY FOR CUMBERLAND COUNTY AND PART OF OXFORD COUNTY, MAINE, SURVEY AREA DATA VERSION 17, DATED JUNE 5, 2020.



| NO. | DATE     | REVISION DESCRIPTION                                |
|-----|----------|-----------------------------------------------------|
| 1   | 08/24/21 | Submitted to Planning Department for Initial Review |
| 2   | 10/20/21 | Revisions Based on Planning Department Comments     |
|     |          |                                                     |
|     |          |                                                     |
|     |          |                                                     |
|     |          |                                                     |



**BH2M**

Barry Huff, MacDonald, Milligan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel. (207) 839-2771  
www.bh2m.com

FOR

Chabad Lubavitch of Maine Inc.  
11 Pomeroy Street  
Portland, Maine

POST DEVELOPMENT  
DRAINAGE PLAN  
CHANGE OF USE & MINOR SITE  
PLAN APPLICATION  
LAND OF  
CHABAD LUBAVITCH OF MAINE INC.  
11 POMEROY STREET  
PORTLAND, MAINE

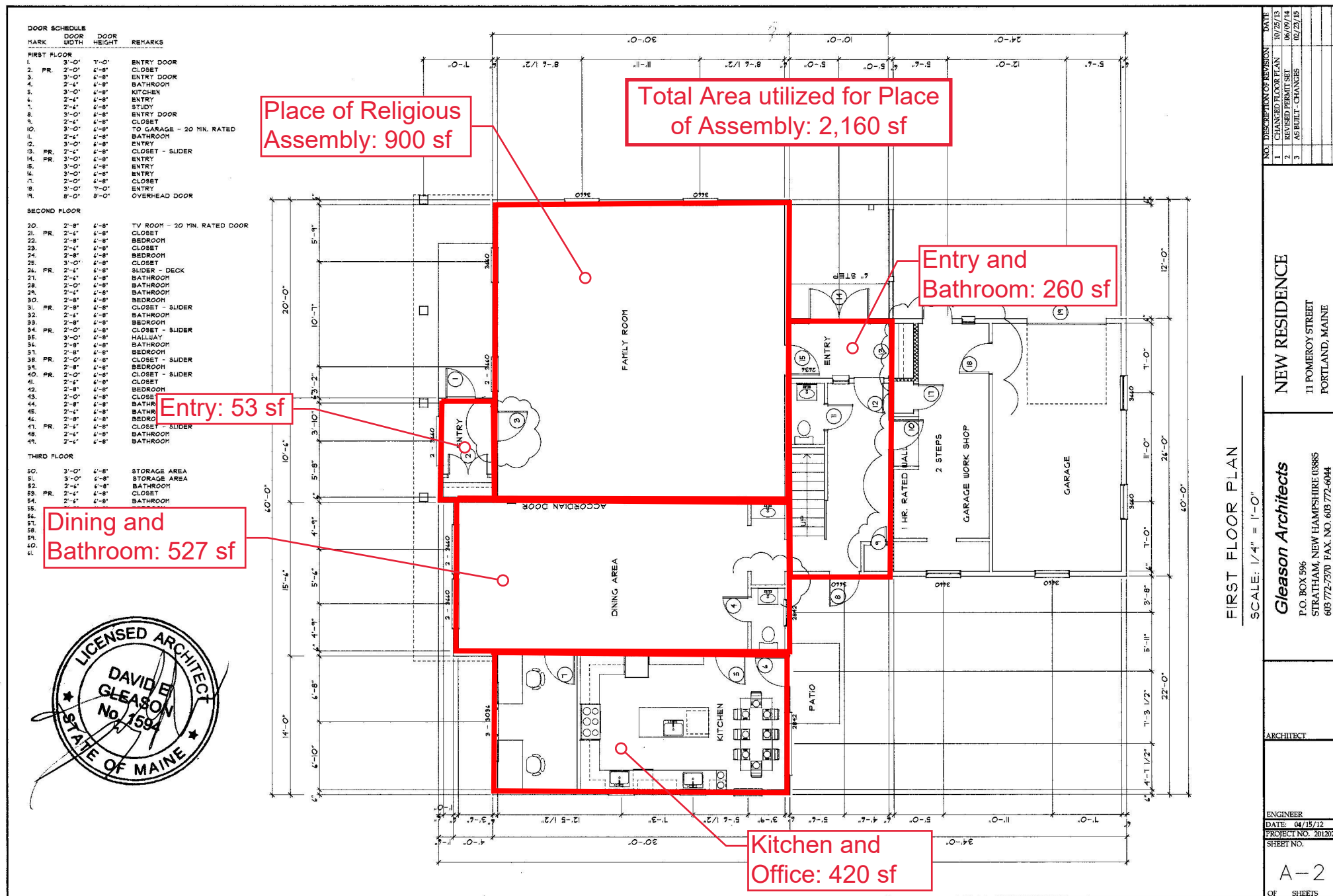
|                          |                     |
|--------------------------|---------------------|
| DESIGNED<br>C. MacDonald | DATE<br>August 2021 |
| DRAWN<br>Staff           | SCALE<br>1" = 30'   |
| CHECKED<br>C. MacDonald  | JOB. NO.<br>21100   |

SHEET

B

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Ali Goldstein <alison.goldstein@gmail.com>

May 22, 2022, 5:11:04 PM (17 hours ago)

to planningboard@portlandmaine.gov, Daniel Norup

**Subject:** 11 Pomeroy Street Application PL-000058-2018 / Plan Number CU-001763-2021

*To the Planning Board,*

*Our names are Daniel and Alison Norup, and we are residents and homeowners at 14 Benjamin Way - direct neighbors and within the immediate vicinity of 11 Pomeroy Street.*

*This is our third time writing to the Planning Board about the application for 11 Pomeroy Street. We previously wrote on October 22nd, 2021 and April 6, 2022. Both emails are included below.*

*Building upon our previous emails, we are disappointed on two main items we included in our previous emails as well as were addressed during the April 12th meeting.*

*1) In the April 12th meeting, the Planning Board Chairwoman pointed out that hearings should not happen for Applications where fees are outstanding, especially past due. The Chabbad of Maine still continues to not take its application seriously as the Chabbad has not paid its outstanding fees, this includes the aforementioned*

- [October 2021 Cost Legal Ad and Cost of Notices fees that were due in November 2021](#) and
- [March 2022 Cost Legal Aid and Cost of Notices fees that were due in April 2022](#) - at the time of the last hearing.

*In addition, the Chabbad has now not paid the below as well:*

- [May 2022 Cost Legal Ad and Cost of Notices fees that are due in June 2022](#) and
- [May 2022 PL Additional Application fees that are due in June 2022.](#)

*2) Our concerns around 11 Pomeroy being zoned for only residential use, continues. We are direct neighbors of the Chabbad of Maine, and we as well as many others continue to attempt engagement with our neighbors and extend our community. It is concerning to us that the Chabbad continues to not engage the larger community - a very important point covered in the April 12th meeting. We cannot reiterate enough that we bought in this neighborhood because it is residential - zoned for residential, not commercial.*

*Due to the late scheduling of this hearing - we were only alerted via mail one week prior - we will do our best to be in attendance virtually on Tuesday, May 24th.*

*Thank you.*

*Daniel and Alison Norup  
14 Benjamin Way  
Portland, ME 04102*

**PsstDue Screenshots and Links:**

[October 2021 Cost Legal Ad and Cost of Notices fees that were due in November 2021](#)

[Back](#)

Invoice Number: INV-00056343

|                |                    |               |            |
|----------------|--------------------|---------------|------------|
| Invoice Total: | \$813.61           |               |            |
| Status:        | Invoiced, Past Due | Invoice Date: | 10/18/2021 |
|                |                    | Due Date:     | 11/17/2021 |
| Description:   | CU-001763-2021     |               |            |

[Primary Fees](#) [Misc Fees](#) [Payments](#) [Attachments](#) [Contacts](#)

Primary Fees

Sort [Fee Name ▾](#)

| Fee Name        | Fee Total | Amount Due | Case Number    | Case Type | Notes |
|-----------------|-----------|------------|----------------|-----------|-------|
| Cost Legal Ad   | \$726.61  | \$726.61   | CU-001763-2021 | Plan      |       |
| Cost Of Notices | \$87.00   | \$87.00    | CU-001763-2021 | Plan      |       |

Results per page [10 ▾](#) 1 - 2 of 2 << < 1 > >>

March 2022 Cost Legal Aid and Cost of Notices fees that were due in April 2022

[Back](#)

Invoice Number: INV-00064408

|                |                    |               |            |
|----------------|--------------------|---------------|------------|
| Invoice Total: | \$563.65           |               |            |
| Status:        | Invoiced, Past Due | Invoice Date: | 03/30/2022 |
|                |                    | Due Date:     | 04/29/2022 |
| Description:   | CU-001763-2021     |               |            |

[Primary Fees](#) [Misc Fees](#) [Payments](#) [Attachments](#) [Contacts](#)

Primary Fees

Sort [Fee Name ▾](#)

| Fee Name        | Fee Total | Amount Due | Case Number    | Case Type | Notes                                                         |
|-----------------|-----------|------------|----------------|-----------|---------------------------------------------------------------|
| Cost Legal Ad   | \$476.65  | \$476.65   | CU-001763-2021 | Plan      | % of legal ad for the 4-12-2022 Planning Board meeting.       |
| Cost Of Notices | \$87.00   | \$87.00    | CU-001763-2021 | Plan      | Notice to neighbors for the 4-12-2022 Planning Board meeting. |

Results per page [10 ▾](#) 1 - 2 of 2 << < 1 > >>

May 2022 Cost Legal Ad and Cost of Notices fees that are due in June 2022

[Back](#)

Invoice Number: INV-00067618

|                |                |               |            |
|----------------|----------------|---------------|------------|
| Invoice Total: | \$561.96       |               |            |
| Status:        | Due            | Invoice Date: | 05/18/2022 |
|                |                | Due Date:     | 06/17/2022 |
| Description:   | CU-001763-2021 |               |            |

[Primary Fees](#) [Misc Fees](#) [Payments](#) [Attachments](#) [Contacts](#)

Primary Fees

Sort [Fee Name ▾](#)

| Fee Name        | Fee Total | Amount Due | Case Number    | Case Type | Notes                                                         |
|-----------------|-----------|------------|----------------|-----------|---------------------------------------------------------------|
| Cost Legal Ad   | \$474.96  | \$474.96   | CU-001763-2021 | Plan      | % of legal ad for the 4-24-2022 Planning Board meeting.       |
| Cost Of Notices | \$87.00   | \$87.00    | CU-001763-2021 | Plan      | Notice to neighbors for the 4-24-2022 Planning Board meeting. |

Results per page [10 ▾](#) 1 - 2 of 2 << < 1 > >>



May 2022 PL Additional Application fees that are due in June 2022



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- [Calendar ⓘ](#)

[← Back](#)

Invoice Number: INV-00067707

|                |                |
|----------------|----------------|
| Invoice Total: | \$1,000.00     |
| Status:        | Due            |
| Invoice Date:  | 05/19/2022     |
| Due Date:      | 06/18/2022     |
| Description:   | CU-001763-2021 |

- Primary Fees
- Misc Fees
- Payments
- Attachments
- Contacts

Primary Fees

Sort [Fee Name ▾](#)

| Fee Name                       | Fee Total  | Amount Due | Case Number    | Case Type | Notes                                      |
|--------------------------------|------------|------------|----------------|-----------|--------------------------------------------|
| PL Additional Application fees | \$1,000.00 | \$1,000.00 | CU-001763-2021 | Plan      | Application Fee for Conditional Use Review |

Results per page [10 ▾](#) 1 - 1 of 1 << 1 >>

# Planning Board Report

## Planning and Urban Development Department



Dougherty Commons Redevelopment  
57 Douglass Street  
Major Site Plan and Inclusionary Zoning Application  
PL-001888-2021; CU-001900-2022  
Maine Cooperative Development Partners; The Szanton Company, Applicants

|                             |                         |                     |                         |
|-----------------------------|-------------------------|---------------------|-------------------------|
| <b>Submitted to:</b>        | Portland Planning Board | <b>Prepared By:</b> | Jimmy Dealaman, Planner |
| <b>Public Hearing Date:</b> | May 24, 2022            | <b>Date:</b>        | May 20, 2022            |

### I. INTRODUCTION

Maine Cooperative Development Partners and the Szanton Company is seeking a Major Site Plan and Inclusionary Zoning Conditional Use approval to facilitate construction of eight new residential buildings totaling approximately 120,345 square feet of floor area and creating a total of 120 residential units including 61 affordable units at 43 and 91 Douglass Street (57 Douglass Street). The proposed development includes two separate phases of construction including 1) a 63-unit, five-story multifamily residential building and; 2) seven two to three-story townhome-style buildings comprising 57 units. Each phase includes associated site improvements including but not limited to parking, landscaping, and a new shared-street “woonerf” along the center of the site. The site is located in the Libbytown neighborhood and within the R-5a Residential zone.



Figure 1: Approximate Development Site

This application is being referred to the Planning Board for compliance with the City of Portland’s Land Use Code Site Plan Standards, Section 14.1 and Inclusionary Zoning Conditional Use Standards, Section 18.2.3.

The Planning and Urban Development Department mailed 101 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the May 13 and 14, 2022 editions of the *Portland Press Herald*. The Planning Board held a first workshop on March 22, 2022, and a second workshop on May 10, 2022.

|                             |                                                             |
|-----------------------------|-------------------------------------------------------------|
| <b>Applicants:</b>          | Maine Cooperative Development Partners; The Szanton Company |
| <b>Engineer:</b>            | Sam Lebel, Acorn Engineering                                |
| <b>Architects:</b>          | Kaplan Thompson Architects; Archetype Architects            |
| <b>Landscape Architect:</b> | Seth Kimball, Aceto Landscape Architects                    |



Figure 2: Aerial View of Site (facing north)

## II. REQUIRED REVIEWS

| <i>Review</i>                       | <i>Applicable Standards</i>                                                            |
|-------------------------------------|----------------------------------------------------------------------------------------|
| Site Plan                           | Section 14.6                                                                           |
| Inclusionary Zoning Conditional Use | Section 18.2.3                                                                         |
| Design Review                       | City of Portland Design Manual Section (h) Planned Residential Unit Development (PRUD) |

| <i>Waiver Requests</i>                                       | <i>Applicable Standards</i>                                                                           |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Request: To reduce drive aisle width from 24 feet to 22 feet | Technical Manual, Section 1.14.3.: Parking lot layout shall provide a minimum drive aisle of 24 feet. |

## III. PROJECT DATA

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| Existing Zoning | R-5a Residential                                                  |
| Property Size   | 146,011 square feet (3.34 acres)                                  |
| Existing Use    | Vacant Lot                                                        |
| Proposed Use    | Planned Residential Unit Development (PRUD), Multi-family housing |

|                         | <i>Existing</i> | <i>Proposed</i> | <i>Net Change</i> |
|-------------------------|-----------------|-----------------|-------------------|
| Building Footprint      | o               | 33,510 SF       | +33,510 SF        |
| Building Floor Area     | o               | 120,345 SF      | +120,345 SF       |
| Impervious Surface Area | 94,185 SF       | 80,382SF        | -13,803 SF        |
| Parking Spaces          | o               | 78              | +78 spaces        |
| Bicycle Parking Spaces  | o               | 50              | +50 spaces        |
| EV Charging Stations    | o               | 16              | +16 stations      |

## IV. BACKGROUND

On December 16, 2019, the City Council approved the sale of the property (Resolve 10-19/20) located at 43 and 91 Douglass Street based on a recommendation from the City's Housing Committee to market the property to help meet the City's goals of constructing housing.

A. RFP for Disposition of 43 & 91 Douglass Street

In 2020, the City of Portland released an RFP to dispose of three separate City-owned properties, with the property at 43 and 91 Douglass Street being among them (Attachment 1). The criteria for consideration centered around the ability to provide high quality and age-inclusive affordable housing at-scale, and integrated with the surrounding community.

Aside from affordability requirements, the RFP requires that the development be designed in accordance with Portland's Green Building Code, and in a manner that is compatible with the pattern, scale, massing and materials of surrounding development.

The Szanton Company was selected as the winning bid, and Douglass Commons LLC entered into a purchase and sale agreement with the City on May 21, 2021 for development of this site.

B. Purchase and Sales Agreement for 43 & 91 Douglass Street

On May 21<sup>st</sup>, 2021 the applicant entered into a Purchase and Sale agreement with the City, and shortly after identified that a zoning map amendment was necessary to complete the project as presented in their bid. The Purchase and Sale Agreement (Attachment C) has been signed and both Environmental Assessments are now completed. The sale is contingent upon a number of conditions, one of which requires an 18-month due diligence period, so the transfer of the property from the City to the applicant is expected to occur no later than November of 2022.

The agreement specifies that the developer shall be responsible for the creation of a certain number of residential units, with a portion of those being deed restricted for affordability.

C. Zoning Map Amendment

On September 14<sup>th</sup>, 2021 the Planning Board recommended to the City Council a zoning map amendment application (#ZN-001640-2021) to change the existing R-5 Residential zoning to R-5a Residential to facilitate an increase in density in a transit accessible location with access to services.

On October 18, 2021 the City Council approved an amendment to the City's Zoning Map (Order 72-21/22) as recommended by the Planning Board for both parcels located at 43 and 91 Douglass Street (Attachment 2). The zoning map amendment became effective October 28<sup>th</sup>, 2021.

**V. EXISTING CONDITIONS AND SURROUNDING AREA**

The subject property is comprised of two vacant city-owned parcels at 91 and 43 Douglass Street (Plan 3). The property is bounded by City-owned Dougherty Field to the north, property owned by Maine Department of Transportation (MDOT) to the east and south, and to the west the site is bordered by a mix of 11 residential properties made up of four 3-Family, two 2 Family, and five single family homes built between 1850 and 1930s.

Historically, the site consisted of salt marches and wetlands until sometime prior to 1866. Until 1900 the site was used as a brick yard, with a portion of the site also containing a residential structure. The City acquired both parcels around the late 1930s through mid-1940s. In 1962, the West School was built and used as an elementary school until being used as an adult educational facility beginning in the mid-1980s,



which was eventually vacated in 2013, as the building had reportedly fallen into significant disrepair. The West School building was eventually demolished in 2016.

The site is proximate to a number of commercial uses (zoned B-2 Community Business) which are along Congress Street to the south. The surrounding area also includes the Kiwanis Community Pool on the upper portion of Dougherty Field to the north. A B-1 Neighborhood Business zone is mapped at the intersection of Douglass Street, Brighton Avenue, and St. John Street. There are also a number of commercial/industrial land use types that exist along St James Street to the north east which are zoned I-M Industrial. To the west there are approximately four blocks of mid density (R-5) residential neighborhood that becomes lower density (R-3) residential zoning heading further west, which together provide a primarily residential context. Also serving these neighborhoods, at the end of Stevens Avenue, a priority corridor identified in the City's Comprehensive Plan, is the Westgate Shopping Center (zoned B-2 Community Business), a roughly 13-minute walk from the development site.

The site is accessible to public transit and is in close proximity to Portland METRO bus routes 1, 5, 9A, and 9B, which run along Congress Street, Park Avenue, and the Fore River Parkway. The site is also 0.5 miles from the Portland Transportation Center – Amtrak Downeaster and Concord Coach Station. Further south, beyond the Portland Transportation Center is Thompson's Point, a large-scale mixed-use development including light industrial, restaurant, and venue space as well as the Portland Children's Museum.

Prior to this application, there was a recent zoning map amendment in the vicinity approved by the City Council on May 3, 2021 (Order No. 226-20/21) rezoning a property at 1217 Congress Street and adjacent parcels from a B-1 Neighborhood Business zone to a B-2 Community Business zone.

The adjacent Dougherty Field park complex at 107 Douglass Street was also recently administratively approved for site work (PL-001867-2021) involving a new basketball court and playground replacements which will have a pathway connection coordinated with the development at 57 Douglass Street.



*Figure 3: Aerial View*

*(facing West) Showing Surrounding Uses*





Figure 4: Perspective Rendering Facing North (Co-op buildings on left and 5-story building on right)

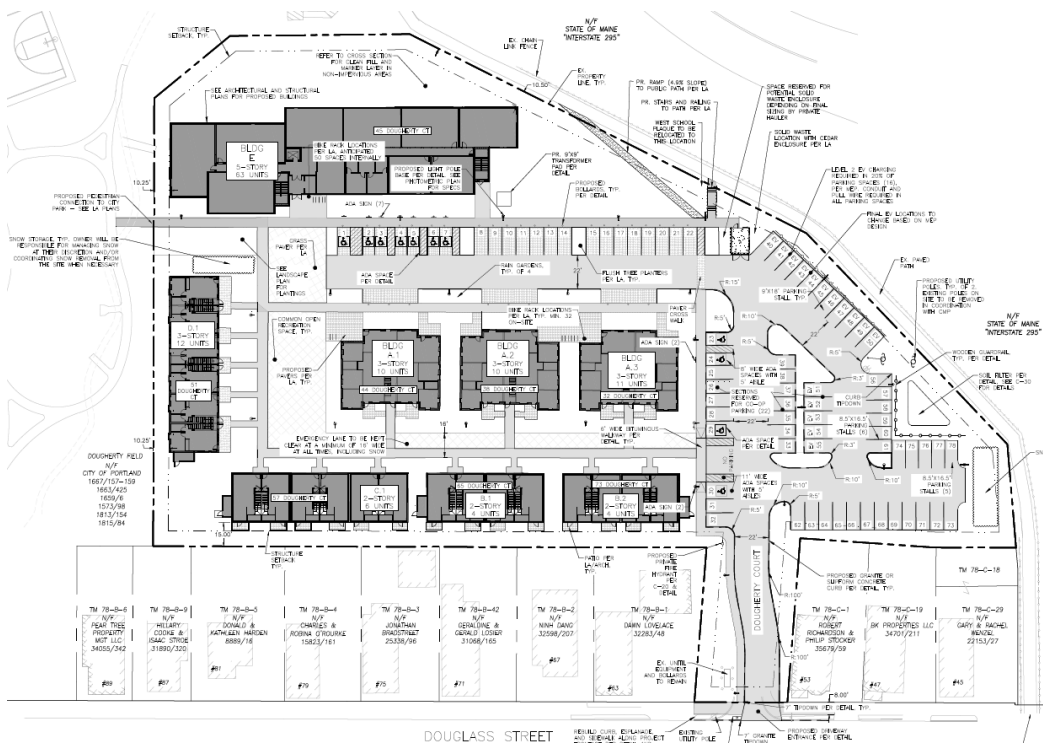


Figure 5: Overall Site Plan (Phase 1 & Phase 2 Shown)

## VI. PROPOSED DEVELOPMENT

The applicant has provided an overall development plan (Plan 5) proposing a joint infill development of eight new buildings creating a total 120 residential units including 61 affordable units combined. Maine

Cooperative Development Partners and the Szanton Company are each developing a portion of the project, and proposing a phased site plan in order for each phase to be independent of subsequent phases. Section 14.9.1 of the City's Land Use Code allows for phasing major site plans and requires that each phase of the project must demonstrate being at least 20 percent of the total development, show the entire tract/parcel, and demonstrate that each phase conforms to all applicable site plan standards in the event that subsequent phases do not go forward (e.g. providing all necessary infrastructure, landscaping, parking, etc.).

The applicant has submitted a Phase 1 and Phase 2 plan which have been reviewed by staff. The full development proposal includes a combined total of 120 residential units, 78 parking spaces, 16 EV charging stations, and 36,325 square feet of open space area which may be accomplished with either Phase 1 or Phase 2 being constructed individually in any order or concurrently. Each segmented phase of the applicant's development proposal is described below:

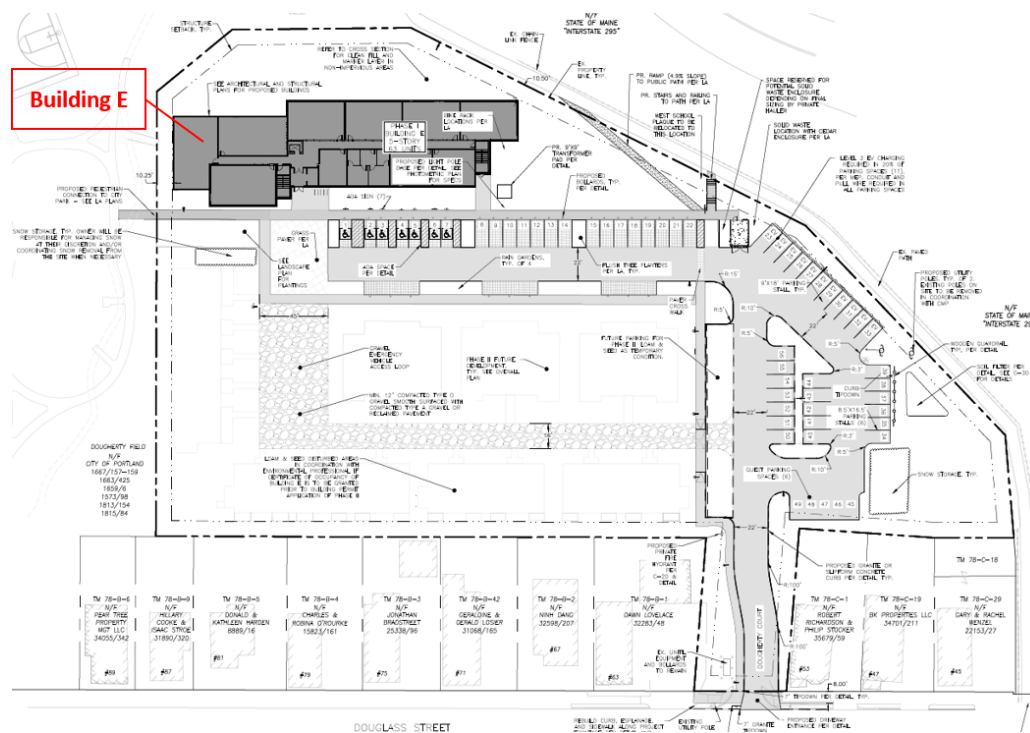


Figure 6: Phase 1 Development Plan

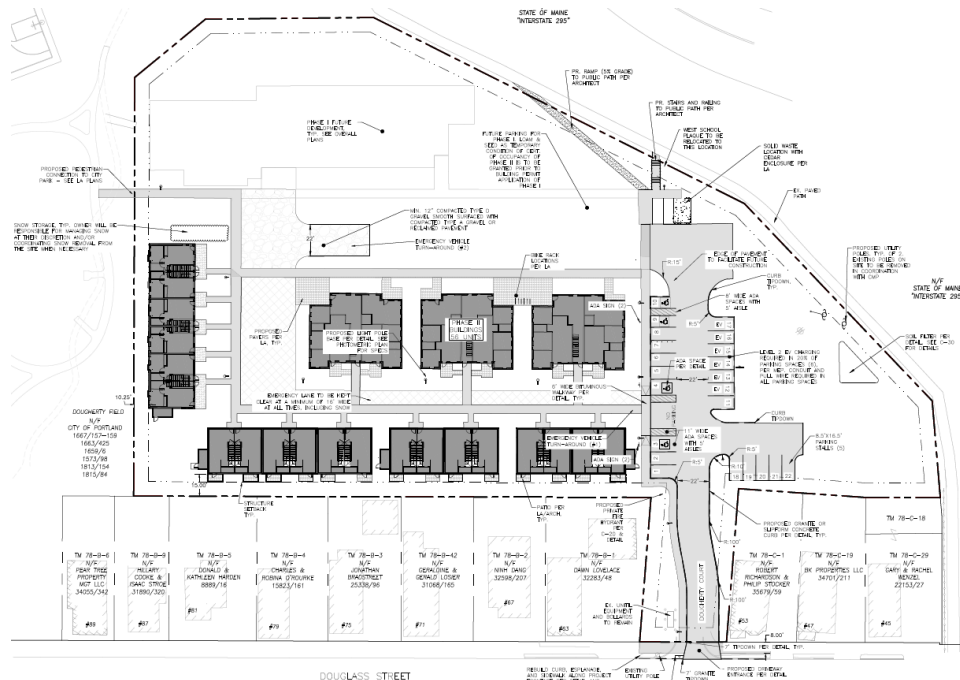
#### A. PHASE 1 – BUILDING E

Phase 1 of the proposal includes constructing a five-story apartment building (Building E) with 63 residential units (approximately 64,615 SF) with all-in-one heating/cooling units that combine high-efficiency heat pumps, ERVs, MERV 13 filters, and a bathroom exhaust inside the unit. The building is located toward the eastern portion of the site along the I-295 interchange (Plan 6). The building will be comprised of a mix of 35 one-bedroom, 18 two-bedroom, and 10 three-bedroom rental units managed by the Szanton Company.

The proposal includes constructing a private street (“Dougherty Court”) which leads into the center of the site between each phase and is intended to function as a shared-street or ‘woonerf’ to ‘encourage community gathering and prioritize the pedestrian experience.’ Phase 1 includes building a total of 56 parking spaces—including six compact spaces as well as 11 electric vehicle charging stations. Other site

improvements include stormwater management by way of a soil filter, approximately 15,339 square feet of common open recreation space, a gravel emergency vehicle access loop as well as loaming and seeding of the disturbed area should Phase 1 be constructed prior to Phase 2. Additionally, Phase 1 provides a walkway connection to adjacent Dougherty Field, with stairs and a sloped walkway connecting the site to the adjacent trail system, which is managed by Portland Trails, as well as providing lighting along the trail to promote safety of trail users.

Phase 1 proposes 46 deed restricted workforce housing units at or below 60% AMI) pursuant to the Inclusionary Zoning requirements (Section 18.2.3).



**Figure 7: Phase 2 Development Plan**

### **B. PHASE 2 – BLDGS. A1, A2, A3, B1, B2, C1, D1**

Phase 2 of the proposal includes constructing a collection of seven townhome-style buildings totaling 57 residential units with approximately 55,730 square feet under a limited equity cooperative model managed by Maine Cooperative Development Partners (Plan 6a). The buildings include three new 2-story townhouses each with six units behind the existing Douglass Street houses, three 3-story courtyard flats each with 10 to 11 units at the center of the site, and one 3-story building with row houses made up of 12 units off of Dougherty Park to the north of the site. Phase 2 includes a total of 19 one-bedroom, 15 two-bedroom, and 23 three-bedroom units, 22,234 square feet of common open recreation space, and loaming and seeding of the remaining disturbed area onsite should Phase 2 be constructed prior to Phase 1. Additionally, this portion of development provides a hammerhead turnaround for emergency vehicle access in the event that Phase 1 is not yet constructed.

A six-foot pedestrian-only walkway is proposed running through the Phase 2 site leading to an open-space common area and connecting back to the shared-street portion of the site. Whichever phase commences site work first will be required to provide internal site circulation including but not limited to providing

acceptable turnaround for emergency vehicle to/from the site. Phase 2 also includes providing site improvements in order to meet site plan requirements such as providing required landscaping, stormwater management, and a total of 22 parking spaces and five electric vehicle charging stations. It also includes providing trail and park connections and trail lighting described above in Phase 1, should Phase 2 be constructed first.

Phase 2 proposes to provide 15 deed restricted workforce housing units (at or below 80% AMI) pursuant to the Inclusionary Zoning requirements (Section 18.2.3).

## VII. PREVIOUS PUBLIC MEETINGS

### WORKSHOP 1 – MARCH 22, 2022

The project was introduced to the Planning Board by the applicant and staff at a workshop held on March 22, 2022. The Board provided initial feedback about the design, requested parking aisle waiver, and parking requirement, which is as follows:

**Design** – The Board expressed general support for the design and layout of both phases. The Board asked questions about reviewing both phases under PRUD standards and if there needed to be continuity between both portions of the development. Staff responded that PRUD design standards do provide for some flexibility for each portion of the overall development because Phase 2 is being developed as a PRUD, while Phase 1 is a multi-family building, which is required to follow the PRUD standards per Table 7-B footnote 3. There should be some cohesion to the whole development overall, however, the different uses and building types may provide for variation between the two. The Board also asked if window mounted air conditioning units could be restricted and if there was sufficient storage area available to units. Some Board members expressed interest in providing occupiable outdoor ground level space, and more uniqueness between the designs of the co-op unit buildings. The Board requested the applicant revisit the cornice of the five-story apartment building in order to fit with detailing proposed on other buildings and questioned the material choices proposed on the stair towers and seeing more variety in windows to improve the fenestration.

**Parking Aisle and Compact Parking Waiver** – The Board generally supported a reduced parking aisle width of 22 feet. The Board supported the extent of proposed compact parking spaces provided, however since the first workshop the applicant now proposes less than 20 percent compact spaces and the waiver request has been withdrawn.

**Parking Requirement** – The Board were generally supportive of considering a reduced parking amount for the overall development due to the sites access to public transit but requested a parking analysis to understand the parking demand generated by the proposal. The applicant answered Board questions explaining that parking spaces would require tags and would be offered by each phase on a first come first serve basis. The Board requested more information about how parking spaces and EV charging station spaces would be provided by each individual phase. Some Board members were interested in the site providing guest parking, as well as better understanding the quality of transit options available in the vicinity of the site.

### WORKSHOP 2 – MAY 10, 2022

The Planning Board held a second workshop on May 10, 2022. The Board provided additional feedback about the application materials, including input about the proposed design, parking analysis, and requested parking aisle waiver. Some of the Board requested the elevations show the location of vents. Other Board members expressed support for the reduced parking amount proposed and were supportive of the waiver for reduced parking aisle width. The Board also expressed concern with the absence of centralized cooling within the phase 1 multi-family building and expressed a desire to restrict the use of window AC units. The Board encouraged the applicant to explore alternative options for cooling units in the building. Since this workshop, staff have received an Autoturn analysis for emergency vehicles, additional trail lighting, finalized parking analysis, updated HVAC designs, and additional information justifying what site constraints necessitate a waiver for reduced drive aisle width. All other outstanding staff comments are addressed in this report.

#### **VIII. RIGHT, TITLE, & INTEREST**

The owner of the property is currently the City of Portland. The applicant has entered into a Purchase and Sale Agreement with the City (Attachment C) which serves as sufficient right-title-interest documentation for the purposes of reviewing a site plan application.

The applicant's existing conditions survey (Plan 3) indicates the property has one easement present on site which was granted by Public Works in 2016 to Northern Utilities, Inc. for an anode bed (Book 33292, Page 266) which provides corrosion protection for underground utility lines. The anode bed easement is currently in the process of being amended by the City's attorney to accommodate the development proposal as part of the sale of the property.

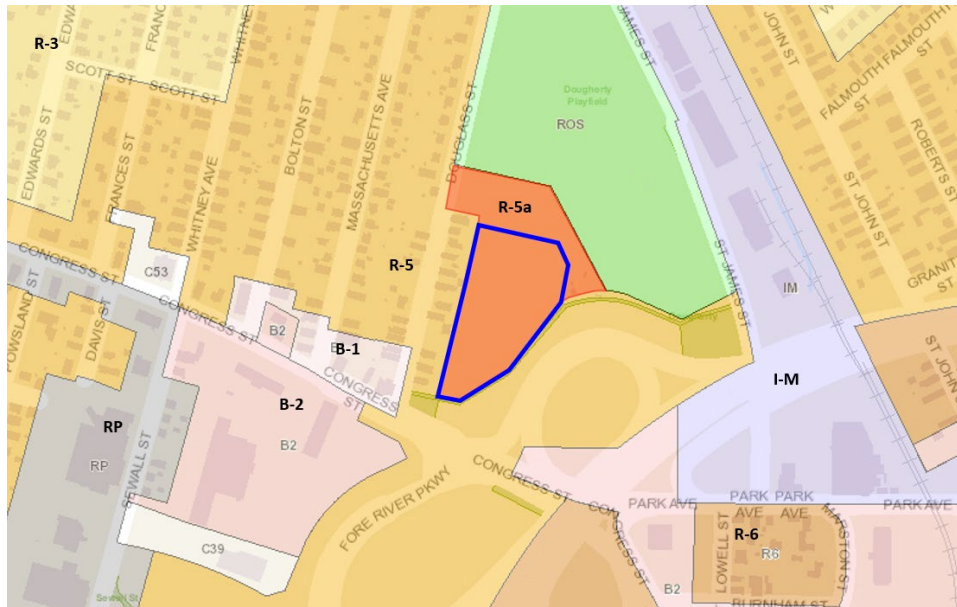
#### **IX. FINANCIAL & TECHNICAL CAPACITY**

The applicant has submitted a letter of financial capacity from each applicant's financial institutions as well as documentation from the Secretary of State stating both applicants are in good standing (Attachment G).

The applicant's representatives have also provided descriptions and examples of technical capacity demonstrating their ability to undertake the project (Attachment H).

#### **X. ZONING ANALYSIS**





*Figure 8: Zoning Map with Subject Parcel Outlined in Blue*

The subject property is located in the R-5a Residential zone (Figure 8).

The proposed development proposes two uses; Phase 1 proposes a building with 63 units of housing which falls under the multifamily use and Phase 2 proposes seven buildings with 57 units under a Planned Residential Unit Development (PRUD) use. According to Land Use Code Table 6-A, both multifamily and PRUDs are permitted uses in the R-5a Residential zone.

Under Table 7-A of the City's Land Use Code, in the R-5a zone PRUD standards apply to multi-family development of four or more units, so the proposal is subject to Table 7-A except where superseded by Table 7-B with PRUD dimensional standards.

The project provides more than 50% of the units as low-income or workforce units for rent or for sale (See Section XI below) and therefore it may utilize dimensional bonuses available to PRUD developments under Article 18 of the City's Land Use Code, which is incorporated into the zoning review. Staff analyzed the proposal and found that the project complies with all dimensional requirements for principal structures which are summarized below:

| <i>R-5a Residential Zone</i> | <i>Permitted</i>    | <i>PRUD Dimensional Bonus Applied'</i> | <i>Proposed</i> |
|------------------------------|---------------------|----------------------------------------|-----------------|
| Street Frontage (min.)       | 50 feet             | N/A                                    | 60 feet         |
| Lot Width (min.)             | 60 feet             | N/A                                    | 247 feet        |
| Front Setback (min.)         | 25 feet             | 10 feet                                | 10 feet         |
| Rear Setback (min.)          | 25 feet             | 10 feet                                | 10 feet         |
| Right Side Setback (min.)    | 14-16 feet (varies) | 10 feet                                | 10 feet         |

<sup>1</sup> Planned Residential Unit Developments (PRUD) developments with more than 50% of the units as low-income or workforce units for rent or for sale may utilize dimensional bonuses and changes listed under Land Use Code Section 18.2.4.B.

|                                                                                                    |                     |                                                                                                                 |                  |
|----------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| Left Side Setback (min.)                                                                           | 14-16 feet (varies) | 10 feet                                                                                                         | 10 feet          |
| Stepbacks                                                                                          | N/A                 | N/A                                                                                                             | N/A              |
| Lot Coverage (max.)                                                                                | 30%                 | N/A                                                                                                             | 23%              |
| Off Street Parking Spaces                                                                          | 120 spaces          | N/A                                                                                                             | 78 spaces        |
| Lot Area (min.)                                                                                    | 2 acres             | N/A                                                                                                             | 3.34 acres       |
| Net land area per dwelling unit (min.)                                                             | 1,600 sq. ft.       | 800 sq. ft.                                                                                                     | 1,217 sq. ft.    |
| Units per building (max)                                                                           | N/A                 | N/A                                                                                                             | N/A              |
| Average number of units per building                                                               | N/A                 | N/A                                                                                                             | N/A              |
| Structure Height                                                                                   | 55 feet             | N/A                                                                                                             | 53 feet          |
| Building length                                                                                    | N/A                 | N/A                                                                                                             | N/A              |
| Bldg setback from external subdivision property lines (min.) for bldg. length 100 ft. or less      | 25 ft.              | 10 feet                                                                                                         | 10 feet          |
| Bldg setback from external subdivision property lines (min.) for bldg. length greater than 100 ft. | 35 ft.              | 10 feet                                                                                                         | 10 feet          |
| Distance between detached PRUD dwelling units (min.)                                               | N/A                 | N/A                                                                                                             | N/A              |
| Common recreation open space area (min.)                                                           | 200 sq.ft./D.U      | (200 sq. ft./D.U - Minimum contiguous size and setbacks do not apply and shall be set through site plan review) | 280 sq. ft./D.U. |

## XI. CONDITIONAL USE INCLUSIONARY ZONING (IZ)

As required by Section 18.2.3 of the City's Land Use Code, the City's Inclusionary Zoning Ordinance, residential developments with ten or more units are required to provide a minimum of twenty-five percent of the dwelling units as Workforce Housing units. Alternatively, the applicant may pay a fee-in-lieu for those units.

Given the project proposes a total of 120 units, a minimum of 30 workforce housing units are required to meet the IZ requirement. The applicant proposes making 46 (73%) of units at or below 60 percent AMI for Phase I, and 15 (26%) of units at or below 80 percent AMI for Phase II, for a combined total of 61 (51%) of units as workforce housing units and 59 (49%) as market rate units.

The City's Housing Program Manager reviewed the application (Attachment 4) and determined that the proposed project would meet the minimum requirements set forth in Section 18.2 providing the term of affordability for the workforce units shall have a minimum term of affordability of 30 years and recommends the applicant enter into an Affordable Housing Agreement (AHA) - detailing the affordability restrictions - with the City prior to issuance of a building permit.

Given that the project is proposing more than 50 percent of the units as workforce units for sale or rent, the project is eligible for the following dimensional bonuses and changes outlined in Section 18.2.4.B:

- Minimum lot area per dwelling unit is reduced by 50%.
  - R-5a PRUD Net land area per dwelling unit: 1,600 SF
  - R-5a PRUD Net land area per dwelling unit with Affordable Bonus: 800 SF
- Maximum number of units and maximum length of buildings do not apply but may be set through site plan review.

- Minimum building setbacks may be reduced to 10 feet.
- The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements.
- Minimum recreation open space area is reduced to 200 square feet per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size setbacks do not apply and shall be set through site plan review.
- The Planning Board's *Design Manual*, design standards, and guidelines with respect to PRUDs shall apply in full to PRUDs utilizing this subsection.

## XII. SITE PLAN REVIEW STANDARDS (Section 14.6)

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 14.6. Staff comments are below.

### 1. **Transportation Standards (Section 14.6.1)**

#### A. Impact on surrounding street systems

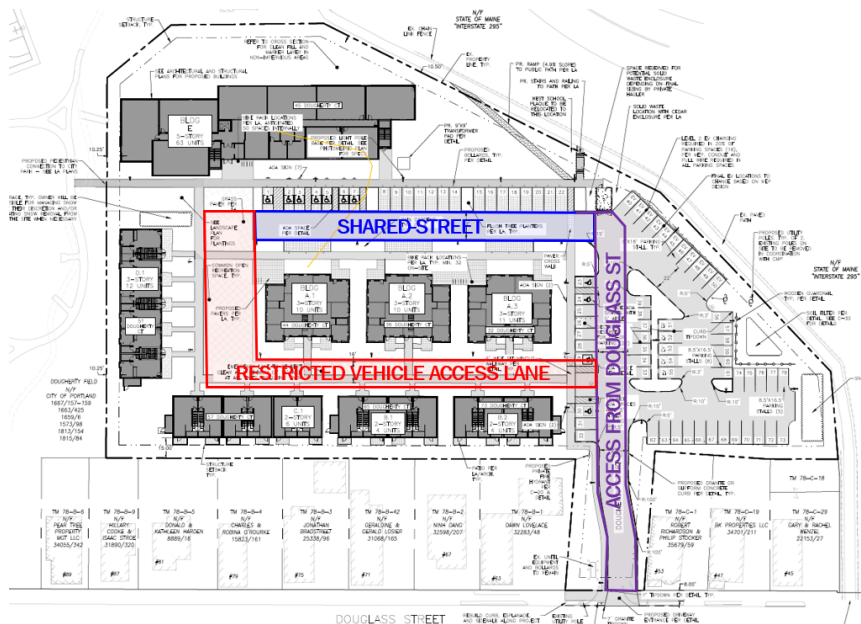
The proposed development is located off of Douglass Street, a local street, which connects two principal arterial roadways, Congress Street to the south and Brighton Avenue to the north. Both arterials are two priority corridors identified in the City's Comprehensive Plan.

The site is proximate to transit lines with METRO bus routes 5, 9A, and 9B on Congress Street and the 4-line on Brighton Avenue which operate within a half mile of the site. The site has several bus stops immediately available within a block along Congress Street. The applicant indicated that these services run every half hour at peak times and every hour off-peak, and that the Portland Transportation Center, a regional transit hub, is less than a half mile away and provides connections to METRO's Breeze and 1-line, as well as regional connections via the Downeaster and Concord Coach Lines (Attachment V).

The application anticipates increasing traffic by moderate levels, with 78 parking spaces proposed, and peak hour trips occurring on the weekend, primarily on Saturday with 54 peak hours trips expected.

The applicant's traffic analysis has been reviewed by the City's Consulting Traffic Engineer who finds it to be reasonable, and reports that there are no high crash locations in the vicinity. Based on the applicant's trip generation estimate he does not recommend a traffic study being required (Attachment 3). In general, the City's traffic consultant finds the egress and circulation to be acceptable for vehicles and pedestrians and based on these findings staff do not expect the proposed development to substantially increase congestion or provide hazard to the surrounding street network.

#### B. Access and circulation



**Figure 9: Overall Site Plan with Internal Circulation Highlighted**

The application proposes to continue using the existing access drive entrance which will become a two-way private street, Douglass Court, for access to the site, and discontinuing egress via the existing drive to the north. New site circulation through the site includes a main drive aisle connecting to a shared street and parking areas throughout the site, as well as a restricted access lane kept clear for emergency vehicles and pedestrians which runs through the site looping back to the shared street. (Figure 9). No drive-up services or loading needs are proposed except in three flexible, non-parking areas along the courtyard flats and shared-street where residents can use as gathering space or as a five-minute unloading zone for drop-offs. The application also includes providing common open recreation areas with grass pavers, pathway connection to Dougherty Field, stair and path connection to the adjacent trail system, and bituminous pavement sidewalks throughout the site connecting to the existing sidewalk on Douglass Street for pedestrian access.

The applicant has requested one waiver relevant to the parking lot and space design:

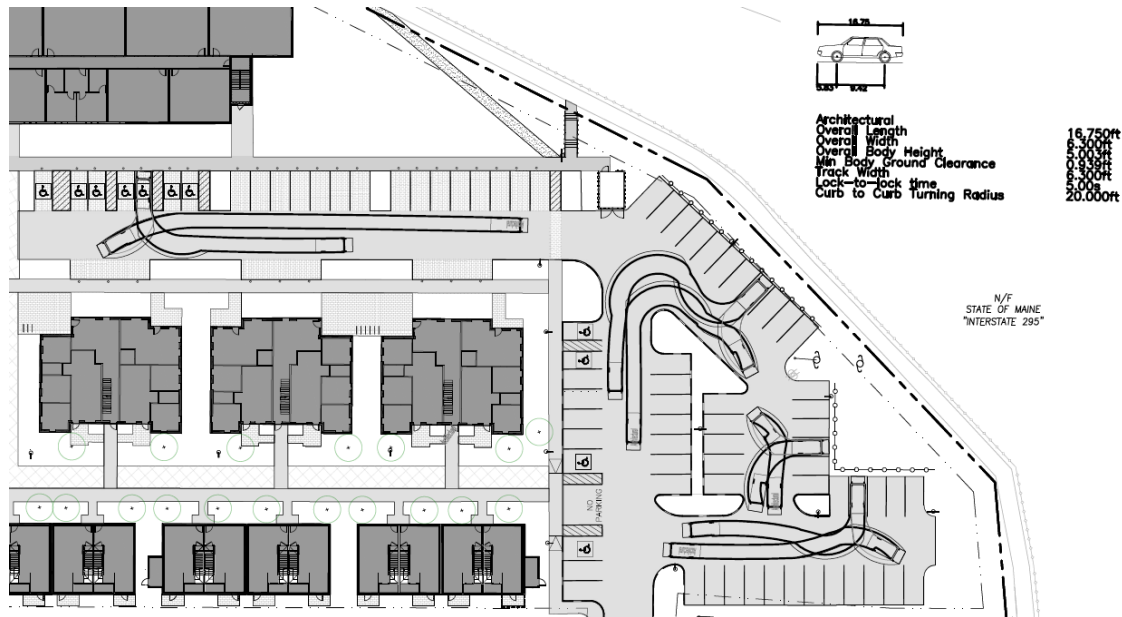
#### **Technical Manual Section 1.14.3 – Parking Lot Drive Aisle Width**

The applicant is requesting to reduce the drive aisle width from the required 24 feet to 22 feet, a two foot reduction. Section 1.14.3 of the City's Technical Manual requires a minimum drive aisle width of 24 feet. The applicant has provided additional justification as a basis for waiving the standard explaining:

*'Specific constraints include existing gas and electrical infrastructure that drive the overall parking layout geometry as well as elevation challenges when matching back into the abutting land. As seen, there is little room between the edge of pavement property line in several instances. Additionally, there is a strong desire to incorporate landscape islands and vegetation within the parking field to break up parking and providing shading. By reducing two drive aisles to 22', we gain four feet to be put towards screening/shading which is not only a policy goal of the City, but a Site Plan standard.'*

Additionally, the applicant has stated that given residents' tendency to become familiar with their parking spot and low rate of turnover that the 22 foot width is sufficient to accommodate a functional

parking lot as well as allow the site to decrease impervious area. The applicant has provided turning templates as demonstration of adequate maneuvering (Plan 56 & Figure 10), and stated that the proposed 22 feet is sufficient in a residential setting and allows for less impervious area and pavement-to-pavement opening to help motorists drive slower which is consistent with the goals of a woonerf space.



**Figure 10: Automobile Turn Templates**

City staff and the City's Consulting Traffic Engineer reviewed the applicant's submitted Autoturn analysis and waiver request and believes this waiver is appropriate because of the documented site constraints including underground utilities and topography. Staff also believe the reduction in driveway width allows for sufficient landscaped islands and planted buffer to be accommodated within and adjacent to the parking lot to support screening and an enhanced tree canopy.

#### C. Public transit access

Not applicable. Please see Section A above for additional information regarding public transit options available to site.

#### D. Parking

In general, residential units are required to provide one parking space per dwelling unit unless the project is eligible for parking requirement exceptions listed in Table 19-B of the Land Use Code. Per Table 19-B the Planning Board may establish a parking requirement that is less than one space per workforce or low-income housing unit, regardless of the size of the structure for affordable housing projects. The application includes providing 61 affordable units and 59 market rate units. In addition, for major site plans, the Planning Board shall establish the off-street parking requirement based on a parking study. Furthermore, as described in Table 19-B no off-street parking shall be required for developments within  $\frac{1}{4}$  mile of fixed route transit service. If the applicant were to take advantage of this exception, they would be required to provide a TDM plan.



The application on the whole proposes 78 parking spaces to meet the overall demand of the proposed units — a ratio of 0.65 spaces per unit. As part of the total parking space allotment, Phase 1 includes 56 spaces (0.89 spaces per unit) and Phase 2 includes 22 spaces (0.39 spaces per unit), which the applicant believes is an appropriate amount of parking to serve each phase of the development, given that more than half of the units will be offered as affordable. As a basis for determining an adequate parking amount, the applicant has provided a parking analysis (Attachment V) calculating parking generation based on industry parking generation rates (per Transportation Engineers (ITE) publication, Parking Generation, 5th Edition).

Due to the unbundling of the Phase 2 co-op parking from unit ownership as well as the finding made by the applicant's engineer that transit-oriented developments (TOD) generally have approximately 44 percent fewer vehicle trips than the industry parking generation standard, the applicant believes the respective parking amounts are sufficient. Additionally, the applicant has noted the site's close proximity to multimodal transportation services (See Section A above) as well as the site's pedestrian connections to the Dougherty Field Path and the applicant's intention to install 50 bicycle parking spaces onsite, which exceeds the required bicycle parking requirements.

The applicant's parking analysis for the full development anticipates an average parking demand of 70 parking spaces during the weekday peak hour, and the overall plan provides 78 spaces to address overall demand from the combined development.

The City's Parking Director has raised that 78 parking spaces is insufficient for 120 residential units and noted that the proposed development will increase demand for on-street parking (Attachment 6).

The City's Consulting Traffic Engineer has reviewed the applicant's updated parking analysis and estimates that parking demand is approximately 82 spaces (Attachment 3). The City's Consulting Traffic Engineer finds that the demand of 82 parking spaces is slightly above the supply of 78 parking spaces proposed, however, staff recommend that prior to issuance of a building permit the applicant revise and resubmit their plan to accommodate four additional parking spaces on site, or alternatively they may provide a fee-in-lieu payment into the Sustainable Transportation Fund pursuant to Section 19.1.7 for some or all of the required spaces, to sufficiently meet the projected demand for the project.

E. Transportation demand management (TDM)

Not Applicable.

2. **Environmental Quality Standards (Section 14.6.2)**

A. Preservation of significant natural features

Not applicable. The applicant has indicated that there are no significant natural features present on site.

B. Landscape preservation

The project includes removing 13 existing trees onsite — five of which are greater than 10-inch caliper but are outside the building setback area, therefore no tree replacement is required. The City Arborist has no concerns with the plan for tree removals, and finds that the applicant's stormwater maintenance agreement will help ensure vegetation located within rain garden areas will be monitored to ensure survival in the future.

C. Site landscaping and buffers

The applicant has submitted Landscape/Planting (Plans 19-23) plans which include planting approximately 110 trees and 400 shrubs throughout the site. The site includes a landscaped buffer of sugar maple trees along the adjacent trail to the east. To the west of the site, at the rear of the townhouse buildings, the landscaping plan provides a landscaped buffer from the existing Douglass Street residences proposing 10 upright Armstrong maple trees, and a dense mix of evergreen trees and other shrubs. An existing tree buffer at the rear of the existing Douglass Street properties is expected to remain to further buffer the development from the existing neighborhood.

Various other plantings and landscaping are proposed throughout the site including grass paver common areas and deciduous plantings along the main access roadway and throughout the parking lot areas.

The proposal includes screening the proposed transformer with a combination of trees and evergreen landscaping. The proposed solid waste container will be screened by a cedar fence as well as tree planting and arborvitae landscaping.

The creation of 120 residential units requires either planting a total of 120 street trees or an acceptable alternative as recommended by the City Arborist. The current plan proposes planting 25 trees along the public trail to the north, 19 adjacent to Dougherty Park, and 33 trees within the portions of the proposed street that provide a public benefit for a total of 77 trees eligible to count toward the street tree requirement. The applicant is required to provide an alternative for the remaining 43 required trees. The applicant has agreed to contribute to the tree fund for the remaining trees, which is supported by the City's Arborist.

#### D. Water quality/storm water management/erosion control

The project proposes managing stormwater by a series of systems including an underdrained soil filter, proprietary rain gardens, and routing all stormwater from the site to a separated storm drain on Douglass Street. Overall, the applicant has stated that the site improvements will decrease the amount of impervious area on the site and reduce the overall runoff levels.

The applicant has submitted a Stormwater Management Report and Erosion and Sedimentation Control Report, which has been reviewed by the City's consulting civil engineer for compliance with MDEP Chapter 500 requirements as part of the City's delegated stormwater review. The City's consulting civil engineer has no concerns regarding the proposal's ability to meet stormwater standards, however recommends the applicant revise the construction management plan once more information is available regarding sequencing of phases in order for each phased plan to consider the construction management requirements associated with the other phase being constructed or in operation, and to clarify what coordination is necessary between phases. Additionally, the City's consulting engineer recommends the applicant submit clear documentation demonstrating the responsibilities for maintaining stormwater infrastructure by each entity. Planning staff are recommending a condition of approval to ensure the above comments will be addressed prior to issuance of a building permit.

### **3. Public Infrastructure and Community Safety Standards (Section 14.6.3)**

#### A. Consistency with City Master Plans

#### **Portland's Plan 2030**

Comprehensive Plan goals and policies (state and local) relevant to the proposed development are included below. The development proposal aligns with these vision statements and goals, by creating a new opportunity for an affordable, and well-connected new housing development accessible to public transit and within walking distance to a variety of services supporting the Plans goal of *Complete Neighborhoods*, and *increasing, preserving, and modifying the overall supply of housing city-wide*. In addition, the proposed project supports the City's desire to *leverage underused properties* owned by the City. The proposed development allows for maximizing development on an underutilized lot, which creates the opportunity to provide affordable homes, with access to public transit, services, and open space. Relevant Comprehensive Plan goals have been excerpted below:



#### Vision Statements:

- Secure - We will be committed to accessible housing and healthy food for all our residents.
- Authentic - The uniqueness and integrity of our neighborhoods will be maintained and enhanced.
- Connected - We will foster accessible linkages between where we live, work, shop, and play.
- Connected - We will enable meaningful access to the natural world and recreational opportunities as a central component of community health.

#### Housing: A Livable City

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Reinforce existing housing tools, policies, and programs while continuing to explore emerging best practices.
- Evaluate whether current zoning allows for new development consistent with historic patterns of form, density, and/or use, as well as whether it allows for priority growth areas.
- Consider the sale of City-owned land that may be appropriate for housing development.
- Consider incentivizing affordability restrictions as part of City-owned property transactions, as well as the potential to return improved properties to the City's tax rolls.
- Create, promote, and facilitate safe, affordable, and practical housing solutions that will meet the evolving needs of Portland residents as they age.

#### Recreation & Open Space

- Pursue opportunities, in collaboration with partners, to create new open spaces in areas that are currently underserved.
- Pursue opportunities for new and enhanced walking and biking trails as a means of filling existing gaps and investigate paper streets, vacant land, medians, and other often overlooked areas for the potential for park linkages, trails, and other improvements to the urban landscape.
- Prioritize open space acquisition and programming toward creating linkages where there are gaps in the network, particularly between Stroudwater and the Fore River; Evergreen Cemetery and the Presumpscot River; Portland Transportation Center and Bayside; Martin's Point and the Back Cove; and the Western Waterfront and the Fore River.

#### Future Land Use

- *Complete Neighborhood* – Portland’s Plan recognizes that strong, complete neighborhoods are fundamental to the city’s overall health. Portland’s intent for its predominantly residential neighborhoods is one where all residents regardless of age, ability, or income have access to the basic necessities of daily life - high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services - within a walkable, bikeable distance.
- *Connecting the Chain* – Portland’s Plan recognizes that physically integrated transportation systems, utilities, and open spaces provide the structure for the city’s growth, and that a well-connected system is more efficient and more resilient. An integrated transportation system allows residents to access jobs, food, healthcare, and recreation from their homes while planning for an unbroken network of open space connects neighborhoods and improves access to the outdoors.
- *One Portland* - Portland’s Plan is a vision for One Portland, where the form and characteristics of neighborhoods vary, but the city functions as a cohesive whole. No one area of the city carries all the expectations for accommodating development and all areas can expect appropriate City services and amenities.

#### B. Public safety and fire prevention

The applicant has stated that the site has been designed to promote safe and inviting public access connections to walking trails within Dougherty Field, as well as providing adequate emergency access to new buildings via the restricted access loop road.

The proposal includes a new private hydrant to serve the buildings onsite and will be within 450 feet from the furthest structure.

The City’s Fire Marshall has reviewed the application materials, and finds the project has incorporated the Fire Department’s feedback by providing access for emergency vehicles into both phases.

Department of Public Works staff have provided a recommendation that the applicant install a cobrahead lighting fixture on an existing utility pole at the corner of Douglass and Congress Street immediately adjacent to the trail entrance which leads into the site, in order to improve the street lighting for pedestrian safety in the area. Due to the development’s direct impact on the existing trail and bus stop caused by the increased use of public transit and other multimodal transport methods as the primary mode of transportation to and from the site, the request is being made. In addition, Public Works believes that the increase in residents to the area that will be accessing the site via Congress Street will necessitate additional lighting along pedestrian routes to the site. However, the applicant disagrees with the finding that this off-site public improvement should fall onto their project and posits that *‘there are multiple neighbors and businesses with consistent lighting in addition to the adjacent utility pole/cobra head and Turnpike/Congress Street spillover lighting that contributes to illumination.’* While the applicant has demonstrated meeting CPTED standards for the majority of the site, staff recommends installation of the cobrahead lighting fixture to enhance safety for its residents coming to and from the site.

#### C. Availability and capacity of public utilities

The applicant proposes installing a new 8 inch PVC lateral throughout the site with a doghouse manhole to accept wastewater from each unit. In addition to the submitted utilities plan, the applicant has obtained a Wastewater Capacity Authorization from Public Works confirming capacity to manage wastewater.

The applicant proposes retiring the existing 2 inch service line to the site and proposing to tap an 8 inch fire line as well as a 4 inch domestic line off the existing 8 inch ductile iron water main within Douglass Street. A private fire hydrant will be installed to serve the buildings on site. The applicant has written the Portland Water District requesting an Ability to Serve letter to confirm adequate water is available to support the development, and this documentation is still pending. Planning staff is recommending a condition of approval that confirmation of ability to serve be provided prior to issuance of a building permit.

**4. Site Design Standards (Section 14.6.4)**

**A. Massing, ventilation, and wind impact**

The massing of the proposed townhouse, rowhouses, and courtyard flats are generally consistent with the existing 2-3 story buildings found in the vicinity. The proposed five-story building is separated by a street and the site design provides permeability between other structures to accommodate ventilation between structures. Staff do not have concerns that the proposed structures will result in unsafe ventilation or wind impact to users of the site or adjacent public spaces.

**B. Shadows**

The applicant's shadow study (Plan 59) was submitted and staff do not find that the proposal will result in adverse impacts of shadows cast from the new five-story structure on the adjacent public open space areas.

**C. Snow and ice loading**

The applicant has indicated respective snow storage areas and stated that structures will not distribute snow and ice onto adjacent properties. Staff will continue to review the application for compliance with this standard in conjunction with reviewing the stormwater management standards above.

**D. View corridors**

There are no designated view corridors within the project vicinity.

**E. Historic resources**

The proposed development is not located in or within 100 feet of a historic district or historic landmark.

**F. Exterior lighting**

The applicant has submitted an updated lighting plan (Attachment O) and lighting cut sheets. Staff have reviewed the applicant's lighting plan and associated information and find that all lighting onsite meets the requirements contained in Section 12 of the City's Technical Manual.

Based on a staff recommendation the applicant has elected to provide additional lighting on their site directed toward the adjacent Dougherty Field Path so as to provide better lighting during evening hours given the expectation that more pedestrians will begin utilizing the pathway. Although site lighting trespass from the site exceeds 0.1-foot candles at the property line, staff have determined that where site lighting crosses the property line exceeding allowable levels, it is directed toward the I-295-



offramp, which is considered a non-sensitive use, and therefore areas of lighting along the trail are exempted from the lighting trespass standards of Technical Manual Section 12.3.4.

G. Noise and vibration

No adverse impacts related to noise and vibration are anticipated as mechanical equipment is either screened and located away from residential properties. The applicant has stated that the HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

H. Signage and wayfinding

No wayfinding signage is currently proposed, and only signage shown on plans is related to vehicular access.

I. Zoning-related design standards



*Figure 11: Rendering Provided by Applicant as Viewed from Douglass St.*

The proposal is subject to meeting the applicable PRUD design standards under Section (h) of the City's Design Manual. The applicant has submitted updated elevations and renderings with an accompanying architectural narrative (Plans 30-42 & 47-54; Attachment Y).

The project was reviewed by a design review team made up of three Planning staff (Attachment 5). The current design reflects updates made in response to Planning Board's feedback at the March 22, 2022 and May 10<sup>th</sup>, 2022 workshops, and staff design review comments. In response to the Board's most recent comments the applicant's elevations for Phase 2 now show vents shown on the elevations.

Staff have no further comments and finds the project meets the applicable design standards (Attachment 5).

### **XIII. PUBLIC COMMENT**

Planning staff have received three written comments over the course of the project's public review process (PC1-3). Since the last workshop no additional comments have been received.

In general feedback included concerns of an overabundance of parking, supporting repurposing parking areas for a community space such as a parklet, seeking more information about snow management operations, and concerns about past uses on the site posing geotechnical complications for future development. The Libbytown Neighborhood Association recommends a professional TDM study be conducted giving special attention to utilizing on-street parking and reducing parking onsite. Staff note that a TDM is not required as part of the site plan review standards for this project.

### **XIV. STAFF RECOMMENDATION**

Subject to the proposed motions and conditions of approval listed below, Planning Department staff recommends that the Planning Board approve application #PL-001888-2021 to construct two separate phases of residential development including 63 units (Phase 1) and 57 units (Phase 2) for a combined total of 120 new residential units at 57 Douglass Street which both meet the applicable standards of Portland's Land Use Code.

### **XV. PROPOSED MOTIONS**

#### **A. WAIVERS**

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing held on May 24, 2022 for application # PL-001888-2021 relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

#### **1. Parking Lot Drive Aisle Width**

The Planning Board [**finds/does not find**] based upon the Consulting Traffic Engineer's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.14.3 which requires parking lot layouts provide a minimum drive aisle width of 24 feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] Technical Manual Section 1.14.3 to allow a reduced parking lot drive aisle width of 22 feet.

#### **B. CONDITIONAL USE**

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing on May 24, 2022 for application # PL-001888-2021 relevant to Portland's Inclusionary Zoning Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing, the Planning Board, [**finds/does not find**] the proposed conditional use for workforce housing meets the standards of Section 18.2 with the following conditions:

## PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. That the Applicant and the City enter into an agreed upon Affordable Housing Agreement (AHA) for workforce housing units as described in the memorandum from Housing Program Manager dated May 18, 2022, or as an alternative to providing workforce housing units, the project may pay a fee-in-lieu for some or all of the required units;

## PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

2. That the Affordable Housing Agreement (AHA) be filed as covenant to the 57 Douglass Street (i.e. 43 and 91 Douglass Street) property's deed with the Cumberland County Registry of Deeds.

**C. SITE PLAN REVIEW**

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on May 24, 2022 for application # PL-001888-2021 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code subject to the following conditions of approval:

## PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit an updated site plan modifying their parking layout to provide four (4) additional parking spaces to meet the required 82 parking spaces on site, for review and approval by the Planning Authority or as an alternative the applicant may pay a fee-in-lieu into the Sustainable Transportation Fund pursuant to Land Use Code Section 19.1.7 for some or all the required parking spaces, which shall be paid on or before the date upon which certificate of occupancy is issued.

## PRIOR TO ISSUANCE OF A BUILDING PERMIT

2. The applicant shall provide a letter from the Portland Water District showing ability to serve.
3. The applicant shall submit an updated Construction Management Plan (CMP) for review and approval by the Planning Authority that specifies additional information regarding coordination of grading and sequencing between phases, updated plans for any modification to the stormwater treatment system, and documentation demonstrating the responsibilities of each owner to maintain stormwater infrastructure.

## PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

4. Due to site constraints preventing the planting of required street trees, the remaining forty-three (43) street trees as required in Land Use Code Section 14.6.2.C.4 cannot be met, and the applicant shall contribute to the tree fund in the amount of \$400 per tree for a total of \$17,200.

**XVI. ATTACHMENTS**

**REPORT ATTACHMENTS**

1. Request for Proposals #2020-2
2. City Council Order 72-21\_22
3. Consulting Traffic Engineer Comments (dated 5.18.2022)
4. Housing Program Manager Memo (dated 5.16.2022)
5. Updated Design Memo (dated 5.18.2022)
6. Parking Director Comments (dated 5.3.2022)
7. Public Works Engineer Comments (dated 5.19.2022)

**APPLICANT'S SUBMITTAL**

- A. Douglass Commons Cover Letter
- B. Major Site Plan Checklist
- C. Douglass Commons Purchase and Sale Agreement
- D. Zoning Assessment
- E. Easements
- F. Waivers
- G. Financial Capacity
- H. Technical Capacity
- I. Conformity with Land Use Ordinance
- J. Soil Survey
- K. Stormwater Management Report
- L. Erosion & Sedimentation Control
- M. Fire Department Letter
- N. Wastewater Capacity
- O. Lighting
- P. Architectural Narrative
- Q. Utilities
- R. Construction Management Plan
- S. Solid Waste
- T. Traffic Memo
- U. Stormwater Management Law Delegated Review Application
- V. Parking Analysis and METRO Bus Route and Multimodal Map
- W. Permeable Grass Paver Manual
- X. Stormwater Maintenance Agreement
- Y. Response to Staff comments, dated 4.27.2022
- Z. Response to Staff Comments, dated 5.13.2022

**PLANS**

- Plan 1. Cover Sheet & Legend
- Plan 2. General Notes
- Plan 3. Boundary & Topographic Survey
- Plan 4. Construction Management Plan
- Plan 4a. Construction Management Plan Phase I
- Plan 4b. Construction Management Plan Phase II
- Plan 5. Site Plan
- Plan 6. Interim Phase I Site Plan
- Plan 6a. Interim Phase II Site Plan

Plan 7. Utility Plan  
Plan 8. Interim Phase I Utility Plan  
Plan 8a. Interim Phase II Utility Plan  
Plan 9. Grading & Drainage Plan  
Plan 10. Interim Phase I Grading & Drainage Plan  
Plan 10a. Interim Phase II Grading & Drainage Plan  
Plan 11. Site Details - 1  
Plan 12. Site Details - 2  
Plan 13. Utility Details - 1  
Plan 14. Utility Details - 2  
Plan 15. Drainage Details - 1  
Plan 16. Drainage Details - 2  
Plan 17. Erosion & Sedimentation Details & Control Notes  
Plan 18. Erosion & Sedimentation Details & Control Notes  
Plan 19. Landscaping Materials Plan  
Plan 19a. Landscaping Materials Plan Phase 1  
Plan 19b. Landscaping Materials Plan Phase 2  
Plan 20. Landscaping Planting Plan  
Plan 20a. Landscaping Planting Plan Phase 1  
Plan 20b. Landscaping Planting Plan Phase 2  
Plan 21. Landscaping Planting Details  
Plan 22. Landscaping Site Details - 1  
Plan 23. Landscaping Site Details - 2  
Plan 24. Community Flats Ground Floor Plan A1-A2  
Plan 25. Community Flats Ground Floor Plan A3  
Plan 26. Community Flats Second Floor Plan A1-A3  
Plan 27. Community Flats Third Floor Plan A1-A3  
Plan 28. Townhomes Floor Plans B1-B2-C1  
Plan 29. Rowhome Floor Plans D1  
Plan 30. Community Flats and Rowhome Elevations  
Plan 31. Cooperative Buildings Materials Options  
Plan 32. Site Elevations  
Plan 33. Townhome Elevations  
Plan 34. Sections A1-A3  
Plan 35. Sections B-C-D  
Plan 36. Cooperative Rending 1  
Plan 37. Cooperative Rending 2  
Plan 38. Cooperative Rending 3  
Plan 39. Cooperative Rending 4  
Plan 40. Cooperative Rending 5  
Plan 42. Cooperative Rending 7  
Plan 43. Five-Story Basement Plan  
Plan 44. Five-Story First Floor Plan  
Plan 45. Five-Story Typical Floor Plan  
Plan 46. Five-Story Fifth Floor Plan  
Plan 47. Five-Story Building Elevations - 1  
Plan 48. Five-Story Building Elevations - 2



Plan 49. Five-Story Rendering 1  
Plan 50. Five-Story Rendering 2  
Plan 51. Five-Story Rendering 3  
Plan 52. Five-Story Rendering 4  
Plan 53. Five-Story Rendering 5  
Plan 54. Five-Story Rendering 6  
Plan 55. Subdivision Plat  
Plan 56. Automobile Turn Templates  
Plan 57. Open Space Exhibit  
Plan 58. Multi-Modal Exhibit  
Plan 59. Shadow Study  
Plan 60. Rendering from Offsite Douglass St.  
Plan 61. Rendering From Congress St  
Plan 62. Rendering from I-295

**PUBLIC COMMENT**

PC1. Maureen Morse 1-26-2022  
PC2. George Rheault 3-22-2022  
PC3. George Rheault 3-22-2022

**CITY of PORTLAND, MAINE**  
**Request for Proposals for Disposition of City-Owned Property**  
**Located at 43 & 91 Douglass Street**  
**RFP #2020-2**

**I. NOTICE AND SPECIFICATIONS**

The City of Portland, Maine seeks proposals from qualified developers for the creation of residential housing at 43 & 91 Douglass Street. The site is designated on the City of Portland Tax Assessor's Map as lot CBL 078 C002 & 078 B007.

**Sealed proposals for the project, including an original, seven (7) copies, and one (1) digital copy, as specified herein, will be received by the Purchasing Office, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101, until 3:15 p.m., Tuesday, June 16, 2020, at which time they will be publicly opened.**

Proposals shall be submitted, and returned in sealed envelopes plainly marked on the outside "Disposition and Development of Property Located at 43 & 91 Douglass Street".

Proposals that are late, unsigned or submitted via fax will not be accepted. Proposals from individuals not registered with the Purchasing Office may be rejected; receipt of this document directly from the City of Portland indicates registration. Should a person receive this Request from a source other than the City, please contact 207-874-8654 to ensure that you are listed as a recipient for this proposal.

All questions must be submitted in writing to the Purchasing Office. These may be mailed, hand delivered, faxed to (207) 874-8652 or e-mailed to [mff@portlandmaine.gov](mailto:mff@portlandmaine.gov) and be received no later than five (5) business days prior to the opening date. Questions received after this time will not be addressed. Any interpretation, correction, or change of this document will be made only by written addenda. Changes in any other manner will not be binding on the City and proposers should not rely on. Proposers should not have contact with any City staff with regard to this proposal unless to obtain general public information as specified in the document.

The disposal of this real estate shall be on the basis of a negotiated proposal, with the City of Portland reserving the right to refuse any and all proposals. *All proposers are advised that the property will be sold "as-is" and "where is", in its existing condition, with no warranties either expressed or implied.* The City makes no representations or warranties about of any of the information about the property set forth herein, which is provided to proposers for their convenience only. The successful proposer shall be responsible to inspect the property, or to hire its own professionals to do so. The City, and its agents, make no representations or warranties with respect to the title of the property, the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the property, or as to the fitness of the property for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the property. The City disclaims any and all responsibility for injury to proposers, their agents or others while examining the property or at any other time. The City will not be responsible for any broker's commission.

Any and all improvements made to said property must be done in accordance with existing City Codes and Ordinances.

## **II. GENERAL INFORMATION**

### **Summary of Request:**

The City of Portland is committed to providing housing opportunities and has set a goal to evaluate the use of City-owned property to construct housing. As one-step in accomplishing this goal, the City of Portland will accept proposals for the development of housing on the lot located at 43 & 91 Douglass Street, which currently is a vacant lot but was the former site of the West School.

This request for proposals results from the December 16, 2019 approval by the Portland City Council (Resolve 10-19/20) on the recommendation of the Housing Committee to market the City-owned vacant property located at 43 and 91 Douglass Street.

The City of Portland uses the RFP process to ensure that public resources are utilized for maximum public benefit while accomplishing specific objectives and providing fair access to all applicants.

### **Site Information:**

- a. Location:** 43 & 91 Douglass Street, as identified in the City of Portland Assessor's records as lot CBL 078 C002 and 078 B007, in the R-5 zone. The lot includes the former site of the West School. The site for disposition includes a portion of 91 Douglass Street, but not the entire lot (See Attachment 2).
- b. Existing Conditions:** 43 & 91 Douglass Street is located on two parcels with frontage on Douglass Street in the Libbytown neighborhood. A right-of-way bisects the two parcels. The surrounding context is predominantly residential with the majority of homes in the area being one and multi-family structures. Dougherty Play Field abuts the property to the north.
- c. Current use:** Vacant lot.
- d. General Dimensions:** 43 Douglass Street (estimated at .3981 acres), and an estimated 2.85-acre portion of 91 Douglass Street.
- e. Current Zoning:** R-5. The minimum lot size in the R-5 zone is 6,000 square feet for residential development (single-family and two-family), 9,000 square feet for a multi-plex development (three-family or more), and 2 acres for a planned residential unit development (PRUD). This parcel would allow for residential, multi-family, and PRUD development. The minimum lot area per unit in a PRUD is 3,000 square feet; the maximum units per building is 12 units. At an estimated 141,570 square feet, the maximum number of residential units that could be developed within a PRUD is 47 units. For complete zoning requirements, please refer to Chapter 14, Land

Use, of the City Code.

- f. **Rezoning:** Higher density zoning that furthers exceptional projects and other city goals as outlined in Section III may be considered. It should be noted that changes to zoning require both Planning Board and City Council approval.
- g. **Condition of the property at the time of sale:** This parcel is the location of a former city-dump, and later the West School. A natural gas line and gas company easement are located in the right-of-way and the 43 Douglass Street parcel thus precluding development over these sites. A 40' wide sewer easement is also identified in the unbuildable portion of the site.
- h. **Environmental Conditions:** A Phase II Environmental Site Assessment (ESA) has been completed to evaluate current environmental conditions. Based on findings, special soil disposal restrictions may be required. Participation in the Maine DEP Voluntary Response Action Program (VRAP) should be considered. The Phase II ESA will be available on-line.
- i. Proposers are urged to investigate water sources and utility connection requirements with the Department of Public Works.

### III. CITY GOALS

The City's primary goals for the use of the property are:

1. Developments shall provide mixed income units. All units must be affordable to households earning 60% to 120% of the area median income (AMI). Currently, 60% AMI for a family of four is \$55,800 and 120% AMI for a family of four is \$111,600.

Affordable means that the percentage of income a household is charged in rent and other housing expenses including utilities, or must pay in monthly mortgage payments (including real estate taxes, mortgage insurance, condominium/HOA fees, insurance and utilities), does not exceed 30% of a household's gross income, or other amount established in city regulations that does not vary significantly from this amount.

Restrictions on the affordability of units must be in place for a minimum of 30 years for homeownership units, and the longest period allowed by law for rental units.

2. Development of mixed income homeownership or rental housing of excellent building and site design. Design principles should promote efficient use of land to create a development that is compatible with the existing pattern, scale, massing, and materials of the surrounding neighborhood. The development's buildings shall be designed to meet the City's Green Building Code.
3. Rezoning may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.
4. Developments shall create housing options that are age inclusive.

The general terms for this real estate transaction include:

- Units must be used as the principal residence of the owner/tenant and owner/tenant shall not use the unit for the conduct of business (except for a home occupation allowed under the City of Portland zoning ordinance) or as an investment property. Units shall not be rented for short-term periods of one to thirty days.
- Property Sale Price. The City expects to receive Fair Market Value (“FMV”) for the property.
- Alternative Ownership Models. Alternative ownership models that will encourage a mixed income community with long term affordability for the maximum number of units, such as limited equity units, co-housing, cooperative, or a community land trust, may be considered in order to ensure the units affordability over time.
- Proposals must outline how they will maintain affordability.
- Other City Incentives. Other city financial incentives may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.

#### **IV. PROPOSED SCORING**

An internal staff Committee will review proposals received, and will apply the following selection criteria in reviewing and scoring the applications.

##### **Proposed use to achieve the City of Portland's goals**

**40 points**

1. Market Demand - 20 points
  - a. 20 points - all units meet the City’s Goals and Terms noted in Section III
  - b. 15 points - at least 75% of the units meet the City’s Goals and Terms noted in Section III
  - c. 10 points - at least 50% of the units meet the City’s Goals and Terms noted in Section III
  - d. 0 points - project does not meet the City’s Goals and Terms noted in Section III
2. Economic diversity - 10 points
  - a. 10 points - creates housing options which promote economic diversity in the neighborhood in which the development is located
  - b. 0 points - does not promote economic diversity
3. Age Inclusive – 10 points
  - a. 10 points – creates housing which is age inclusive
  - b. 0 points – does not create housing which is age inclusive

##### **Impact on surrounding neighborhood, including design.**

**25 points**

1. Project Design -15 points
  - a. 15 points - the proposal is consistent with design characteristics
  - b. 10 points - the proposal is an adequate fit with neighborhood characteristics
  - c. 0 points - the design is a significant outlier
2. Amenities and unit design - 10 points
  - a. 10 points - amenities & unit design are well thought out and appropriate for residents
  - b. 5 points - amenities & unit design are adequate



- c. 0 points - amenities and unit design raise significant concerns that resident needs will not be adequately addressed

**Applicant's ability to complete project, including financial feasibility, development team experience, capacity, and timeframe for completion.**

**35 points**

1. Readiness to proceed - 15 points
  - a. 15 points - all projected sources of funding include letters of commitment or interest are projected at terms and conditions consistent with the City's prior experience with the funder
  - b. 10 points - most projected sources of funding include letters of commitment, letters of interest, or, if no letter is included, are projected at terms and conditions consistent with the City's prior experience with this funder
  - c. 0 points - one or more sources are projected on terms that are not consistent with the City's prior experience with the funder and are not documented by letter(s) from funder(s)
2. Track record of development team - 10 points
  - a. 10 points - every development team member has a successful track record with this type of project and at this scale
  - b. 8 points - all but one development team members have a successful track record with this type of project and at this scale; one development team member has relevant experience but at a smaller scale or not of this project type
  - c. 5 points - two development team members, while having relevant experience, are new to this type of project or this scale of development
  - d. 0 points - the development team does not meet the criteria above
3. Current Capacity of development team - 10 points
  - a. 10 points - development team members have exceptional depth of human and financial resources to complete this project
  - b. 8 points - development team members have the human and financial resources to complete this project
  - c. 5 points - development team has a staffing gap in a significant role and a plan to address that gap, OR there are some concerns about the financial resources of the team to move the development forward
  - d. 0 points - the development team does not meet the criteria described above

***SUBMISSION INFORMATION***

Interested parties are asked to submit a concept development (including preliminary drawings) and a brief description of the project, no longer than two pages, to include the number and type of units, occupants (owners/renters) to be served, special features, the impact on the neighborhood and other ways the proposal meets the primary goals of the City. A general project budget with projected funding sources, development timeline, and development team qualifications and financial capabilities is also required. This RFP does not require detailed architectural drawings or development pro formas.

Photographs and maps of the site and area are required.

- a) **Developer:** Name, address, telephone, email, fax number of the proposed owner/developer and the name(s) of an alternative contact person(s).
- b) **Proposal:** Each proposal submitted must specifically outline the proposed use of the property and any proposed rezoning requests.

- c) **Financial Feasibility:** Provide a business plan, which shall include prospective and committed sources of funding, development and operating budgets; a letter from a lending institution indicating the applicant's ability to finance the projected costs; and provide examples of prior projects that indicate the proven ability to develop a project of similar type and scale from a fiscal perspective.
- d) **Timetable:** Provide an overview of how the proposal will be implemented. Include approximate schedule for completion of each element, closing, construction start-up, substantial completion, final completion, and occupancy. Include applications for public or private financing.
- e) **Developer Capacity:** Identify the qualifications and experience of the development team for the project including a list of previously completed projects similar to the proposed project. This team may include key staff of the developer, architect, general contractor and future property management. Also, discuss the ability to complete the project including the qualifications of the development team, management plan, experience, capacity, project readiness to proceed, and timeframe for completion.
- f) **Occupancy and Management Plan:** Present a plan detailing the ownership structure (condominium, cooperative, etc.), resale restrictions and resale process, to ensure mixed income and long-term affordability.
- g) **Purchase Price:** Proposed purchase price for the property.
- h) **Copies:** Seven (7) copies, with the original so marked, and one (1) digital copy of each proposal shall be submitted.

## V. SALE INFORMATION

After proposals are opened, city staff will make a recommendation to the City Council's Economic Development Committee (EDC) and the Housing Committee (HC). The EDC and HC will make a recommendation to the City Council.

## VI. OTHER INFORMATION

**Confidentiality:** Proposals received by the City shall become a matter of public record, subject to public inspection, except to the extent, which an applicant designates in writing, proprietary data to be confidential and submits that data under separate cover, such information, may, to the extent permitted by law, be held from public inspection, as provided in applicable Maine law, including, without limitation, 5 MRS Sections 13119-A and 13119-B.

## VII. LEGAL REQUIREMENTS

The contract for the disposition of the property will be executed only after review and final approval by the City Council.

## **VIII. RESERVATION of RIGHTS**

The City of Portland reserves the right, at its sole discretion, to award as well as reject any and all proposals for the city-owned property, based on the quality and merits of the proposals received, or when it is determined to be in the public interest to do so. Furthermore, the City may extend deadlines and timeframes, as needed.

The City reserves the right to substantiate any proposer's qualifications, capability to perform, availability, past performance records, and to verify that the proposer is current in its financial obligations to the City.

The City of Portland, Maine, reserves the right to waive any informalities in proposals, to accept any proposal or portion thereof, and, to reject any and all proposals, as well as negotiate with the successful proposer(s) should it be in the best interest of the City to do so for a final purchase and sale agreement and ultimate sale of the property.

Pursuant to City procurement policy and ordinance, the City is unable to contract with businesses or individuals who are delinquent in their financial obligations to the City. These obligations may include but are not limited to real estate and personal property taxes and sewer user fees.

Proposers who are delinquent in their financial obligations to the City must do one of the following: bring the obligation current, negotiate a payment plan with the City's Treasury office, or agree to an offset, which shall be established by the contract, which shall be issued to the successful proposer

April 10, 2020

Matthew F. Fitzgerald  
Purchasing Manager

Attachments:

- A. Proposal Signature
- B. Portland Assessor's Record
- C Site Map
- D Phase II ESA available online

**PROPOSAL****NOTE: THIS PAGE IS TO BE COMPLETED AND RETURNED**

The UNDERSIGNED hereby declares that he/she or they are the only person(s), firm or corporation interested in this proposal as principal, which it is made without any connection with any other person(s), firm or corporation submitting a proposal for the same.

The UNDERSIGNED hereby declares that they have read and understand all conditions as outlined in the Request for Proposals, and that the proposal is made in accordance with same.

The UNDERSIGNED hereby declares that any person(s) employed by the City of Portland, Maine, who has direct or indirect personal or financial interest in this proposal or in any portion of the profits which may be derived therefrom has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this proposal. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or to you. If in doubt as to status or interest, please disclose to the extent known).

The proposer acknowledges the receipt of Addenda numbered \_\_\_\_\_  
If Applicable

COMPANY NAME: \_\_\_\_\_  
(Individual, Partnership, Corporation, Joint Venture)

AUTHORIZED SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
(Officer, Authorized Individual or Owner)

PRINT NAME & TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

FEDERAL TAX ID #: \_\_\_\_\_ DUNS #: \_\_\_\_\_

STATE OF INCORPORATION \_\_\_\_\_

(If incorporated in another State, businesses must be authorized to do business in the State of Maine.)

In your organizations preceding completed fiscal year, did the organization receive:

(1) 80 percent or more of its annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements; AND

(2) \$25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements? ☐ Yes ☐ No

Does the public have access to information about the compensation of the executives in the organization through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (18 U.S.C. 78m(a), 78o(d) or section 6104 of the Internal Revenue Code of 1986? ☐ Yes ☐ No

NOTE: All bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid. **This sheet must be signed and returned with the application package.**



This page contains a detailed description of the Parcel ID you selected.

**New Search!**

### Current Owner Information:

|                                                       |                                                          |
|-------------------------------------------------------|----------------------------------------------------------|
| <b>CBL</b>                                            | 078 C002001                                              |
| <b>Land Use Type</b>                                  | GOVERNMENTAL                                             |
| <b>Verify legal use with<br/>Inspections Division</b> |                                                          |
| <b>Property Location</b>                              | 43 DOUGLASS ST                                           |
| <b>Owner Information</b>                              | CITY OF PORTLAND<br>389 CONGRESS ST<br>PORTLAND ME 04101 |
| <b>Book and Page</b>                                  |                                                          |
| <b>Legal Description</b>                              | 78-C-2<br>DOUGLASS ST 43-53 REAR<br>PROPOSED ST 17340SF  |
| <b>Rental Registration</b>                            | No                                                       |
| <b>Acres</b>                                          | 0.3981                                                   |

### Current Assessed Valuation:

|                                  |               |                                         |
|----------------------------------|---------------|-----------------------------------------|
| <b>TAX ACCT NO.</b>              | 10005         | <b>OWNER OF RECORD AS OF APRIL 2019</b> |
| <b>LAND VALUE</b>                | \$49,000.00   | CITY OF PORTLAND                        |
| <b>BUILDING VALUE</b>            | \$0.00        | 389 CONGRESS ST                         |
| <b>MUNICIPAL TYPE</b>            | (\$49,000.00) | PORTLAND ME 04101                       |
| <b>NET TAXABLE - REAL ESTATE</b> | \$0.00        |                                         |
| <b>TAX AMOUNT</b>                | \$0.00        |                                         |

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or [e-mailed](#).

This page contains a detailed description of the Parcel ID you selected.

**New Search!**

### Current Owner Information:

|                                                       |                                                          |
|-------------------------------------------------------|----------------------------------------------------------|
| <b>CBL</b>                                            | 078 B007001                                              |
| <b>Land Use Type</b>                                  | GOVERNMENTAL                                             |
| <b>Verify legal use with<br/>Inspections Division</b> |                                                          |
| <b>Property Location</b>                              | 91 DOUGLASS ST                                           |
| <b>Owner Information</b>                              | CITY OF PORTLAND<br>389 CONGRESS ST<br>PORTLAND ME 04101 |
| <b>Book and Page</b>                                  |                                                          |
| <b>Legal Description</b>                              | 78-B-7<br>DOUGLASS ST 91-105<br>195648 SF                |
| <b>Rental Registration</b>                            | No                                                       |
| <b>Acres</b>                                          | 4.4915                                                   |

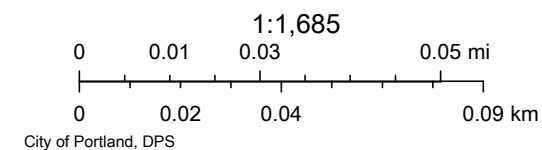
### Current Assessed Valuation:

|                                  |                |                                         |
|----------------------------------|----------------|-----------------------------------------|
| <b>TAX ACCT NO.</b>              | 10005          | <b>OWNER OF RECORD AS OF APRIL 2019</b> |
| <b>LAND VALUE</b>                | \$489,100.00   | CITY OF PORTLAND                        |
| <b>BUILDING VALUE</b>            | \$0.00         | 389 CONGRESS ST                         |
| <b>MUNICIPAL TYPE</b>            | (\$489,100.00) | PORTLAND ME 04101                       |
| <b>NET TAXABLE - REAL ESTATE</b> | \$0.00         |                                         |
| <b>TAX AMOUNT</b>                | \$0.00         |                                         |

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or [e-mailed](#).



■ Override 1



Order 72-21/22

Passage: 7-0 (Fournier absent) on 10/18/2021

Effective 10/28/2021

KATE SNYDER (MAYOR)  
 BELINDA S. RAY (1)  
 SPENCER R. THIBODEAU (2)  
 TAE Y. CHONG (3)  
 ANDREW ZARRO (4)

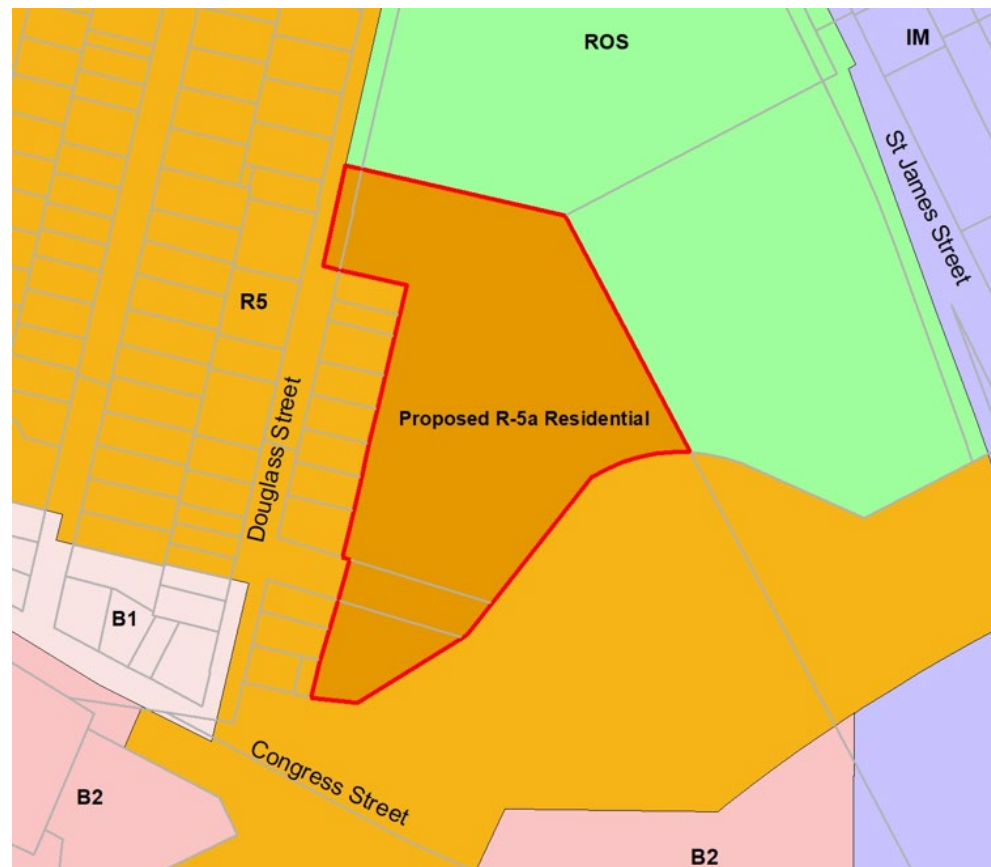
**CITY OF PORTLAND  
 IN THE CITY COUNCIL**

MARK DION (5)  
 APRIL D. FOURNIER(A/L)  
 PIOUS ALI (A/L)  
 NICHOLAS M. MAVODONES, JR (A/L)

**AMENDMENT TO ZONING MAP  
 RE: 43 AND 91 DOUGLASS STREET  
 FROM R-5 RESIDENTIAL TO R-5A RESIDENTIAL**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORTLAND, MAINE  
 IN CITY COUNCIL ASSEMBLED AS FOLLOWS:**

That the Zoning Map of the City of Portland, dated December 2000, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49, be and hereby is amended by adopting the attached map change amendment and specifically rezoning property at 43 and 91 Douglass Street from R-5 Residential to R-5a Residential as shown in the bordered area in the map below.









Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

## 57 Douglas Street - Final Traffic Comments

Tom Errico &lt;thomas.errico@tylin.com&gt;

Wed, May 18, 2022 at 3:19 PM

To: James Dealaman &lt;jdealaman@portlandmaine.gov&gt;

Hi Jimmy – I have reviewed the application materials and offer the following final traffic comments.

- I reviewed the applicant's trip generation estimate and I generally find the methodology to be reasonable. Given trip credits for the former school, the project does not require a Traffic Movement Permit. I also investigated the presence of High Crash Locations on Douglass Street between Congress Street and Brighton Avenue. There are no High Crash Locations. Based upon the trip generation estimate, the preparation of a traffic study is not recommended.

**Final Status: I have no further comment.**

- The applicant shall conduct a parking study to document the adequacy of the proposed parking supply. The parking study can be based on ITE and local data from similar type residential developments.

Status: I have reviewed the parking demand study prepared by the applicant and in general I find it to be reasonable. I do not support the assumption that the project is less than half a mile from a rail station (criteria in the ITE Parking Generation Manual). The definition is intended for a commuter rail station and not an Amtrak station. Based upon my calculation the project will generate the following parking demand:

- Mid-Rise Multi-Family 19 Units x 0.90 spaces per unit = 17 spaces
- Low-Rise Multi-Family 28 Units x 0.76 spaces per unit = 21 spaces
- Affordable Housing – Income Limits 73 Units x 0.53 spaces per unit = 39 spaces
- Total = 77 spaces

This does increase the parking demand estimate slightly, but the proposed supply (78 spaces) is expected to be sufficient.

**Final Status: Based upon an updated parking demand calculation for the project a demand of 82 parking spaces is required. This is slightly above the supply of 78 parking spaces.**

- Mid-Rise Multi-Family 25 Units x 0.90 spaces per unit = 23 spaces
- Low-Rise Multi-Family 34 Units x 0.76 spaces per unit = 26 spaces
- Affordable Housing – Income Limits 61 Units x 0.53 spaces per unit = 33 spaces
- Total = 82 spaces

- In general, I find access and egress and circulation to be acceptable.

**Final Status: I have no further comment.**

- I do not support the applicant's justification for parking aisle width reduction. Waivers from the City's Technical Standards in most cases are justified by site or other constraints. The applicant shall present information that details site constraints that prevents them from meeting City Standards.

Status: The applicant is requesting an aisle width waiver in conjunction with reducing impervious area and documents the adequacy of vehicle movements into and out of parking spaces. I would suggest that the applicant review site specific details that prevent expansion of the parking area to meet the 24-foot aisle width standard and document why the site can't accommodate the wider aisle width.

**Final Status: The applicant has noted that the site has constraints related to utilities, topography, and the desire to incorporate landscaped islands and vegetation in the parking lot. Given these constraints and**

**documentation that vehicles can maneuver into and out of impacted parking spaces, I support a waiver from the City's Technical standards.**

- I generally support a waiver for the number of compact parking spaces given the likelihood of low parking space turnover due to it being a residential development with the expectation of tenants using alternative transportation. But like the previous comment, the applicant shall present information that details site constraints that prevents them from meeting City Standards.

**Final Status: The applicant has reduced the number of compact parking spaces and a waiver is no longer required. I have no further comment.**

- I have reviewed the fire truck vehicle Phase 2 template and it appears a truck will be constrained by parking spaces 3 and 4. A similar issue will occur for the full site scenario. The Fire Department should determine if this is acceptable.

If you have any questions, please contact me.

Best regards,

Tom Errico, PE

NE TRAFFIC ENGINEERING DIRECTOR

T +1 207.347.4354

M +1 207.400.0719

E [thomas.errico@tylin.com](mailto:thomas.errico@tylin.com)

**TYLin**

12 Northbrook Drive Building A, Suite One  
Falmouth, ME 04105, United States

[TYLin.com](https://www.tylin.com)





To: Jimmy Dealaman, Planner, Planning & Urban Development Department  
 From: Victoria Volent, Housing Program Manager, Housing & Community Development Division  
 Date: May 16, 2022  
 Subject: 57 Douglass– Inclusionary Zoning Conditional Use

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Chapter 14, Section 18.2 of the Zoning Ordinance.

Chapter 14, Section 18.2, Affordable Housing, requires at least twenty-five percent (25%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The ordinance under Section 18.2.3 C (5) also requires the number of bedrooms in the units shall be 10% of the total number of bedrooms in the development.

57 Douglass Street proposes the construction of 120 units of housing over two phases. The project triggers Inclusionary Zoning as it would create ten or more new dwelling units through new construction. Per Section 18.2.3 C 3, "projects shall not be segmented or phases to avoid compliance with these provisions."

Phase I proposes the construction of one five-story building with 63 units of housing containing 35 one-bedroom, 18 two-bedroom, and 10 three-bedroom units.

Phase II proposes the construction of; one three-story townhouse containing 6 one-bedroom units and 6 three-bedroom units for a total of 12 units; three townhouses the first of which would contain 6 units (with 6 three-bedrooms), the second and third building would contain 4 units each for a total of 8 units (with a total of 8 three-bedroom units); three courtyard flats made up of 2 three-story building containing a total of 20 units (with 8 one-bedroom, 10 two-bedroom and 2 three-bedroom units) and a third three-story building containing 11 units (with 1 studio, 4 one-bedroom, 5 two-bedroom, and 1 three-bedroom units). The total bedroom count for Phase II is: 1 studio unit, 18 one-bedroom units, 15 two-bedroom units, and 23 three-bedroom units.

Phase I proposes to provide 46 units at or below 60% AMI (23 one-bedroom and 14 two-bedroom units) and 17 units at market rate. 46 out of 63 units equals 74% of the total units as deed restricted.

Phase II proposes to provide 25% of the cooperative units (15 units) deed restricted to households at or below 80% AMI.

The term of affordability for the workforce units provided shall be defined as set forth in Table 18-B. At 25% of workforce units provided, the minimum term of affordability is thirty (30) years.

Staff recommends the Planning Board Approve this Conditional Use provided the Applicant, Maine Cooperative Development Partners, and the City enter into an agreed upon Affordable Housing Agreement (AHA) for 15 (fifteen) workforce units before a Building Permit may be issued.

The Affordable Housing Agreement will outline the details of the affordability restrictions placed on the Workforce Units and will be filed as a covenant to the property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

Sincerely,

Victoria Volent  
Housing Program Manager

Subject: 57 Douglass Street  
Zone: R-5a  
Date of Review: Wednesday, May 18, 2022  
Reviewer(s): Sean King (Urban Designer), Jimmy Dealaman (Planner)  
Project ID: PL-001888-2021

## I. DESIGN REVIEW COMMENTS

### *(h) Planned Residential Unit Development (PRUDs) in the R-5a Residential Zones.*

*(1) STANDARDS. Planned residential unit developments (PRUDs) in the R-3, R-5 or R-5a residential zones and manufactured housing parks in any zone shall meet the following standards.*

#### *Standard (1) a. Design relationship to the site*

The placement, orientation and arrangement of buildings types (Courtyard flats, Townhouses, Rowhouses and Apartment building) are responsive to the surrounding neighborhood street network and provide adequate southern solar exposure for morning / evening light. The proposed PRUD has a new primary roadway access from Douglass Street, interior roadways are limited for vehicles to access parking and drop-off areas to prioritize pedestrian accessibility with walkways to all residential entryways and open spaces. The location of parking and drainage facilities are proposed at the southern edge of the property to arrange the close proximity of buildings that complement the walkable connections to existing open space features at Dougherty Field and sidewalk connection to Douglass Street. The proposed development provides an interior network of open spaces with communal, shared and private spaces.

#### *Standard (1) b. Internal design character and relationship to the surrounding neighborhood*

Context: The surrounding neighborhood contains a variety of residential housing types that range from single-family, two-family and multi-family dwelling units. The proximity of existing residential housing to each other is evident by the dimensional standard setbacks within the R-5 zone that also maintains a clear orientation to the street. Existing buildings include a majority of gable roofs, flat roofs utilized in multi-family units, entryway porches and simple windows. Other adjacent uses that border the property include Dougherty Field recreation area, Dougherty Field Path, and Interstate I-295 on/off ramps which do not reinforce the neighborhood form and must address adequate buffers from existing uses. The applicant has provided updated plans and views to verify sufficient vegetated buffers from adjacent uses.

Architectural character: The overall building design character should complement existing development in the surrounding neighborhood that range in a variety of materials that include traditional lap siding, natural and composite siding shingles. The architectural character of the proposed building types (Courtyard flats, Townhouses, Rowhouses and Apartment building) include a range in siding material – cedar shiplap, reverse board and batten, traditional lap with reveal variation and color, fiber cement lap



siding and paneling, metal shingles and brick base that effectively relate to surrounding neighborhood. The proposed building types include shared entrance canopies of various form / color / material, façade articulation and window fenestration patterns oriented towards primary circulation routes.

Height, scale, and massing: The design and layout of buildings exhibit a cohesive design character expressed by a diversity of housing types, roof types and exterior facades to create a unique neighborhood. The transition in building heights from existing residential buildings along Douglass Street is appropriate, with taller building heights proposed interior to the property. Applicant has provided additional building design variation for all units and housing types above 2 units with building lengths greater than forty (40) feet. These variations include façade material changes to differentiate units vertically, variation in roof forms and building massing composition articulated with appropriate material changes.

*Standard (1) c. Recreation and open space*

1. External buffers: Sufficient landscape buffers via screening shrubs and tree plantings are provided around perimeter of the property. Applicant has confirmed the existing trees along State Interstate 295 on/off ramp as an existing external buffer to remain.
2. Internal buffers: Effective privacy between unit entryways, screening of utilities (e.g. transformer, generator), roadways and waste collection is proposed with sufficient screening shrubs.
3. Passive recreational open space: Proposed passive recreational open space includes paved walkways, stone bench seating, lawn spaces and paved communal patio spaces. Applicant has highlighted a communal entryway canopy at the ground floor central to the Apartment building to encourage access to open space amenities. Applicant has indicated the site constraints that restrict the addition for an outdoor amenity at basement level due to (38.5') finish floor elevation 4.5' average below existing grade.
4. Active recreational open space: The applicant's master landscape plan promotes connection to the existing recreational area at Dougherty Field and multi-use path managed by Portland Trails. Applicant has provided sufficient site lighting within close proximity to the proposed walkway and stair pedestrian access connection.
5. Private open spaces: Proposed private open spaces are included within the applicant's master landscape plan to include; balconies and entryway porches at Rowhouses, individual unit patios and entryway porches proposed at rear of Townhouses, and balconies proposed at Courtyard Flats. City staff continues to suggest additional opportunities for private open space for residents (ie. Balconies, yards, decks, patios) at Apartment building, applicant has indicated significant costs that would be a financial burden not available due to the project's funding mechanism.



Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

## 57 Douglas St

John Peverada &lt;jbp@portlandmaine.gov&gt;

Tue, May 3, 2022 at 3:20 PM

To: Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

Cc: Kevin Kraft &lt;kkraft@portlandmaine.gov&gt;, James Rather &lt;jrather@portlandmaine.gov&gt;, Errico Thomas &lt;thomas.errico@tylin.com&gt;, Jeremiah Bartlett &lt;jbartlett@portlandmaine.gov&gt;, Anne McGuire &lt;amcguire@portlandmaine.gov&gt;, Mary Davis &lt;mpd@portlandmaine.gov&gt;

Jimmy,

I have reviewed the plans for this development and it looks quite impressive, however I am concerned that there are only 79 parking spaces for 120 units.

It is my understanding that the first phase will have a parking ratio of 1 to 1 which is good, but the second phase will only have 22 spaces for 63 units a ratio of .34 spaces per unit, which in my opinion is unacceptable.

I fully understand that more housing in the City could be beneficial; however I think that it should be created in a way that

it does not negatively impact others. In this specific case the existing residents of Douglas St. are already parking on the street,

coupled with people attending events at Dougherty Field can make for a tight parking supply. Not to mention where people will park during parking bans.

Most landlords that I talk to say that most of their tenants have at least one car and most have more, in many cases two families are sharing one apartment, or teenagers have cars, and others have overnight guest.

For the above stated reasons, I think that it is unfortunate that this development will not be providing at least one off street parking

space per unit for all units. I still believe that the majority of tenants/owners will own vehicles. Even if they do not use their vehicles daily, they will need a place to park or store them.

The following is a email I received from a resident of Parkside that supports my statements above.

"I am a Parkside resident and homeowner of a two unit on Sherman St...I have parking for only one vehicle and there are 4 tenants including myself...

Since I am older and work some nights until midnight, walking two or three blocks at that hour is really unsafe for both myself and or tenants.

What is the reality of increasing any type of city parking for this area. I am at the Maine Medical end of Sherman and there are NO nearby parking locations....With the new development of the housing on Cumberland Avenue this issue is going to get worse.....Several homes on my end of Sherman have no driveways at all so street parking is nearly IMPOSSIBLE to find.

I work privately as a caregiver for an elderly lady with Alzheimer's disease which requires me to be on call 24 hours a day, so a taxi is not an option.

Thoughts/ideas/anything? I am almost to the point of selling my home due to lack of parking.

Sincerely...."

Let me know if you need any additional information from me concerning this matter.

Please forward this memo onto the Planning Board.

Thanks  
John



Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

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## 57 Douglass - DPW Comments

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**Jennifer Ladd** <jwl@portlandmaine.gov>

Thu, May 19, 2022 at 1:51 PM

To: Jimmy Dealaman &lt;jdealaman@portlandmaine.gov&gt;

Cc: Lauren Andersen &lt;landersen@portlandmaine.gov&gt;, Jeremiah Bartlett &lt;jbartlett@portlandmaine.gov&gt;

Hi Jimmy,

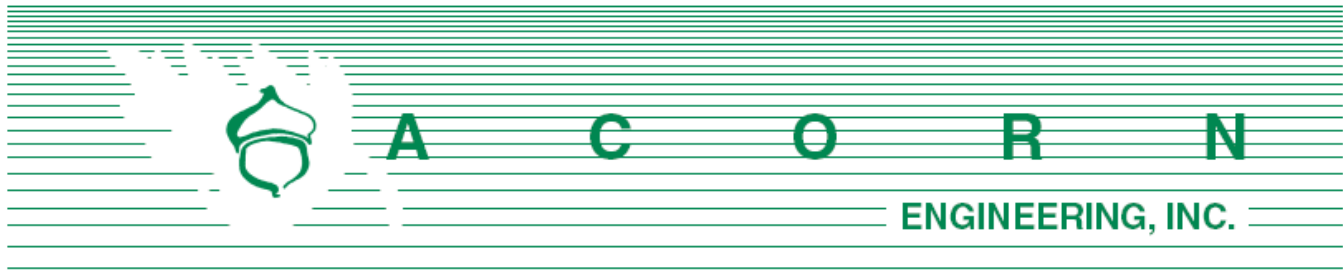
DPW has reviewed the recent response to comments for the [57 Douglass Street](#) project and is accepting of the responses with the following exception. DPW maintains that in order for this development to successfully rely on its convenient proximity to transit, the lighting at the corner of Douglass and Congress needs to be improved for pedestrian safety. This should be via the installation of a single cobra head mounted on the existing utility pole and angled toward Congress Street.

Thank you,  
Jen

Jennifer Ladd

Senior Transportation Engineer  
City of Portland  
Department of Public Works - Engineering  
[212 Canco Road](#)  
[Portland, Maine 04103](#)  
(207) 874-8894  
[jwl@portlandmaine.gov](mailto:jwl@portlandmaine.gov)  
(she/her/hers)





Planning Division  
Attn: James Rather, Development Review Manager  
City of Portland, Maine  
389 Congress Street, 4th Floor  
Portland, ME 04101

December 22, 2021

Subject: Major Site Plan & Subdivision Application  
Douglass Commons Redevelopment

James:

On behalf of Douglass Commons, LLC and the design team, we are pleased to submit the accompanying package of materials related to the proposed redevelopment of the former West School at 43/91 Douglass Street in the Libbytown neighborhood. The 3.34-acre parcel was recently put under a Purchase & Sale agreement between the City and the developer after a competitive public RFP process. Since then, the design team has held numerous neighborhood meetings and informational sessions, as well as achieved a map amendment, extending the R-5a zoning district to include the subject parcel.

The project includes a total of 120 affordable residential units and falls under the Planned Residential Unit Development (PRUD) standards in addition to capitalizing on affordable housing incentives. The design includes a five story 63-unit building managed by the Szanton Company as well as a collection of townhome-style buildings comprising 57 units under a Co-Op model managed by Maine Cooperative Development Partners. This joint infill redevelopment will feature a phased project with each portion being seamlessly integrated into the overall development, creating a harmonious site design. A focal point of the project includes a woonerf, a European technique designed to encourage community gathering and prioritize the pedestrian experience. The project has also been coordinated with the abutting park redevelopment to provide a cohesive connection.

We are excited to submit this application to the Planning Department as it falls directly in line with the comprehensive plan by creating quality affordable housing while transforming the dilapidated infill site into an attractive, multi-generational housing community.

Sincerely,

Samuel J. Lebel, P.E.  
Project Manager  
Acorn Engineering, Inc.



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

Documents:

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

Drawings:

- Civil Site Plan Set, dated 12/22/21
- Architectural Plan Set, dated 12/22/21



**CITY OF PORTLAND**  
**Planning & Urban Development Department**

Att. B

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>MAJOR SITE PLAN</b></p> <p><b>GENERAL DOCUMENT AND DRAWINGS CHECKLIST</b></p> <p>Please submit each document as a separate PDF file.</p> <p>Please confirm by electronically checking the boxes in the left-hand column.</p> <p><b>** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW **</b></p> <p style="color: red;">At the time of application submission, please contact the Department of Public Works regarding E-911 addressing for your project.</p> |                                                                                                                                                                                                                                        |
| <b>GENERAL APPLICATION DOCUMENTS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                        |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Project Description</b> <ul style="list-style-type: none"> <li>Cover letter with detailed project description</li> </ul>                                                                                                            |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Completed Checklist</b> (this document)                                                                                                                                                                                             |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Evidence of Right, Title, and Interest</b> <ul style="list-style-type: none"> <li>Deeds, leases, or purchase and sales agreements</li> </ul>                                                                                        |
| Yes <input type="checkbox"/> NA <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Evidence of State or Federal Approvals</b> <ul style="list-style-type: none"> <li>Permits or letters of non-jurisdiction, if applicable</li> </ul>                                                                                  |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Zoning Assessment</b> (see <a href="#">Zoning Assessment Table</a> )<br>Summary of compliance with use and dimensional standards of the land use code                                                                               |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Site Plan Standards Assessment</b> (see Section 14.6 of the land use code) <ul style="list-style-type: none"> <li>Summary of project compliance with site plan standards of the land use code</li> </ul>                            |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Summary of Existing and/or Proposed Easements or Covenants, applicable.</b> <ul style="list-style-type: none"> <li>Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way</li> </ul> |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Waiver Requests</b> (see <a href="#">Waiver Table</a> ) <ul style="list-style-type: none"> <li>Written request for waiver describing request and compliance with applicable waiver standards</li> </ul>                             |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Financial Capability</b> <ul style="list-style-type: none"> <li>Letter or evidence from a financial institution or third party verifying financial capacity to undertake project</li> </ul>                                         |
| Yes <input checked="" type="checkbox"/> NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Technical Capability</b> <ul style="list-style-type: none"> <li>Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects</li> </ul>                                                 |

## 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 <input checked="" type="checkbox"/> | <b>Impact on Surrounding Street Systems (14-14.6.1(A))</b> <ul style="list-style-type: none"> <li>Describe incremental volume of traffic impacts and mitigation measures. If needed</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Yes <input checked="" type="checkbox"/> NA    | <b>Access and Circulation (14-14.6.1(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Site access and internal circulation, including ADA access</li> <li>Drive-up features, if applicable</li> <li>Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable</li> <li>Sidewalks and condition along street frontages and internal walkways</li> <li>Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)</li> </ul> |
| Yes <input checked="" type="checkbox"/> NA    | <b>Public Transit (14-14.6.1(C)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter</li> </ul>                                                                                                                                                                                                                                                                                                                               |
| Yes <input checked="" type="checkbox"/> NA    | <b>Off-Street Parking (14-14.6.1(D)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code</li> <li>Curb cut separation and parking layout (Technical Manual, Section 1)</li> <li>Construction details for bicycle racks</li> <li>Management plan for snow storage and removal</li> </ul>                                                                                                             |
| Yes    NA <input checked="" type="checkbox"/> | <b>Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable</b> <ul style="list-style-type: none"> <li>Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |

| ENVIRONMENTAL |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes           | NA | X  | <b>Preservation of Significant Natural Features (14-14.6.2(A)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• High and moderate value waterfowl and wading habitat</li> <li>• Aquifers (for Casco Bay Islands)</li> <li>• Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)</li> <li>• Proposed preservation areas and protection measures</li> <li>• Documentation from environmental compliance consultants and determinations from applicable state and federal agencies</li> </ul> |
| Yes           | X  | NA | <b>Landscape Preservation (14-14.6.2(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4)</li> <li>• Measures to protect existing vegetation during construction</li> </ul>                                                                                                                                                                                                                                                                |
| Yes           | X  | NA | <b>Site Landscaping and Buffers (14-14.6.2(C))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Overall landscaping approach and consistency with standards</li> <li>• The use of screening and buffering of service areas and between non-residential and residential uses</li> <li>• Existing Heritage or Feature Trees on site and measures to preserve</li> <li>• Compliance with street tree requirements</li> </ul>                                                                                                                      |
| Yes           | X  | NA | <b>Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>• Erosion and sedimentation control plan and measures</li> <li>• Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable</li> <li>• Subsurface sanitary sewage disposal and groundwater protection measures</li> </ul>                                                                                                                                |

| PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes <input checked="" type="checkbox"/> NA | <b>Consistency with City Master Plans (14-14.6.3(A))</b> <ul style="list-style-type: none"> <li>Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable</li> </ul>                                                                                                                                                                                                                    |
| Yes <input checked="" type="checkbox"/> NA | <b>Public Safety and Fire Prevention (14-14.6.3(B))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3)</li> <li>Emergency vehicle access</li> <li>Consistency with public safety standards (Technical Manual, Section 3)</li> </ul>                                                                        |
| Yes <input checked="" type="checkbox"/> NA | <b>Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 &amp; 9)</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Electrical services, including providing underground services</li> <li>Existing and proposed connections for public utilities and required public utility upgrades</li> <li>Sewer line connections</li> </ul>                                                     |
| SITE DESIGN                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Yes NA <input checked="" type="checkbox"/> | <b>Massing, Ventilations and Wind Impact (14-14.6.4(A))</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable</li> <li>Bulk, location, or height impacts on adjoining structures</li> </ul>                                                                                                            |
| Yes NA <input checked="" type="checkbox"/> | <b>Shadows (14-14.6.4(B)), if applicable</b> <ul style="list-style-type: none"> <li>Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)</li> </ul>                                                                                                                                                                                                                                                          |
| Yes NA <input checked="" type="checkbox"/> | <b>Snow and Ice Loading (14-14.6.4(C))</b> <ul style="list-style-type: none"> <li>Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways</li> </ul>                                                                                                                                                                                                                                      |
| Yes NA <input checked="" type="checkbox"/> | <b>View Corridors (14-14.6.4(D)), if applicable</b> <ul style="list-style-type: none"> <li>Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)</li> </ul>                                                                                                                                                                                                                                                            |
| Yes NA <input checked="" type="checkbox"/> | <b>Historic Resources (14-14.6.4(E)), if applicable</b><br>Identify and describe the following: <ul style="list-style-type: none"> <li>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</li> <li>Compliance with standards for preservation and documentation of archaeological resources</li> </ul> |



|                                            |                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes <input checked="" type="checkbox"/> NA | <b>Exterior Lighting (14-14.6.4(F))</b> <ul style="list-style-type: none"> <li>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</li> </ul>                     |
| Yes NA <input checked="" type="checkbox"/> | <b>Noise and Vibration (14-14.6.4(G))</b> <ul style="list-style-type: none"> <li>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</li> </ul>   |
| Yes NA <input checked="" type="checkbox"/> | <b>Signage and Wayfinding (14-14.6.4(H)), if applicable</b> <ul style="list-style-type: none"> <li>Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs</li> <li>Provide drawings of all commercial and directional signage on site</li> </ul> |
| Yes <input checked="" type="checkbox"/> NA | <b>Zone-Related Design Standards (14-14.6.4(I))</b> <ul style="list-style-type: none"> <li>Address any applicable design review standards by zone, including compliance with Design Manual</li> </ul>                                                                                                  |

## 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Location of solid waste management receptacles</li> <li>• Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable</li> <li>• Location of proposed easements and rights-of-way, including dimensions</li> <li>• Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed</li> </ul> |
| <b>UTILITY PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• Proposed electrical infrastructure</li> <li>• Location, sizing and directional flows of all proposed sewer and stormwater infrastructure</li> <li>• Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site</li> <li>• Electric utility infrastructure</li> </ul>                                                                                               |
| <b>GRADING AND DRAINAGE PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Proposed grades</li> <li>• Proposed stormwater management measures meeting Technical Manual (Section 5) standards</li> <li>• Any proposed alteration of a watercourse or wetlands</li> <li>• Any groundwater protection measures</li> <li>• Proposed buffers and preservation measures for wetlands or significant natural features</li> </ul>                                                                |
| <b>LANDSCAPE PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• Existing vegetation to be preserved and preservation measures</li> <li>• Proposed landscaping, screening, and street trees, including caliper widths for trees</li> <li>• Planting schedule, including street trees</li> </ul>                                                                                                                                                                                |
| <b>ARCHITECTURAL PLANS AND RENDERINGS including:</b>                                                                                                                                                                                                                                                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• Exterior building elevations, color renderings, illustrations of all sides</li> <li>• Axonometric and street-level views for structures greater than three stories in height</li> <li>• Provide context drawings, if applicable (Design Manual, page 1)</li> <li>• Floor plans</li> </ul>                                                                                                                     |
| <b>CONSTRUCTION MANAGEMENT PLAN including:</b>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting</li> <li>• Include a drawing and written narrative</li> </ul>                                                                                                                                                                                                                                                                          |
| <b>OTHER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• Details and cross-sections, as necessary</li> </ul>                                                                                                                                                                                                                                                                                                                                                           |

## **C. Right, Title, & Interest**

Please find attached the Purchase and Sale Agreement between the City of Portland and Douglass Commons, LLC.



## PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this “Agreement”) is made this 21st day of May, 2021 (the “Effective Date”) by and between the CITY OF PORTLAND, a body politic and corporate located in Cumberland County, Maine, (hereinafter referred to as “Seller” or “City”), and Douglass Commons, LLC, a Maine limited liability company having a mailing address as provided below (hereinafter referred to as “Buyer”).

### RECITALS

WHEREAS, the CITY is the owner of approximately 3.40 acres of land at or near 43 & 91 Douglass Street, Portland, Maine (the “Premises”) and did advertise RFP #20067 dated April 10, 2020, entitled Request for Proposals for Disposition and Development of City-Owned Property Located at 43 and 91 Douglass Street, a copy of which is attached hereto as Exhibit A and incorporated herein (the “Request for Proposals”) (the Premises is identified in the City’s tax records as CBL 078 C002 and a portion of 078 B007 together with the 60 ft. wide proposed street situated between the two parcels, as is generally depicted on the Boundary Survey dated March 1, 2021 prepared by Owen Haskell, Inc. for The Szanton Company, a copy of which is attached as Exhibit B); and

WHEREAS, Buyer submitted a proposal dated June 15, 2020 in response to the Request for Proposals, a copy of which is attached hereto as Exhibit C and incorporated herein (the “Proposal”); and

WHEREAS, Buyer desires to purchase and develop the Premises, and the City desires to convey the Premises to Buyer, subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **SALE.** City agrees to sell the Premises to Buyer, and Buyer agrees to purchase the Premises in accordance with the terms and conditions set forth in this Agreement. This Agreement is for the sale of land only.
2. **CONSIDERATION.** The purchase price for the Premises shall be Four Hundred Seventy-Five Thousand Dollars (\$475,000.00) (the “Purchase Price”), subject to the following cost adjustments and conditions:
  - a. Buyer shall deliver to the City the sum of Ten Thousand Dollars (\$10,000.00) (the “Deposit”) within 3 business days after the full execution of this Agreement, which the City shall hold in a non-interest bearing account. The Deposit shall be governed by the terms and conditions of this Agreement and shall be fully refundable until the end of the Due Diligence Period as that term is defined below.
  - b. The Buyer shall pay the remainder of the Purchase Price to the City by wire transfer (or as otherwise reasonably requested by the City) at closing.



### 3. TITLE AND DUE DILIGENCE.

- a. Due Diligence Period. Buyer will have from the Effective Date until 4:00 PM Eastern Time on the day that is eighteen (18) months after the Effective Date (the “Due Diligence Period”) to complete any surveys, environmental review, inspections, and title examinations, and to obtain any zone change, site plan approval, and any other permits and regulatory approvals required for the Project. Buyer may, in its sole discretion, notify the City in writing that the Buyer elects to terminate the Due Diligence Period sooner and proceed to closing. Within ten days of the Effective Date, the City shall provide copies of, or reasonable access to, all known, non-confidential City files regarding the Premises, including without limitation title files.
- b. Property Description. The legal description of the Premises contained in the deed will be a survey description based upon a survey plan that will more specifically describe the Premises. The parties acknowledge and agree that the survey attached as Exhibit B is a preliminary draft prepared by Buyer and is subject to change after review, amendment, and approval by both parties. The City will notify Buyer of any objections to the survey within 30 days after the Effective Date. Within 10 days after receipt of any such objection, the Buyer will either provide the City with a revised survey addressing City’s objections to City’s satisfaction, or notify the City that Buyer will not change the survey, in which case the City, will have the right to terminate this Agreement, return the Deposit to Buyer, and neither party shall have any further obligation to the other. Upon City’s acceptance of the survey, Buyer will provide the City with a draft legal description for the Premises, which shall be based on the survey and be subject to the City’s review and approval. The survey and description of the Premises will be prepared by the Buyer at its sole expense. The parties will work together in good faith to complete their review and approval of the survey and legal description on or before the day that is 90 days after the Effective Date.
- c. Rezoning Contingency. Buyer proposes to obtain the Portland City Council’s approval to rezone the Premises (the “Rezoning Approval”) to increase residential density for its development of the Premises as described in the Proposal (the “Project”). The Buyer will be responsible for obtaining, at its sole expense, the Rezoning Approval and any other regulatory approvals required for the Project prior to Closing. Buyer may terminate this Agreement and receive a full refund of the Deposit if the Rezoning Approval is not received.
- d. Financing Contingency. The Buyer’s obligation to close is contingent on obtaining construction and permanent financing for the Project that the Buyer, in its discretion, determines is sufficient to put the Project on a sound financial footing. That financing is anticipated to include, but not be limited to, the following: (i) for the residential rental portion of the project an allocation of Federal low-income housing tax credits (“LIHTCs”), other

financing provided by Maine State Housing Authority (“MaineHousing”) and affordable housing tax increment financing from the City including a Credit Enhancement Agreement and (ii) for the cooperative housing portion of the project permanent financing under the U.S. Department of Housing and Urban Development section 213 program and affordable housing tax increment financing from the City including a Credit Enhancement Agreement. Buyer may terminate this Agreement and receive a full refund of the Deposit if the financing contingency described above is not met during the Due Diligence Period.

- e. Title and Survey Objections. Buyer will have until the end of the Due Diligence Period to deliver to City any written objections to title, environmental, or survey matters (other than the permitted exceptions identified herein) that materially affect insurability or use. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record environmental, or survey matters first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.
- f. Option to Cure. In the event of a title or survey objection, City will have the option, but not the obligation, to cure the objection and will notify Buyer of its election within ten (10) business days after receipt of the objection. In the event that the City elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the City does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to Buyer’s reasonable satisfaction, Buyer will have the option to (1) terminate this Agreement and obtain a refund of the Deposit (after which neither party will have any further obligation or liability to the other under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).
- g. Deed. City shall convey the Premises to Buyer at the closing in fee simple by a municipal quitclaim deed without covenant. Title shall be good and insurable title, free and clear of all encumbrances except (i) easements of record and easements described herein, including, without limitation, an easement to be reserved by, and in form and substance satisfactory to the City and Buyer, the City for access to, and maintenance, repair, and replacement of, the trail located between the Premises and the I-295 corridor; (ii) easements for utilities servicing the property, in form and substance satisfactory to the City and Buyer, including, without limitation, Utility and sewer (iii) zoning ordinances, and (iv) real estate taxes not yet due and payable. Further, Buyer acknowledges that the deed shall contain a restriction stating that in the event that the Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount equal to

the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Such restriction shall also confirm that Buyer and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine. The City shall provide a draft of the deed, and of any declaration of covenants and restrictions pursuant to section 11, to Buyer one month before the end of the Due Diligence Period, and the City and Buyer shall in good faith endeavor to agree on the form of the deed prior to the end of the Due Diligence Period.

- h. Existing Natural Gas Equipment and Easement. The City has informed Buyer that the City believes that all or a portion of the existing natural gas pipe and other equipment depicted on Exhibit B may be actually located outside of the easement provided by the City to Unitil. The City shall use best efforts to work with Unitil to resolve the actual location of the gas pipeline and equipment and amend the easement, if necessary, within three months of the Effective Date. If City is unable to amend the Unitil easement to Buyer's satisfaction, Buyer shall have the right to terminate this Agreement as set forth in subsection (i) below.
- i. Buyer's Right to Terminate. The Buyer may terminate this Agreement at any time during the Due Diligence Period if, in the exercise of its sole discretion, it decides to not proceed with the Project by giving written notice of termination to the City in which case the City shall return the Deposit to Buyer and neither party shall have any further obligations to the other.

#### **4. INSPECTIONS.**

- a. During the Due Diligence Period, Buyer and its employees, consultants, contractors and agents shall have the right, at Buyer's expense, to enter on the Premises at reasonable times in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as Buyer determines, it is sole discretion, to be required to determine the suitability of the Premises for Buyer's intended use (collectively, the "Inspections"). The City acknowledges that such Inspections may include the digging of test pits, which the City hereby approves.
- b. Buyer agrees to defend, indemnify and hold harmless the City against any mechanics liens that may arise from the activities of Buyer and its employees, consultants, contractors and agents on the Premises.
- c. Buyer shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and Buyer hereby releases the City from, and

agrees to indemnify, defend, and hold the City harmless against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by the City on account of any injury to person or damage to property arising out of the exercise by Buyer of its rights hereunder, except to the extent that such Damages result from the act or omission of the City.

- d. Buyer shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance, if applicable, and commercial general liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars (\$400,000.00) per occurrence for bodily injury, death and property damage, listing the City as an additional insured thereon, and also Workers' Compensation Insurance coverage to the extent required by law; the forms of all such insurance to be subject to City's Corporation Counsel's reasonable satisfaction.
- e. In the event that Buyer does not purchase the Premises, Buyer agrees to either return the Premises as nearly as possible to its original condition after conducting the Inspections; provided, however, the City hereby acknowledges and agrees Buyer shall have no obligation to clean-up, remove or take any other action with respect to any disturbance of any pre-existing environmental contamination on the Premises caused by such inspections, studies, tests, exams, and assessments, and that Buyer shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.
- f. The parties hereto acknowledge and agree that it is a condition to Buyer's obligations under this Agreement that the results of the Inspections be acceptable to Buyer in its sole discretion. If the results of such due diligence are not acceptable to Buyer in its sole discretion, and if Buyer exercises its right to terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

- 5. **REAL ESTATE TAXES, PRORATIONS AND TRANSFER TAX.** Buyer shall be liable for all real estate taxes beginning as of the start of fiscal year following the closing and continuing thereafter. Because the Property is currently owned by the City of Portland, which is exempt from real estate taxes, no taxes were assessed or will be due for any portion of the tax year during which the closing occurs, and no taxes will be prorated at the closing. Any utilities for the Property shall be prorated as of the closing. The Maine real estate transfer tax shall be paid for by Buyer in accordance with 36 M.R.S.A. § 4641-A. City is exempt from paying the transfer tax pursuant to 36 M.R.S.A. § 4641-C. The recording fee for the deed of conveyance and any expenses relating to Buyer's financing or closing shall be paid for by Buyer.
- 6. **DEFAULT AND REMEDIES.** Prior to Closing, in the event that Buyer defaults hereunder for a reason other than the default of the City, the City may terminate this Agreement and retain the Deposit, and neither party shall have any further obligation

to the other. In the event that Buyer defaults on any matters addressed in this Agreement that survive Closing, Seller may pursue all available legal and equitable remedies. In the event City defaults under this Agreement, and if Buyer is not then in default hereunder, Buyer shall have the right to pursue specific performance or terminate this Agreement and elect in substitution therefor, as its sole remedy, the right to a return of the Deposit.

7. **RISK OF LOSS.** The risk of loss or damage to the Premises by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the City. The Premises is to be delivered in substantially the same condition as of the Effective Date unless otherwise stated. In the event City is not able to deliver the Premises as stated, Buyer may terminate this Agreement, obtain a return of the Deposit, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.
8. **PROPERTY SOLD "AS IS, WHERE IS."** Buyer acknowledges that Buyer has had an opportunity to inspect the Premises, and to hire professionals to do so, and that Premises will be sold "as is, where is" and "with all faults." City, and its agents, make no representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the Premises, or as to the fitness of the Premises for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the Premises. Acceptance by Buyer of the Deed at closing and payment of the purchase price shall be deemed to be full performance and discharge by the City of every agreement and obligation contained herein.
9. **ENVIRONMENTAL INDEMNIFICATION.** Buyer covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Buyer or the City and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the City's release, handling or storage of hazardous wastes or hazardous materials on the Premises. This duty to indemnify, defend, and hold harmless shall be included in a covenant in the deed and shall run with the land conveyed and be binding upon Buyer's successors, assigns, and transferees.
10. **CLOSING.** Time is of the essence in the performance of this agreement. The closing shall be held at the offices of Buyer's counsel at a date and time specified by



two weeks' written notice from Buyer to the City on or before the day that is twenty (20) months after the Effective Date (the "Closing Date"). At the Closing:

- a. The City shall execute, acknowledge and deliver to Buyer a municipal quitclaim deed conveying to Buyer good and insurable title to the Premises, free and clear of all encumbrances except as otherwise set forth herein.
- b. Buyer shall deliver the Purchase Price to the City.
- c. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement.
- d. Buyer shall deliver evidence, reasonably satisfactory to City's Corporation Counsel, that the entity receiving title to the Premises is in good standing under Maine law, and that the individuals acting at Closing and executing documents on behalf of Buyer are authorized to do so.

**11. BUYER'S POST CLOSING OBLIGATIONS; RIGHTS OF CITY TO REPURCHASE PROPERTY.** As set forth in the Proposal, the Project includes a rental housing project and a limited equity cooperative housing project (hereinafter referred to as the "Rental Housing Project" and the "Cooperative Housing Project," respectively). Within thirty-two (32) months of the Effective Date, Buyer shall commence construction of both the Rental Housing Project and the Cooperative Housing Project.

- a. **Rental Housing Project.**
  - i. The Rental Housing Project will consist of an apartment building including no less than 56 units, with a mixture of one-, two- and three-bedroom units. In no event shall the Rental Housing Project include fewer than 17 two-bedroom units and 10 three-bedroom units.
  - ii. For a period of 99 years after the Rental Housing Project has been completed, at least 40 units in the Rental Housing Project shall be affordable to households earning less than or equal to 60% of the area median income (AMI), adjusted for family size, based on figures published annually by HUD for the Portland Metropolitan Statistical Area. If at a time in the future, HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability. For purposes of this Agreement, "affordable" means that the percentage of income a household is charged in rent and other housing expenses including utilities, shall not exceed 30% of the household's gross monthly income, except as provided below if the Project is financed with the LIHTC program. Minimum household size allowed per unit and the formula for calculating maximum allowable monthly rent is detailed on Exhibit D, which is attached hereto and made a part hereof. However, if the Rental Housing Project is financed under the Federal Low Income Housing Tax Credit (LIHTC) Program, maximum allowable rent shall

be the maximum allowable rent under the Federal LIHTC Program during the applicable time period for that Program. Upon expiration of any affordability restrictions recorded in the Cumberland County Registry of Deeds under the Federal LIHTC Program, the provisions of Exhibit D shall apply to the Rental Housing Project for the remainder of the 99-year period.

**b. Cooperative Housing Project.**

- i. The Cooperative Housing Project will include at least 52 units, with a mixture of one-, two-, and three-bedroom units owned by a Limited Equity Cooperative Corporation (the “Co-op”) and leased individually to the resident shareholders of the Co-op (the holding of a Co-op share and lease agreement together constituting a resident’s “cooperative interest”). In no event shall the Cooperative Housing Project include fewer than 12 two-bedroom units and 22 three-bedroom units.
- ii. Upon the issuance of a certificate of occupancy for all or a portion of the Cooperative Housing Project, or at such earlier or later time as the Buyer, in its discretion, may determine, the Buyer shall convey the Cooperative Housing Project to the Co-op organized in accordance with the Maine Cooperative Affordable Housing Ownership Act, 13 M.R.S.A. §1741-1762, as may be amended or any successor provisions thereto (the “Act”). References below to particular provisions of the Act include any successor provisions to the provisions referenced.
- iii. Rent Restrictions. For a period of 99 years after the Cooperative Housing Project has been completed, all residential units in the Cooperative Housing Project shall be affordable to households earning less than or equal to 100% of the area median income (AMI), adjusted for family size, based on figures published annually by HUD for the Portland Metropolitan Statistical Area. If, at a time in the future, HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability. For purposes of this Agreement, “affordable” means that the percentage of income a household is charged in connection with (i) its cooperative interest and other housing expenses, including utilities, shall not exceed 30% of the household’s gross monthly income or (ii) its rent and other housing expenses, including utilities, shall not exceed 30% of the household’s gross income. Minimum household size allowed per unit and the formula for calculating maximum allowable purchase price and monthly rent is detailed on Exhibit D, which is attached hereto and made a part hereof.
- iv. Income Restrictions. Except as provided below regarding the initial sale of cooperative interests, a household may only purchase a cooperative interest in a unit or if its income is not more than 100% of the AMI, adjusted for family size, as published by the U.S. Department of Housing and Urban Development (“HUD”) at the time of purchase. This income test will be used only at the time of the household’s purchase. No income test shall apply for subsequent

transfers to family members (as reasonably defined by the Co-Op Entity) or to a cooperative membership interest which is inherited or transferred upon death to a beneficiary. At the time of the initial sale of cooperative membership interests in the Co-op, up to 20% of the cooperative membership interest may be sold to households earning up to 120% AMI. All subsequent sales must be to households earning no more than 100% of AMI.

- v. The articles of organization for the Co-op shall provide that in the event the Co-op shall be dissolved, its assets will be distributed in accordance with §1754 (6) of the Act. In such dissolution, the Co-Op's assets will be used first to pay all debts and other obligations of the Co-op, then to make any distributions to members required under the Co-Op's limited equity organizational documents, then any remaining balance shall be paid to the City or, at the Buyer's option with the consent of the City not to be unreasonably withheld, to another organization permitted under §1754 (6) of the Act.

c. **Option to Repurchase All or a Portion of the Premises.**

(i) If Buyer, its successors, assigns, or transferees commences no construction of any portion of the Project to be located on the Premises within 32 months of the Effective Date, the City shall have the right, but not the obligation, to repurchase the Premises and all improvements thereon (collectively, the "Property") at the Purchase Price (the "Property Repurchase Price") plus all commercially reasonable and documented, design, development, construction, and regulatory approval expenses ("Approved Expenses") incurred by Buyer, or successors, to the date on which the City notifies Buyer, its successors or assigns, of its intent to exercise its option to repurchase the Property. The parties acknowledge and agree that the Approved Expenses are intended to include only costs incurred directly in connection with the development of the Property for documents, agreements, designs, plats, plans, approvals, and construction, the rights to which may be assigned or transferred to the City. In no event shall the **Approved** Expenses include salaries, developer fees, or the like paid by Buyer, its successors or assigns to their members, shareholders, partners, employees, or agents.

(ii) If Buyer conveys a portion of the Property (the "Co-Op Site"), which conveyance may be by creating and conveying a land condominium unit, to a separate entity (the "Co-Op Entity") for purposes of that entity developing the Cooperative Housing Project, and the Co-Op Entity fails to commence construction of the Cooperative Housing Project within 32 months of the date of this agreement or fails to complete construction of the Cooperative Housing Project within fifty (50) months of the date of this agreement, the City shall have the right, but not the obligation, to purchase the Co-Op Site and all improvements thereon for a price equal to One Hundred Thousand Dollars (\$100,000) ("Co-Op Repurchase Price") plus Approved Expenses incurred by Buyer, or successors, for purposes of developing the Co-Op Site to the date on which the City notifies Buyer, its

successors or assigns, of its intent to exercise its option to repurchase. Any conveyance of the Co-Op Site to the City will (i) be subject to any and all rights of the Rental Housing Entity (defined below) or pursuant to any condominium documents that affect or burden the Co-Op Site and (ii) include any and all rights of the Co-Op Entity over the Rental Housing Site (as defined below) or pursuant to any condominium documents.

(iii) If Buyer conveys a portion of the Property (the “Rental Housing Site”), which conveyance may be by creating and conveying a land condominium unit, to a separate entity (the “the Rental Housing Entity”) for purposes of that entity developing the Rental Housing Project, and the Rental Housing Entity fails to commence construction of the Rental Housing Project within 32 months of the date of this agreement or fails to complete construction of the Rental Housing Project within fifty (50) months of the date of this agreement, the City shall have the right, but not the obligation, to purchase the Rental Housing Site and all improvements thereon for a price equal to \$375,000 (the “Rental Housing Repurchase Price”) plus Approved Expenses incurred by Buyer, or successors, for purposes of developing the Rental Housing Site to that the date on which the Property is conveyed to the City. Any conveyance of the Rental Housing Site to the City will (i) be subject to any and all rights of the Co-Op Housing Entity (defined below) or pursuant to any condominium documents that affect or burden the Rental Housing Site and (ii) include any and all rights of the Rental Housing Entity over the Co-Op Site (as defined below) or pursuant to any condominium documents.

(iv) Any conveyance to the City pursuant to the City’s option to purchase shall be subject to all mortgages of record placed by Buyer, its successors and assigns, but only if such mortgages secure financing of the development of the Premises (the “Permitted Mortgages”). In the event that there are any Permitted Mortgages on the Property, or portion thereof, at the time City exercises its right to repurchase, the parties agree that the City shall have the option to pay the applicable Repurchase Price and Approved Expenses to the first priority mortgagee. City and its successors and assigns agrees to enter into such agreements on reasonable commercial terms as may be requested by the lenders and/or investors of Buyer, its successors and assigns, to provide such lenders or investors notice and cure rights. In furtherance, but not in limitation of the foregoing, as long as MaineHousing holds a Permitted Mortgage on the Premises, no notice given by the City to the Buyer, its successors and assigns under the City’s deed shall be valid unless and until a copy of the notice is given to MaineHousing at Maine Housing at Maine State Housing Authority, 26 Edison Drive, Augusta, Maine 04330, Attn: Legal Department. MaineHousing shall have the right, but not the obligation, to cure any default or perform any obligation under the City’s deed for thirty (30) days beyond any period during which Buyer, its successors and assigns may cure any default or perform any obligation under the City’s deed. If the City exercises any of the above right to purchase, Buyer or its successor

shall convey the Property to the City, free and clear of all encumbrances other than the Permitted Mortgages and any utility easements granted by Buyers its successors and assigns, and assign to the City all contracts, plans, and other documents related to the design, construction, and regulatory approvals for the Project. The City agrees to make reasonable modifications to the provisions regarding the City's repurchase rights to facilitate mortgage and development financing for the Project. The rights to purchase shall be assignable by the City.

(v) Buyer anticipates that the Co-Op entity will grant a mortgage on the Co-Op Site to a lender or investor to finance the purchase of the Co-Op Site and preconstruction development costs including the Co-Op's \$100,000 portion of the acquisition price, Approved Expenses and related customary and commercially reasonable financing costs (such financing is referred to as the "Pre-Development Mortgage Loan"). Buyer, for itself, its successors, and assigns, including the Co-Op Entity, agrees that it will not encumber the Co-Op Site with mortgages other than the mortgage securing Pre-Development Mortgage Loan and that such mortgage shall not exceed in the aggregate the Co-Op Pre-Development Appraised Value (as defined below) at any time prior to the closing of the full construction financing for the Cooperative Housing Project (the "Co-Op Construction Loan Closing"). Prior to the Co-Op Construction Loan Closing, notwithstanding any other provision of this Agreement, the total amount that the City is required to pay to repurchase the Co-Op Site upon exercise of its option as provided above, including Approved Expenses, shall be limited to the then-outstanding balance of the mortgage securing the Pre-Development Mortgage Loan.

The term "Co-Op Pre-Development Appraised Value" means the appraised value of the Co-Op Site as determined by an appraisal, made in accordance with all applicable professional standards, obtained by the lender making the pre-development mortgage loan to the Co-Op entity. The Co-Op entity agrees to provide a copy of that appraisal to the City prior to entering into such mortgage loan.

The provisions of this Section 11(c)(v) shall cease to apply as of the Co-Op Construction Loan Closing.

- d. For all purposes of this Section 11, construction will be deemed completed for a portion of the Project upon the issuance of a Certificate of Occupancy by the City for that portion. Upon termination of the City's option with respect to a portion of the Project, the City will, at the request of the Buyer, its successors and assigns execute and record an affidavit indicating that the City's option has terminated with respect to all or a portion of the Project. Notwithstanding anything else to the contrary in this Section 11, in the event that the City fails to give the notice exercising the City's option on or before the date that is 31 months after the Closing Date, then the City's



option shall terminate automatically without the need for further writing or recording.

- e. Notwithstanding the above provisions, if after closing, Buyer, or its successors, assigns, or transferees determines that it is not feasible to develop the Property as a rental housing project using Maine State Housing Authority financing or as a cooperative leasing/ownership structure, Buyer may develop the Property using a different financing or leasing/ownership structure so long as the unit mix and affordability criteria provided in this Agreement are satisfied. If the Buyer or its successors does so within the time periods specified, the City shall not have the right to repurchase the Property.
- f. The provisions of this Section 11 will survive closing and will be included in greater detail in the City's deed to Buyer or in a declaration of covenants, conditions and restrictions executed before or at the time of Closing, which shall be recorded in the Cumberland County Registry of Deeds.

- 12. **ENTIRE AGREEMENT.** This Agreement represents the entire and complete Agreement and understanding between the parties and supersedes any prior agreement or understanding, written or oral, between the parties with respect to the acquisition or exchange of the Property hereunder. This Agreement cannot be amended except by written instrument executed by City and Buyer.
- 13. **NON-WAIVER.** No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.
- 14. **HEADINGS AND CAPTIONS.** The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.
- 15. **BINDING EFFECT.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, administrators, successors and assigns.
- 16. **TIME.** The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.
- 17. **GOVERNING LAW.** This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

**18. NOTICE.** All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after the notice is delivered to an overnight delivery service with delivery confirmation, addressed to the recipients at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

**FOR THE CITY:** City of Portland  
ATTN: City Manager  
389 Congress Street  
Portland, ME 04101

With a copy to: The Office of the Corporation Counsel at the same address.

**FOR BUYER:** Douglass Commons LLC  
c/o The Szanton Company  
482 Congress, Suite 203  
Portland, ME 04101

And to:

Maine Cooperative Development Partners, LLC  
c/o Brian Eng  
6 City Center, Fl. 3  
Portland, ME 04101

With a copy to: John S. Kaminski  
Drummond Woodsum  
84 Marginal Way, Suite 600  
Portland, ME 04101

**19. SIGNATURES; MULTIPLE COUNTERPARTS.** This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

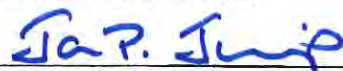
**20. BROKERS.** The City and Buyer each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. Buyer agrees to indemnify and hold harmless City from any claims made by any broker should Buyer's representation in this paragraph be false. Subject to the limitations of liability set forth in the Maine Tort Claims Act, City agrees to indemnify and hold harmless Buyer from any claims made by any broker should City's representation in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive closing.

21. RECITALS INCORPORATED BY REFERENCE. The recitals set forth above are incorporated herein by reference and made a part of this Agreement.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed on their behalf by their duly authorized offices or representatives, on the day and year first written above.

  
WITNESS

CITY OF PORTLAND

  
Jon P. Jennings  
Its City Manager

  
WITNESS

DOUGLASS COMMONS, LLC

By:   
Printed Name: Nathan S. Szanton  
Its Manager

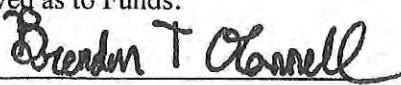
Approved as to Form:

  
City Corporation Counsel's Office

and

By:   
Printed Name: Brian Eng  
Its Manager

Approved as to Funds:

  
City Finance Department

**CITY of PORTLAND, MAINE**  
**Request for Proposals for Disposition of City-Owned Property**  
**Located at 43 & 91 Douglass Street**  
**RFP #20067**

**I. NOTICE AND SPECIFICATIONS**

The City of Portland, Maine seeks proposals from qualified developers for the creation of residential housing at 43 & 91 Douglass Street. The site is designated on the City of Portland Tax Assessor's Map as lot CBL 078 C002 & 078 B007.

**Sealed proposals for the project, including an original, seven (7) copies, and one (1) digital copy, as specified herein, will be received by the Purchasing Office, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101, until 3:15 p.m., Tuesday, June 16, 2020, at which time they will be publicly opened.**

Proposals shall be submitted, and returned in sealed envelopes plainly marked on the outside "Disposition and Development of Property Located at 43 & 91 Douglass Street".

Proposals that are late, unsigned or submitted via fax will not be accepted. Proposals from individuals not registered with the Purchasing Office may be rejected; receipt of this document directly from the City of Portland indicates registration. Should a person receive this Request from a source other than the City, please contact 207-874-8654 to ensure that you are listed as a recipient for this proposal.

All questions must be submitted in writing to the Purchasing Office. These may be mailed, hand delivered, faxed to (207) 874-8652 or e-mailed to [mff@portlandmaine.gov](mailto:mff@portlandmaine.gov) and be received no later than five (5) business days prior to the opening date. Questions received after this time will not be addressed. Any interpretation, correction, or change of this document will be made only by written addenda. Changes in any other manner will not be binding on the City and proposers should not rely on. Proposers should not have contact with any City staff with regard to this proposal unless to obtain general public information as specified in the document.

The disposal of this real estate shall be on the basis of a negotiated proposal, with the City of Portland reserving the right to refuse any and all proposals. *All proposers are advised that the property will be sold "as-is" and "where is", in its existing condition, with no warranties either expressed or implied.* The City makes no representations or warranties about of any of the information about the property set forth herein, which is provided to proposers for their convenience only. The successful proposer shall be responsible to inspect the property, or to hire its own professionals to do so. The City, and its agents, make no representations or warranties with respect to the title of the property, the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the property, or as to the fitness of the property for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the property. The City disclaims any and all responsibility for injury to proposers, their agents or others while examining the property or at any other time. The City will not be responsible for any broker's commission.

Any and all improvements made to said property must be done in accordance with existing City Codes and Ordinances.

## **II. GENERAL INFORMATION**

### **Summary of Request:**

The City of Portland is committed to providing housing opportunities and has set a goal to evaluate the use of City-owned property to construct housing. As one-step in accomplishing this goal, the City of Portland will accept proposals for the development of housing on the lot located at 43 & 91 Douglass Street, which currently is a vacant lot but was the former site of the West School.

This request for proposals results from the December 16, 2019 approval by the Portland City Council (Resolve 10-19/20) on the recommendation of the Housing Committee to market the City-owned vacant property located at 43 and 91 Douglass Street.

The City of Portland uses the RFP process to ensure that public resources are utilized for maximum public benefit while accomplishing specific objectives and providing fair access to all applicants.

### **Site Information:**

- a. Location:** 43 & 91 Douglass Street, as identified in the City of Portland Assessor's records as lot CBL 078 C002 and 078 B007, in the R-5 zone. The lot includes the former site of the West School. The site for disposition includes a portion of 91 Douglass Street, but not the entire lot (See Attachment 2).
- b. Existing Conditions:** 43 & 91 Douglass Street is located on two parcels with frontage on Douglass Street in the Libbytown neighborhood. A right-of-way bisects the two parcels. The surrounding context is predominantly residential with the majority of homes in the area being one and multi-family structures. Dougherty Play Field abuts the property to the north.
- c. Current use:** Vacant lot.
- d. General Dimensions:** 43 Douglass Street (estimated at .3981 acres), and an estimated 2.85-acre portion of 91 Douglass Street.
- e. Current Zoning:** R-5. The minimum lot size in the R-5 zone is 6,000 square feet for residential development (single-family and two-family), 9,000 square feet for a multi-plex development (three-family or more), and 2 acres for a planned residential unit development (PRUD). This parcel would allow for residential, multi-family, and PRUD development. The minimum lot area per unit in a PRUD is 3,000 square feet; the maximum units per building is 12 units. At an estimated 141,570 square feet, the maximum number of residential units that could be developed within a PRUD is 47 units. For complete zoning requirements, please refer to Chapter 14, Land



Use, of the City Code.

- f. **Rezoning:** Higher density zoning that furthers exceptional projects and other city goals as outlined in Section III may be considered. It should be noted that changes to zoning require both Planning Board and City Council approval.
- g. **Condition of the property at the time of sale:** This parcel is the location of a former city-dump, and later the West School. A natural gas line and gas company easement are located in the right-of-way and the 43 Douglass Street parcel thus precluding development over these sites. A 40' wide sewer easement is also identified in the unbuildable portion of the site.
- h. **Environmental Conditions:** A Phase II Environmental Site Assessment (ESA) has been completed to evaluate current environmental conditions. Based on findings, special soil disposal restrictions may be required. Participation in the Maine DEP Voluntary Response Action Program (VRAP) should be considered. The Phase II ESA will be available on-line.
- i. Proposers are urged to investigate water sources and utility connection requirements with the Department of Public Works.

### III. CITY GOALS

The City's primary goals for the use of the property are:

1. Developments shall provide mixed income units. All units must be affordable to households earning 60% to 120% of the area median income (AMI). Currently, 60% AMI for a family of four is \$55,800 and 120% AMI for a family of four is \$111,600.

Affordable means that the percentage of income a household is charged in rent and other housing expenses including utilities, or must pay in monthly mortgage payments (including real estate taxes, mortgage insurance, condominium/HOA fees, insurance and utilities), does not exceed 30% of a household's gross income, or other amount established in city regulations that does not vary significantly from this amount.

Restrictions on the affordability of units must be in place for a minimum of 30 years for homeownership units, and the longest period allowed by law for rental units.

2. Development of mixed income homeownership or rental housing of excellent building and site design. Design principles should promote efficient use of land to create a development that is compatible with the existing pattern, scale, massing, and materials of the surrounding neighborhood. The development's buildings shall be designed to meet the City's Green Building Code.
3. Rezoning may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.
4. Developments shall create housing options that are age inclusive.

The general terms for this real estate transaction include:

- Units must be used as the principal residence of the owner/tenant and owner/tenant shall not use the unit for the conduct of business (except for a home occupation allowed under the City of Portland zoning ordinance) or as an investment property. Units shall not be rented for short-term periods of one to thirty days.
- Property Sale Price. The City expects to receive Fair Market Value (“FMV”) for the property.
- Alternative Ownership Models. Alternative ownership models that will encourage a mixed income community with long term affordability for the maximum number of units, such as limited equity units, co-housing, cooperative, or a community land trust, may be considered in order to ensure the units affordability over time.
- Proposals must outline how they will maintain affordability.
- Other City Incentives. Other city financial incentives may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.

#### **IV. PROPOSED SCORING**

An internal staff Committee will review proposals received, and will apply the following selection criteria in reviewing and scoring the applications.

##### **Proposed use to achieve the City of Portland's goals**

**40 points**

1. Market Demand - 20 points
  - a. 20 points - all units meet the City’s Goals and Terms noted in Section III
  - b. 15 points - at least 75% of the units meet the City’s Goals and Terms noted in Section III
  - c. 10 points - at least 50% of the units meet the City’s Goals and Terms noted in Section III
  - d. 0 points - project does not meet the City’s Goals and Terms noted in Section III
2. Economic diversity - 10 points
  - a. 10 points - creates housing options which promote economic diversity in the neighborhood in which the development is located
  - b. 0 points - does not promote economic diversity
3. Age Inclusive – 10 points
  - a. 10 points – creates housing which is age inclusive
  - b. 0 points – does not create housing which is age inclusive

##### **Impact on surrounding neighborhood, including design.**

**25 points**

1. Project Design -15 points
  - a. 15 points - the proposal is consistent with design characteristics
  - b. 10 points - the proposal is an adequate fit with neighborhood characteristics
  - c. 0 points - the design is a significant outlier
2. Amenities and unit design - 10 points
  - a. 10 points - amenities & unit design are well thought out and appropriate for residents
  - b. 5 points - amenities & unit design are adequate

- c. 0 points - amenities and unit design raise significant concerns that resident needs will not be adequately addressed

**Applicant's ability to complete project, including financial feasibility, development team experience, capacity, and timeframe for completion.**

**35 points**

1. Readiness to proceed - 15 points
  - a. 15 points - all projected sources of funding include letters of commitment or interest are projected at terms and conditions consistent with the City's prior experience with the funder
  - b. 10 points - most projected sources of funding include letters of commitment, letters of interest, or, if no letter is included, are projected at terms and conditions consistent with the City's prior experience with this funder
  - c. 0 points - one or more sources are projected on terms that are not consistent with the City's prior experience with the funder and are not documented by letter(s) from funder(s)
2. Track record of development team - 10 points
  - a. 10 points - every development team member has a successful track record with this type of project and at this scale
  - b. 8 points - all but one development team members have a successful track record with this type of project and at this scale; one development team member has relevant experience but at a smaller scale or not of this project type
  - c. 5 points - two development team members, while having relevant experience, are new to this type of project or this scale of development
  - d. 0 points - the development team does not meet the criteria above
3. Current Capacity of development team - 10 points
  - a. 10 points - development team members have exceptional depth of human and financial resources to complete this project
  - b. 8 points - development team members have the human and financial resources to complete this project
  - c. 5 points - development team has a staffing gap in a significant role and a plan to address that gap, OR there are some concerns about the financial resources of the team to move the development forward
  - d. 0 points - the development team does not meet the criteria described above

***SUBMISSION INFORMATION***

Interested parties are asked to submit a concept development (including preliminary drawings) and a brief description of the project, no longer than two pages, to include the number and type of units, occupants (owners/renters) to be served, special features, the impact on the neighborhood and other ways the proposal meets the primary goals of the City. A general project budget with projected funding sources, development timeline, and development team qualifications and financial capabilities is also required. This RFP does not require detailed architectural drawings or development pro formas.

Photographs and maps of the site and area are required.

- a) **Developer:** Name, address, telephone, email, fax number of the proposed owner/developer and the name(s) of an alternative contact person(s).
- b) **Proposal:** Each proposal submitted must specifically outline the proposed use of the property and any proposed rezoning requests.

- c) **Financial Feasibility:** Provide a business plan, which shall include prospective and committed sources of funding, development and operating budgets; a letter from a lending institution indicating the applicant's ability to finance the projected costs; and provide examples of prior projects that indicate the proven ability to develop a project of similar type and scale from a fiscal perspective.
- d) **Timetable:** Provide an overview of how the proposal will be implemented. Include approximate schedule for completion of each element, closing, construction start-up, substantial completion, final completion, and occupancy. Include applications for public or private financing.
- e) **Developer Capacity:** Identify the qualifications and experience of the development team for the project including a list of previously completed projects similar to the proposed project. This team may include key staff of the developer, architect, general contractor and future property management. Also, discuss the ability to complete the project including the qualifications of the development team, management plan, experience, capacity, project readiness to proceed, and timeframe for completion.
- f) **Occupancy and Management Plan:** Present a plan detailing the ownership structure (condominium, cooperative, etc.), resale restrictions and resale process, to ensure mixed income and long-term affordability.
- g) **Purchase Price:** Proposed purchase price for the property.
- h) **Copies:** Seven (7) copies, with the original so marked, and one (1) digital copy of each proposal shall be submitted.

## V. SALE INFORMATION

After proposals are opened, city staff will make a recommendation to the City Council's Economic Development Committee (EDC) and the Housing Committee (HC). The EDC and HC will make a recommendation to the City Council.

## VI. OTHER INFORMATION

**Confidentiality:** Proposals received by the City shall become a matter of public record, subject to public inspection, except to the extent, which an applicant designates in writing, proprietary data to be confidential and submits that data under separate cover, such information, may, to the extent permitted by law, be held from public inspection, as provided in applicable Maine law, including, without limitation, 5 MRS Sections 13119-A and 13119-B.

## VII. LEGAL REQUIREMENTS

The contract for the disposition of the property will be executed only after review and final approval by the City Council.



## **VIII. RESERVATION of RIGHTS**

The City of Portland reserves the right, at its sole discretion, to award as well as reject any and all proposals for the city-owned property, based on the quality and merits of the proposals received, or when it is determined to be in the public interest to do so. Furthermore, the City may extend deadlines and timeframes, as needed.

The City reserves the right to substantiate any proposer's qualifications, capability to perform, availability, past performance records, and to verify that the proposer is current in its financial obligations to the City.

The City of Portland, Maine, reserves the right to waive any informalities in proposals, to accept any proposal or portion thereof, and, to reject any and all proposals, as well as negotiate with the successful proposer(s) should it be in the best in the best interest of the City to do so for a final purchase and sale agreement and ultimate sale of the property.

Pursuant to City procurement policy and ordinance, the City is unable to contract with businesses or individuals who are delinquent in their financial obligations to the City. These obligations may include but are not limited to real estate and personal property taxes and sewer user fees.

Proposers who are delinquent in their financial obligations to the City must do one of the following: bring the obligation current, negotiate a payment plan with the City's Treasury office, or agree to an offset, which shall be established by the contract, which shall be issued to the successful proposer

April 10, 2020

Matthew F. Fitzgerald  
Purchasing Manager

Attachments:

- A. Proposal Signature
- B. Portland Assessor's Record
- C Site Map
- D Phase II ESA available online

**PROPOSAL****NOTE: THIS PAGE IS TO BE COMPLETED AND RETURNED**

The UNDERSIGNED hereby declares that he/she or they are the only person(s), firm or corporation interested in this proposal as principal, which it is made without any connection with any other person(s), firm or corporation submitting a proposal for the same.

The UNDERSIGNED hereby declares that they have read and understand all conditions as outlined in the Request for Proposals, and that the proposal is made in accordance with same.

The UNDERSIGNED hereby declares that any person(s) employed by the City of Portland, Maine, who has direct or indirect personal or financial interest in this proposal or in any portion of the profits which may be derived therefrom has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this proposal. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or to you. If in doubt as to status or interest, please disclose to the extent known).

The proposer acknowledges the receipt of Addenda numbered \_\_\_\_\_  
If Applicable

COMPANY NAME: \_\_\_\_\_  
(Individual, Partnership, Corporation, Joint Venture)

AUTHORIZED SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
(Officer, Authorized Individual or Owner)

PRINT NAME & TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

FEDERAL TAX ID #: \_\_\_\_\_ DUNS #: \_\_\_\_\_

STATE OF INCORPORATION \_\_\_\_\_

(If incorporated in another State, businesses must be authorized to do business in the State of Maine.)

In your organizations preceding completed fiscal year, did the organization receive:

(1) 80 percent or more of its annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements; AND

(2) \$25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements? ☐ Yes ☐ No

Does the public have access to information about the compensation of the executives in the organization through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (18 U.S.C. 78m(a), 78o(d) or section 6104 of the Internal Revenue Code of 1986? ☐ Yes ☐ No

NOTE: All bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid. **This sheet must be signed and returned with the application package.**

This page contains a detailed description of the Parcel ID you selected.

**New Search!**

### Current Owner Information:

|                                                       |                                                          |
|-------------------------------------------------------|----------------------------------------------------------|
| <b>CBL</b>                                            | 078 C002001                                              |
| <b>Land Use Type</b>                                  | GOVERNMENTAL                                             |
| <b>Verify legal use with<br/>Inspections Division</b> |                                                          |
| <b>Property Location</b>                              | 43 DOUGLASS ST                                           |
| <b>Owner Information</b>                              | CITY OF PORTLAND<br>389 CONGRESS ST<br>PORTLAND ME 04101 |
| <b>Book and Page</b>                                  |                                                          |
| <b>Legal Description</b>                              | 78-C-2<br>DOUGLASS ST 43-53 REAR<br>PROPOSED ST 17340SF  |
| <b>Rental Registration</b>                            | No                                                       |
| <b>Acres</b>                                          | 0.3981                                                   |

### Current Assessed Valuation:

|                                  |               |                                         |
|----------------------------------|---------------|-----------------------------------------|
| <b>TAX ACCT NO.</b>              | 10005         | <b>OWNER OF RECORD AS OF APRIL 2019</b> |
| <b>LAND VALUE</b>                | \$49,000.00   | CITY OF PORTLAND                        |
| <b>BUILDING VALUE</b>            | \$0.00        | 389 CONGRESS ST                         |
| <b>MUNICIPAL TYPE</b>            | (\$49,000.00) | PORTLAND ME 04101                       |
| <b>NET TAXABLE - REAL ESTATE</b> | \$0.00        |                                         |
| <b>TAX AMOUNT</b>                | \$0.00        |                                         |

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or [e-mailed](#).

This page contains a detailed description of the Parcel ID you selected.

**New Search!**

### Current Owner Information:

|                                                       |                                                          |
|-------------------------------------------------------|----------------------------------------------------------|
| <b>CBL</b>                                            | 078 B007001                                              |
| <b>Land Use Type</b>                                  | GOVERNMENTAL                                             |
| <b>Verify legal use with<br/>Inspections Division</b> |                                                          |
| <b>Property Location</b>                              | 91 DOUGLASS ST                                           |
| <b>Owner Information</b>                              | CITY OF PORTLAND<br>389 CONGRESS ST<br>PORTLAND ME 04101 |
| <b>Book and Page</b>                                  |                                                          |
| <b>Legal Description</b>                              | 78-B-7<br>DOUGLASS ST 91-105<br>195648 SF                |
| <b>Rental Registration</b>                            | No                                                       |
| <b>Acres</b>                                          | 4.4915                                                   |

### Current Assessed Valuation:

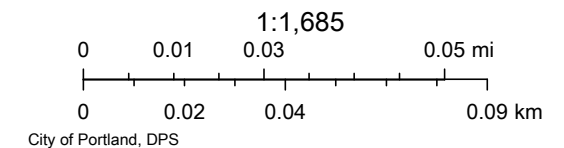
|                                  |                |                                         |
|----------------------------------|----------------|-----------------------------------------|
| <b>TAX ACCT NO.</b>              | 10005          | <b>OWNER OF RECORD AS OF APRIL 2019</b> |
| <b>LAND VALUE</b>                | \$489,100.00   | CITY OF PORTLAND                        |
| <b>BUILDING VALUE</b>            | \$0.00         | 389 CONGRESS ST                         |
| <b>MUNICIPAL TYPE</b>            | (\$489,100.00) | PORTLAND ME 04101                       |
| <b>NET TAXABLE - REAL ESTATE</b> | \$0.00         |                                         |
| <b>TAX AMOUNT</b>                | \$0.00         |                                         |

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or [e-mailed](#).



3/10/2020, 12:45:58 PM

■ Override 1







**ZONING ANALYSIS** Relevant Zone(s) R5-a - PRUD

**All Projects:**

|                           | Required       | Proposed     |
|---------------------------|----------------|--------------|
| Lot Size                  | 2.0 acres      | 3.34 acres   |
| Area Per Dwelling Unit    | 1,600 SF       | 1,210 SF     |
| Minimum Street Frontage   | 50'            | 60'          |
| Front Yard Minimum        | N/A            | N/A          |
| Front Yard Maximum        | 10'            | 15'          |
| Rear Yard                 | 10'            | 10.5'        |
| Yard Right                | 10'            | 150'         |
| Yard Left                 | 10'            | 10.25'       |
| Side Street Setback       | N/A            | N/A          |
| Step Back                 | N/A            | N/A          |
| Maximum Lot Coverage      | N/A            | N/A          |
| Minimum Lot Coverage      | N/A            | N/A          |
| Maximum Height            | 55'            | 53'          |
| Open Space                | 200 S.F / D.U. | 300 S.F/D.U. |
| Maximum Impervious Area   | N/A            | N/A          |
| Pavement Setback          | N/A            | N/A          |
| Floor Area Ratio          | N/A            | N/A          |
| Off Street Parking Spaces | N/A            | 78           |
| Loading Bays              | N/A            | N/A          |
| Other 1                   |                |              |
| Other 2                   |                |              |
| Other 3                   |                |              |



## **E. Summary of Written Easements**

Existing easements on site as identified by Owen Haskell, Inc. include:

- o Anode Bed Easement Douglass Street at Dougherty Field by City Of Portland Public Works Department Engineering Division Dated 09/30/2016, City Plan 882/53.
- o Maine State Highway Commission Right of Way Map State Highway "295" Portland Cumberland County Federal Aid Project No. I-295-3(24)8(25) Dated May 1967.

Proposed Easements:

- o No easements are proposed as part of the project.



| <b>Standard to be Waived:</b><br>Cite Ordinance or Technical Manual Standard | <b>Cite Standard Language:</b><br>Cite specific language of applicable Ordinance or Technical Manual Standard | <b>Waiver Being Sought:</b><br>Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet. | <b>Justification for Waiver:</b><br>Address specific waiver criteria, if applicable, and document reasons for the waiver request.                                                                                                                             |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical Manual 1.14.2                                                      | 20% Compact Space allowance                                                                                   | We are requesting that 27% of the proposed 69 parking spaces be compact.                                                                  | Due to the urban environment and tendency to drive smaller, compact cars, the parking layout has been tailored to minimize impervious area                                                                                                                    |
| Technical Manual 1.7.2.3                                                     | 24' Drive Aisle Width                                                                                         | We are requesting to reduce the drive aisle width from 24' to 22'.                                                                        | Based on the proposed land use and residents' tendency to become familiar with their parking spot, along with a low rate of turnover, a width of 24' is not necessary to accommodate a functional parking lot. 22' allows for a reduction in impervious area. |

## **G. Financial Capacity**

Please find attached the status of good standing from the Secretary of State for The Szanton Company and the Maine Cooperative Development Partners and letters of financial capacity from the Applicant's banks.







December 9, 2021

The City of Portland  
Planning Department  
389 Congress Street  
Portland, ME 04101

RE: 43 & 91 Douglass Street

To Whom It May Concern:

On behalf of Bangor Savings Bank I am pleased to provide this letter in support of The Szanton Company for the above-referenced project. Based on our review of the financial elements of the proposal for the development site, we believe that that the applicant has the ability to finance projected costs and develop a project of similar type and scale from a fiscal perspective.

While this letter of support is not a commitment to lend, Bangor Savings Bank would welcome the opportunity to be a resource to The Szanton Company for financing and sponsorship of any equity awards necessary in connection with this project. Please feel free to call me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald B. Hunt". The signature is fluid and cursive, with a stylized "H" and a trailing flourish.

Ronald B Hunt  
Vice President  
Bangor Savings Bank - Commercial Lending  
280 Fore Street, Suite 200  
Portland, ME 04101  
(207) 420-3967



# MAINE

Department of the Secretary of State  
Bureau of Corporations, Elections and Commissions

**Corporate Name Search**

## Information Summary

[Subscriber activity report](#)

**This record contains information from the CEC database and is accurate as of: Fri Jan 07 2022 11:03:33. Please print or save for your records.**

| Legal Name          | Charter Number | Filing Type          | Status        |
|---------------------|----------------|----------------------|---------------|
| THE SZANTON COMPANY | 20001684 D     | BUSINESS CORPORATION | GOOD STANDING |

| Filing Date | Expiration Date | Jurisdiction |
|-------------|-----------------|--------------|
| 03/03/2000  | N/A             | MAINE        |

**Other Names** (A=Assumed ; F=Former)

NONE

### Clerk/Registered Agent

DREW A. ANDERSON  
P.O. BOX 9785  
PORTLAND, ME 04104 5085

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\(\\$30.00\)](#)

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December 13, 2021

Matthew Peters  
Principal  
MCDP Douglass LLC  
6 City Center, Suite 300  
Portland, ME 04101

RE: Douglas Commons Cooperative

To whom it may concern:

Centennial Mortgage has been engaged by MCDP Douglass LLC to secure mortgage insurance through the FHA 213 program for cooperative housing and fund a construction/permanent mortgage for Douglas Commons Cooperative, a new cooperative housing project in Portland, ME. We have reviewed a financing request, including initial plans, pro forma operating budget, the construction budget and initial market information for Douglas Commons Cooperative in Portland, ME. In addition, we have reviewed the experience of the overall development team. Based on this review, we feel that this project is an excellent candidate for financing and will conform to all the requirements to qualify for construction and permanent financing through the FHA 213 program. We feel that this is the right time and place to create a new affordable cooperative given the advantages this particular form of housing provides to its members, primarily affordable home ownership and a greater sense of community.

We have now entered the formal application stage for the FHA 213 mortgage insurance and believe that Douglas Commons Cooperative has a high likelihood of obtaining a 40-year, low interest loan for the project. Additional subordinated financing would serve to further increase that likelihood. We also believe that success at Douglas Commons Cooperative will open an entirely new avenue for affordable housing finance in the state of Maine by making the FHA 213 program finance accepted in the market.

Centennial Mortgage has substantial expertise and experience completing FHA financing transactions. We are very active in lending to cooperative housing projects throughout the country. Personally, I have been involved in cooperative housing for over 20 years, through financing and serving on the board of the National Association of Housing Cooperatives.

We encourage other funding sources to join us in supporting this innovative project and creating up to 98% leverage for future projects through this program. Please let me know should you have any questions or require any additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read 'H. Jeffers', written in a cursive style.

Hugh Jeffers  
Vice President of Originations



# MAINE

Department of the Secretary of State  
Bureau of Corporations, Elections and Commissions

**Corporate Name Search**

## Information Summary

[Subscriber activity report](#)

**This record contains information from the CEC database and is accurate as of: Fri Jan 07 2022 11:04:29. Please print or save for your records.**

| Legal Name                                 | Charter Number | Filing Type                          | Status        |
|--------------------------------------------|----------------|--------------------------------------|---------------|
| MAINE COOPERATIVE DEVELOPMENT PARTNERS LLC | 20212626DC     | LIMITED LIABILITY COMPANY (DOMESTIC) | GOOD STANDING |

| Filing Date | Expiration Date | Jurisdiction |
|-------------|-----------------|--------------|
| 10/01/2020  | N/A             | MAINE        |

**Other Names** (A=Assumed ; F=Former)

NONE

### Clerk/Registered Agent

DAVID C. PIERSON  
PO BOX 15235

PORTLAND, ME 04112 5235

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amendments  
\(\\$30.00\)](#)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.  
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## **H. Technical Capacity**

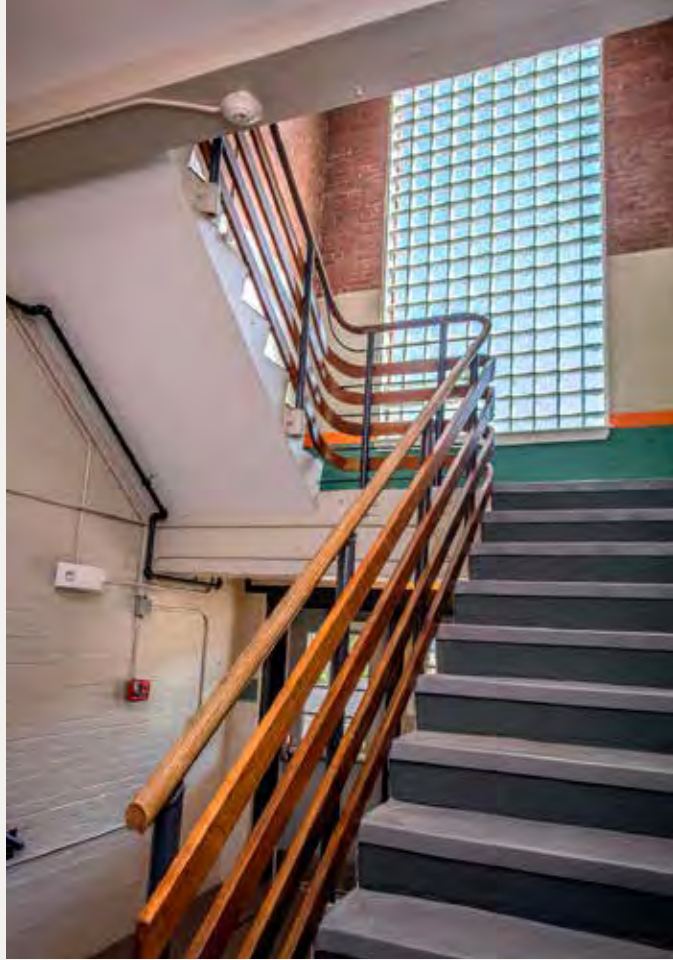
Please find attached descriptions and examples of technical capacity for The Szanton Company, the Maine Cooperative Development Partners, Acorn Engineering, Aceto Landscape Architects, Archetype Architects, and Credere Associates.







**THE SZANTON COMPANY**  
an Affiliate of the Monks Companies



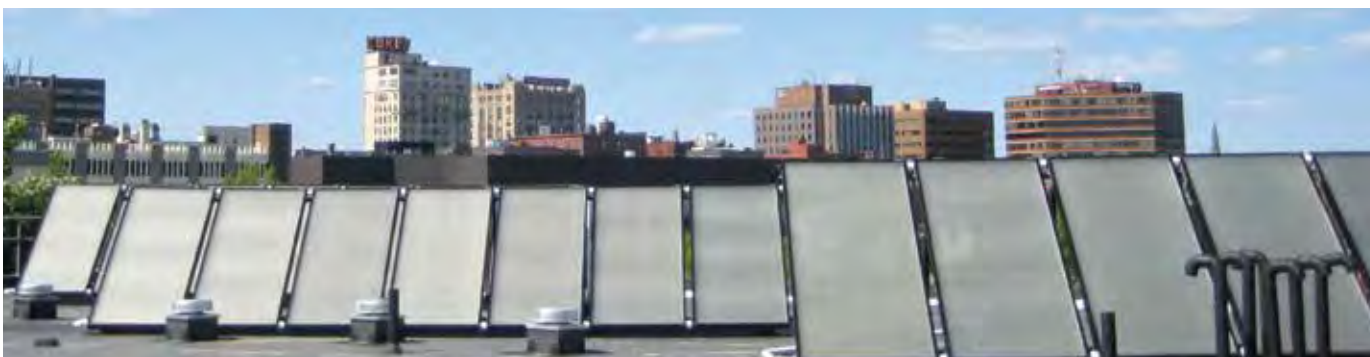
## ABOUT THE SZANTON COMPANY

The Szanton Company, an affiliate of the Monks Companies, specializes in developing mixed-income rental housing in or near downtowns. We have completed eight apartment projects in Maine and New Hampshire totaling 393 units.

The mission of The Szanton Company is to create attractive and affordable rental housing that our residents are proud to call home. We do this by:

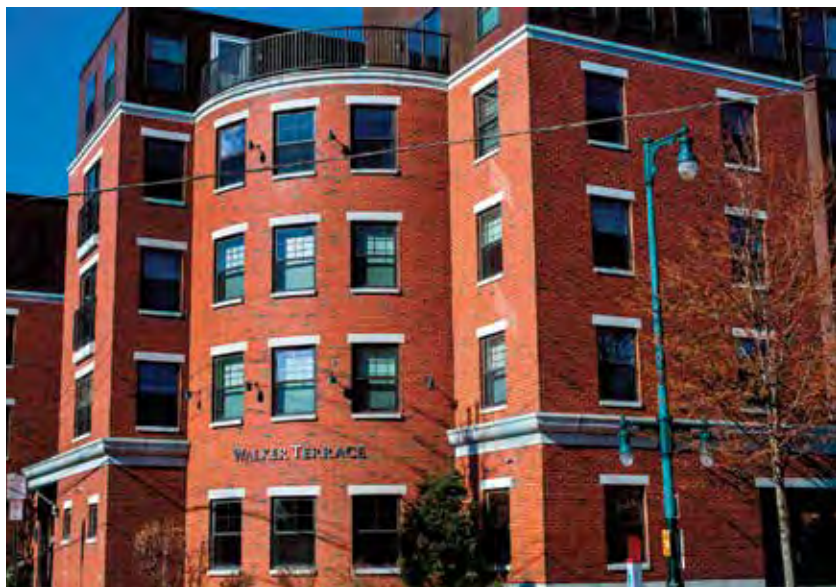
- Creating beautiful apartments of high quality in locations in or near downtowns, adding vitality to our cities and towns;
- Developing properties which provide a consistent, long-term return to their owners, thus ensuring their stability for residents, lenders, and neighborhoods;
- Serving people with diverse incomes;
- Creating amenities for our residents which enhance the quality of their lives;
- Incorporating environmental and energy sustainability in our properties, thereby reducing their impact on the earth's environment.

The Szanton Company is committed to long-term ownership of our apartment assets. In 2013, we founded Saco Falls Management, our property management arm, to ensure the highest standards of visual appearance and livability for our residents, neighbors, and communities.



Rooftop solar panels at 53 Danforth





## PRINCIPALS & STAFF

### NATHAN SZANTON, PRESIDENT

Nathan founded the company in 1996. Since then he has been responsible for developing 617 apartment units in 24 projects. As manager or principal partner in these projects, Nathan has successfully navigated the process of market research, site acquisition, design, regulatory approvals, financing, construction, and marketing.

He has committed himself to creating comfortable and affordable rental homes for residents with diverse incomes. Some of these have been adaptive reuses for underused historic buildings; others have been thoughtfully designed new construction. Nathan holds a B.A. from Harvard University and a J.D. from the University of Maine School of Law.



### ROBERT C.S. MONKS, PRINCIPAL

Robert C.S. Monks is an active capital partner and also provides a deep understanding of real estate development and financing. Throughout his career he has founded, led, and grown 19 businesses in the financial services, real estate, technology and communications sectors.

In 2011, Bobby became an owner and Chairman of Spinnaker Trust, a Maine based trust company managing over \$1 billion in assets. Bobby attended Duke University and graduated from the University of Southern Maine with a Bachelor's Degree in Political Science.

Above: Walker Terrace  
Left: The Mill at Saco Falls

*Facing Page: The Lofts at Bates Mill*

AMY CULLEN, VICE PRESIDENT AND PROJECT PARTNER

Amy joined The Szanton Company in 2006. Her responsibilities include: discovering new project locations, creating financing packages, and working with all development team members to help projects come to life.

Amy also serves as president of our sister company, Saco Falls Management, where she oversees all operations.

Prior to joining The Szanton Company, Amy was on active duty with the U.S. Army for six years, and served as a Training Program Manager for the Department of Defense in Minneapolis, MN. She holds a Bachelors of Science Degree in Accounting from Husson University.

KRISTIN MARTIN, DEVELOPMENT OFFICER

Kristin joined our company in 2013. Her responsibilities include finding and researching sites for new projects, preparing financial analyses, and evaluating development options. She coordinates with lenders, attorneys, architects, engineers, contractors and others on all aspects of The Szanton Company's development projects from concept to completion.

Prior to joining The Szanton Company as a Development Officer, Kristin worked for Saco Falls Management as an Assistant Development Officer, Property Manager and Director of Property Management. She holds a Bachelor of Health Science and a Masters of Occupational Therapy from Quinnipiac University.





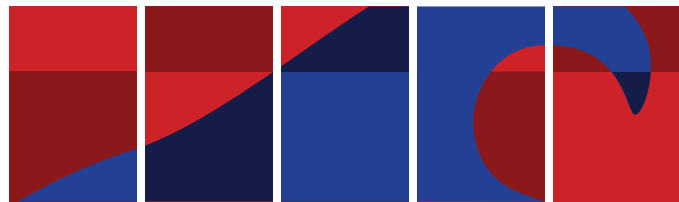
# ABOUT SACO FALLS MANAGEMENT

## HISTORY

Saco Falls Management is a full-service management company formed by The Szanton Company in 2013 to manage its rental properties, both residential and retail. Since then, the physical condition of the buildings has improved, tenant satisfaction has increased, and the profitability of the properties has grown. We are committed to managing our properties for the long-term with the highest sense of responsibility to our residents, financial partners, and host communities.

## OUR MISSION

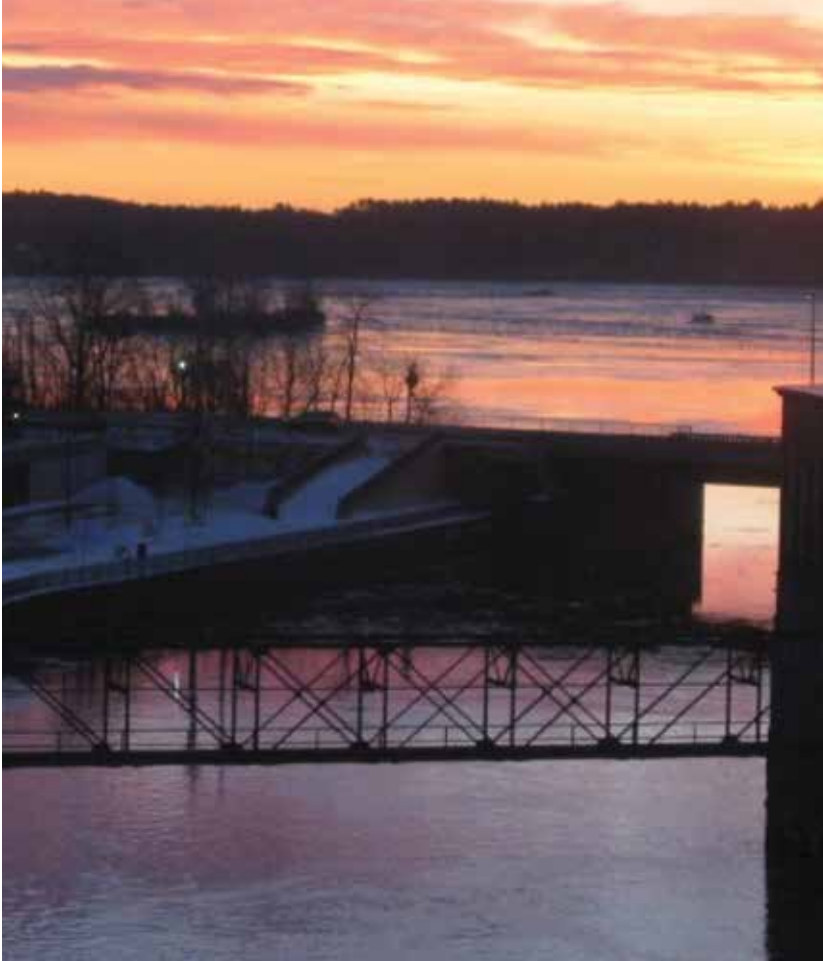
Our mission is creating rental properties that exceed expectations. We are guided by the following core values: honesty, integrity, candor, high standards of quality, respect for all with whom we deal, openness to new ideas, and a culture of continuous learning and enhancement of our knowledge and skills.



**SACO FALLS MANAGEMENT**



Walker Terrace



View from an apartment at The Mill at Saco Falls

## RESIDENT SELECTION

Saco Falls Management Company complies with all state, local, and federal laws regarding fair housing practices or occupancy and resident selection procedures. In addition to program-specific requirements, all adult applicants are screened by our management staff. To be considered for residency at one of our properties, all applicants must have:

- References from prior landlords that show a history of good tenancy. This includes paying rent on time, keeping their unit in good repair and being a good neighbor by following the community rules.
- A favorable credit report.
- An absence of criminal history. We run a criminal background check on all applicants. Any applicant with a history of public disturbances, arrests, criminal activity, listing on the sex offender registry or other law enforcement problems that may indicate behavior inconsistent with lease obligations will be denied.

# CASCO TERRACE

41 STATE STREET, PORTLAND, MAINE



*Above Left: Casco Terrace, after. Right: Casco Terrace, before*

*Facing page: Top: Casco Terrace from State Street  
Bottom: Casco Terrace interior*





**“...CITY OFFICIALS SAY THE STATE-FINANCED PROJECT IS THE  
KIND OF DEVELOPMENT PORTLAND NEEDS...”** —*Portland Press Herald*

CASCO TERRACE is a 27-unit vertical addition on an existing 27-car parking garage (see before and after photos opposite). The pre-construction newspaper story below describes the project's highlights and the need it addresses in a city desperate for affordable housing.

From the *Portland Press Herald*, May 28, 2003:

“It began as one of the first parking garages in Portland, at a time when few people owned cars ...

...City officials say the state-financed project is the kind of development Portland needs to help stem suburban sprawl and provide affordable rental housing for its workforce. They also give it high marks for being attractive and practical, and making the most of an under-used lot with desirable views of the waterfront.

...‘It’s a project with a lot going for it’, said Mark Adelson, Executive Director, Portland Housing Authority.”

**YEAR COMPLETED: 2004**

**UNITS: 27 (14 Market-Rate + 13 Income-Restricted)**

**ARCHITECT: Archetype, P.A.**

**CONSTRUCTION MANAGER: Wright-Ryan Construction**

**FINANCING: MaineHousing and TD Bank**



# THE HARTLEY BLOCK

155 LISBON STREET, LEWISTON, MAINE



Above: The Hartley Block  
Left: Historic images of same location

Facing Page Top: The Hartley Block façade  
Facing Page Bottom: Before construction



**“WE ARE THRILLED THAT THE SZANTON COMPANY WILL BE REINFORCING OUR DOWNTOWN HISTORIC AND COMMERCIAL CORRIDOR BY BUILDING THIS IMPORTANT PROJECT.”**

—Lewiston Mayor Shane Bouchard

THE HARTLEY BLOCK brings new life to a prominent 175' x 100' empty lot on downtown Lewiston's Lisbon Street. In 2004 and 2006, four connected historic buildings on Lisbon Street suffered extensive fire damage and were condemned and demolished, leaving a gaping hole in the city's most iconic street. One of the buildings was the site of the 1906 art studio of Marsden Hartley, an important early modern American painter born and raised in Lewiston.

A mixed-use, mixed-income project, The Hartley Block features 63 apartments aimed at a diversity of income groups and 4,000 sq. ft. of retail space along Lisbon Street. The project includes a fitness center, community room, children's playroom, dedicated bike storage, wi-fi and covered parking directly behind the building. The site is within easy walking distance of the public library (across the street), shops, restaurants, cafes, and two major parks.

This project adds momentum to downtown Lewiston's resurgence, including street-level public art at the entrance. Two 9-foot mosaic tile works, after Marsden Hartley paintings, animate its façade.



**YEAR COMPLETED: 2019**

**UNITS: 63 (22 Market-Rate + 41 Income-Restricted)**

**ARCHITECT: Platz Associates**

**CONSTRUCTION MANAGER: Hebert Construction**

**FINANCING: MaineHousing; TD Bank; Northern New England Housing Investment Fund; City of Lewiston.**

## 48 HAMPSHIRE

48 HAMPSHIRE STREET, AUBURN, MAINE



Located at the corner of Hampshire and Troy Streets, 48 HAMPSHIRE will aid the revitalization of downtown Auburn's important Hampshire Street corridor by bringing 53 high-quality new apartments to the neighborhood.

These will be a mixture of one, two and three-bedroom units, varying in size from 590-950 square feet. Included in the rent are heat and hot water, off-street parking, wi-fi, fitness center, community room and indoor bike storage.

48 Hampshire is located within easy walking distance of the public library, YMCA, shops, restaurants, grocery store, drugstores, and all the amenities of downtown Auburn.

The Szanton Company broke ground in March 2019 and expects to open to residents in April 2020.



Above: Rendering of completed project  
Left: Same location, prior to construction

**“WE ARE LOOKING FORWARD TO WATCHING YET ANOTHER MAJOR CONSTRUCTION PROJECT IN OUR DOWNTOWN TAKE SHAPE — ONE THAT WILL PROVIDE QUALITY WORKFORCE HOUSING, INJECT CAPITAL INTO OUR LOCAL ECONOMY, AND ENHANCE THE IMAGE OF AUBURN AS WE BECOME THE BEST SMALL CITY IN NEW ENGLAND”**

—Auburn Mayor Jason Levesque



Above: Rendering of East elevation

PROJECTED COMPLETION: 2020

UNITS: 53 (11 Market-Rate + 42 Income-Restricted)

ARCHITECT: Platz Associates

CONSTRUCTION MANAGER: Benchmark Construction

FINANCING: MaineHousing; Boston Financial;  
NBT Bank; City of Auburn.



# THE FURMAN BLOCK

100 PARRIS STREET, PORTLAND, MAINE



Above: Rendering of completed project, from corner of Kennebec and Brattle Streets

Right: Before construction, Nathan Szanton and Amy Cullen on project site



**“I THINK THIS IS THE NEXT BIG STEP IN CREATING A MULTI-USE NEIGHBORHOOD IN THIS PART OF BAYSIDE. IT’S PRETTY EXCITING TO GET THIS MOVING.”**

*—Portland City Councilor David Brenerman*

THE FURMAN BLOCK is The Szanton Company’s first mixed-income project specifically for seniors, ages 55 and over. Located in the heart of Portland’s West Bayside neighborhood, it’s a short walk to Whole Foods and Trader Joe’s, small restaurants and delis, the 3.5 mile trail that loops around Back Cove and a few blocks from downtown Congress Street’s arts, business, and shopping district.

The property will feature 46 1-bedroom and five studio apartments. Some residents will have water views of Back Cove; others will enjoy views of Deering Oaks Park or Portland’s downtown. All will have abundant natural light. Included in rent are heat and hot water, a fitness center, indoor bike storage and wi-fi. The property also features a community room and coin-op laundry. The street-level commercial space, to be owned and managed by Ross Furman, will be a combination of artists’ studios and gallery space.

Repurposing an empty gravel lot at the corner of Parris and Kennebec Streets, The Furman Block contributes to the revitalization of this former industrial neighborhood.

**PROJECTED COMPLETION: 2020**

**UNITS: 51 (11 Market-Rate + 40 Income-Restricted)**

**ARCHITECT: Archetype, P.A.**

**CONSTRUCTION MANAGER: Hebert Construction**

**FINANCING: MaineHousing; Northern New England Housing Investment Fund; City of Portland.**



Above: Rendering of completed project, from corner of Kennebec and Parris Streets



## REFERENCES

### AUBURN

PETER CRICHTON

City Manager

207-333-6601, pcrichton@auburnmaine.gov

MICHAEL CHAMMINGS

Director of Economic and Community Development

207-333-6601, mchammings@auburnmaine.gov

### BATH

PETER OWEN

City Manager

207-443-8330, powen@cityofbath.com

### BIDDEFORD

JOHN BUBIER

Former City Manager

207-846-1515, john.bubier@gmail.com

ALAN CASAVANT

Mayor

207-284-4690, acasavant@biddefordmaine.org

GREG TANSLEY

City Planner

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### EXETER

RUSSELL DEAN

Town Manager

603-773-6102, rdean@exeternh.gov

DOUG EASTMAN

Building Code Enforcement Officer

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### LEWISTON

ED BARRETT

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DAVID HEDIGER

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MARY DAVIS

Director of Housing and Community  
Development Division

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JILL DUSON

City Councilor

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NICK MAVODONES

City Councilor

207-774-0257, nmm@portlandmaine.gov





## Maine Cooperative Development Partners

### **MAINE COOPERATIVE DEVELOPMENT PARTNERS**

build neighborhoods where the elements that constitute quality of life—access to green space, healthy lifestyles, community, privacy, and affordability—are not at odds with each other. Grounding principles for this work are creating equitable communities; complementing walkable neighborhoods; building healthy buildings; and celebrating beauty, art, and the natural environment. We use Limited Equity Cooperatives as a form of ownership to create options for people of all ages, backgrounds, and incomes to live in harmony with nature and their neighbors.

**WE ENVISION** small towns, urban neighborhoods, and suburban neighborhood centers that are walkable to daily needs and adjacent to recreational facilities, trails, and transit corridors; homes that use energy efficient construction, and shared gardens, patios, and play spaces for people to get to know and enjoy their neighbors.

**WE GIVE BACK** by partnering with organizations that support trails and green space, transit, local businesses, social equity, and efforts to mainstream energy efficient building and land use.





## PRINCIPALS



**MATTHEW PETERS** has been involved in the completion of over 20 new construction, major rehab, and acquisition deals. Matt worked for eight years at Avesta Housing, one of Northern New England's largest non-profit housing developers and owners, project managing affordable housing developments, building out and overseeing the Asset Management department, and ending in an executive role overseeing the entire development and acquisitions pipeline as Vice President of Real Estate Services. In 2018 he began to consult for Housing Authorities, housing non-profits, and Community Development Finance Institutions in Maine supporting these organizations in acquisition, ground-up development, and underwriting of affordable housing properties. Matt also is the Executive Director of Freeport Housing Trust based in Freeport, Maine. He has strong working relationships with MaineHousing, Rural Development, lenders, tax credit syndicators, and other professionals in the design and construction field, holds a Masters in Urban Planning from the University of Washington, and certifications such as Spectrum's C3P and Rural Development STAR trainings and LEED Accredited Professional.



**BRIAN ENG** is a real estate investor who has worked on commercial projects in Florida, Connecticut, New Jersey, and Maine. He has worked as a principal on developments of over 200 units, is a principal on redeveloping the MERC site in Biddeford, and has redeveloped several smaller properties in Portland. He brings strong expertise in financials, fundraising, advocacy, and public speaking. He grew up in a co-op in New York City, and is on the board of UHAB, the entity that manages 20,000 units of cooperative housing in New York.



**LIZ TRICE** is a policy professional who builds multidisciplinary partnerships across real estate, economic development, entrepreneurship, and public health. Liz holds a masters degree in Public Policy & Management with a certificate in Community Planning & Development from the Muskie School at the University of Southern Maine. She has worked on multi-unit projects in Portland to obtain zone changes, lead the public engagement process with neighboring residents and businesses, apply for TIFs and grants, and direct the design of shared spaces. Her work includes award-winning research on the regulatory barriers to people living alone achieving home ownership, leading the process to redesign Bramhall Square, and working with medical and economic development institutions to develop strategic plans. Her projects to re-envision urban spaces for livability and natural ecosystems won two of three awards given by the 2019 Portland Society of Architecture's Complete City Competition. Liz trained as a cohousing developer and Passive House Design Consultant and has visited over 20 cohousing developments in the United States. She is currently the owner of PelotonLabs, a coworking space in Portland.



## PROJECTS



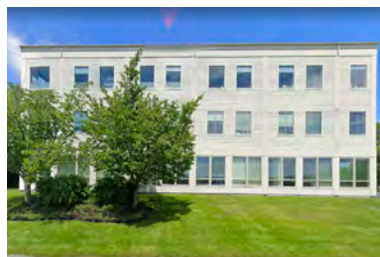
**M NORTH ORLANDO**—As a principal of Clay Cove Capital, Brian was the control capital partner in the ground-up development of M North in Orlando, a \$37.1M, 288-unit multifamily development in Orlando, Florida. [www.mnorthorlando.com](http://www.mnorthorlando.com)



**BIDDEFORD MERC REDEVELOPMENT** Brian worked with Jim Brady of Fathom Companies, to serve as master developer of city-owned land on the former Maine Energy Recovery Corp. incinerator through a public-private partnership with the City of Biddeford.



**6 CITY CENTER IN PORTLAND**—Brian redeveloped and retented a largely vacant Old Port mixed use building including executive office suites. [www.sixcitycenter.com](http://www.sixcitycenter.com), and bringing in a law firm condo, law firm tenant, Lio Restaurant, and HE Paintbar nail salon.



**1685 CONGRESS IN PORTLAND**—Brian redeveloped a 50% vacant office/medical building and retented it including Maine Plastic Surgery Center and Maxim Healthcare. [www.maineplasticsurgery.com](http://www.maineplasticsurgery.com)



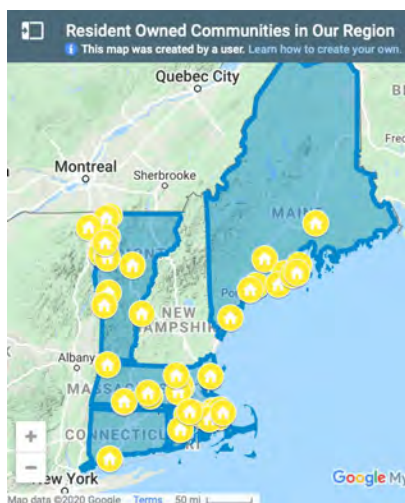
**645 CONGRESS STREET**—This former downtown college dormitory was converted to 55 one-bedroom and studio apartments with retail on the first floor. Liz worked for developers Shinberg and Alford on the initial concept, conducted a market analysis, developed relationships and communication with neighbors and businesses, creating a bike storage and parking plan, created a community management plan, and assisted with lease-up.





The Cooperative Development Institute (CDI) is a regional 501(c)3 non-profit founded in 1994 by co-op leaders in the Northeast. CDI's mission is to build a cooperative economy through the creation and development of successful cooperative enterprises. We are transforming ownership of our economy, so all people can meet their basic needs. CDI has 30 staff across the Northeast including six staff members in Southern Maine.

### New England Resident Owned Community Projects (NEROC)



One of our primary activities is creating cooperative housing in Maine and the Northeast. When a park is for sale we help residents form a cooperative, get financing to buy the park, and learn how to run it with democratic resident control. This program gives residents control of the land beneath their homes and protects the affordability of their housing.

The Resident Owned Community (ROC) model began in NH with the NH Community Loan Fund and became a national model with the formation of ROC USA in 2008. The program has helped people in over 50 parks – comprising more than 4,800 homes — convert to resident ownership. Those communities are part of the ROC USA Network, which has helped secure over 15,000 units of affordable housing

nation-wide. CDI provides ongoing support as trainers and advisers for the ROCs and other cooperatives in the region. We assist in governance, management, financial oversight, communications, conflict resolution, compliance, and securing financing.

### Charter Oaks Village Cooperative



With the support and technical assistance of the Cooperative Development Institute (CDI), the residents of Charter Oaks Village acquired the land on the 40 unit Arundel manufactured housing park on June 11, 2019 for \$1,170,000, helping to preserve the affordable housing community within it.

Charter Oaks Village joins nine other Maine manufactured housing communities supported by CDI and financed by Genesis Community Loan Fund, representing 440 homes now under resident control. The newly formed housing cooperative was a recipient of a GrowSmart Maine's honorary 2019 Smart Growth Award.

### **Mountainside Community Cooperative**



CDI's newest Maine Cooperative is the 52-unit Mountainside Community Cooperative in Camden, Maine. Securing affordable housing in a community like Camden is increasingly challenging as housing costs escalate and its population ages. The residents of Mountainside Community purchased the community on December 11, 2019 for \$1,900,000 with financing provided by Camden National Bank, Genesis Community Loan Fund and the Local Enterprise

Assistance Fund. "We are so pleased to be able to help the residents of the Mountainside Community Cooperative become property owners today," said Bill Floyd, Executive Director of the Genesis Fund.

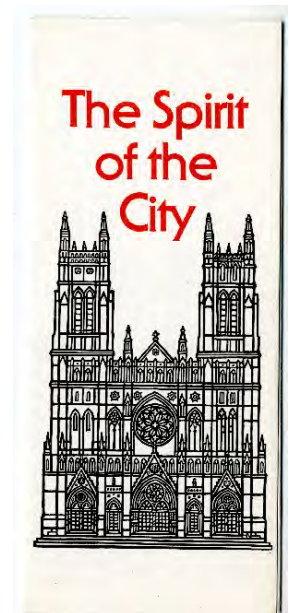
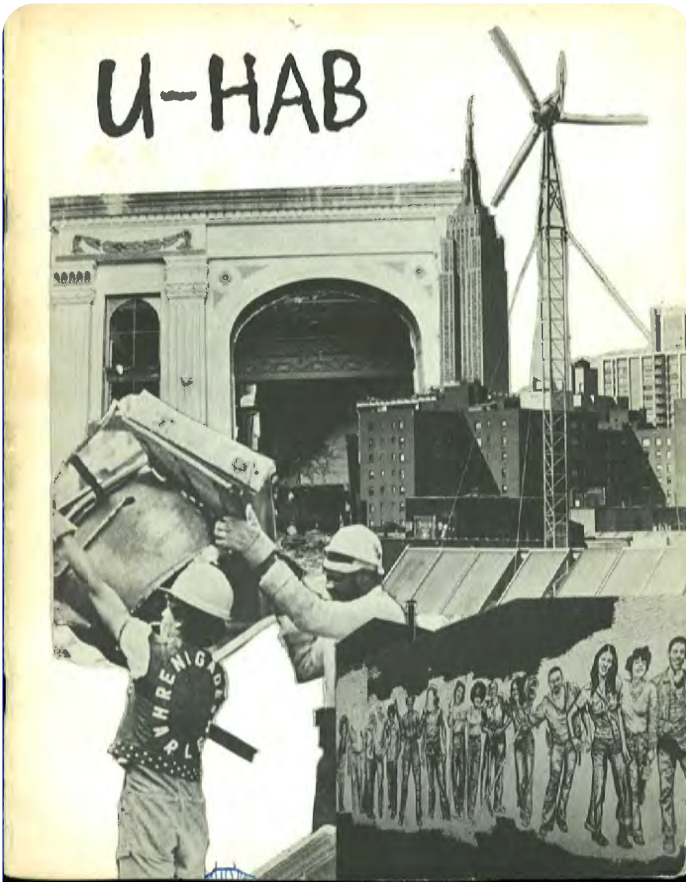
### **Wardtown Mobile Home Cooperative**



The residents of the 60-unit Wardtown Mobile Home Cooperative voted to form the cooperative and purchase the community in May 2015, with assistance from CDI, and combined financing from Maine State Housing and The Genesis Community Loan Fund. As with all of the CDI's Resident Owned Communities (ROCs), Wardtown members continue to engage in extensive training and organizational development. As Bill Hodgkins, Cooperative Treasurer explains, "We all gained valuable new skill sets as we went through the process of establishing and financing our

cooperative...Now we have a very strong board of directors and feel very organized, to the point we are able to assist other ROC mobile home parks with advice about the process."





# 2019 UHAB ANNUAL REPORT

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# Building for Us

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This year, UHAB made a considerable effort to build an archive. In doing so, the lesson we learned from decades of growth is very simple: what has always mattered most for affordable housing is community. It is the strength and support that comes from the community inside a co-op that is just as essential as the affordable housing itself.

With this in mind, UHAB is proud to offer new and expanded programs to low-income homeowners with a refined lens on our work. We have more data and research than ever on the long-term impacts of redlining policies and how communities of color have been resilient in their efforts to remain in their homes, whether in the 1970s or today. By building new affordable co-ops, strengthening tenants' rights statewide, making share loans through our HomeOwnership Lending program, and working in cooperation with our Interboro Community Land Trust partners to create the first Citywide CLT in New York City, we are actively working to dismantle the detrimental legacies of redlining and community disinvestment.

As we look toward the future, our work is expanding in several ways. We are offering more services like Co-ops Go Solar and our energy programs that are tackling the most pressing issue of our lifetime: the climate crisis. Without renewable energy and carbon reduction, low-income residents more than anyone will be affected. Most importantly, we need to recognize that it is not just low-income communities, but people of color in particular who are disproportionately affected by this crisis, just as they have been marginalized from fair and stable housing. UHAB's CDFI, HomeOwnership Lending, helps ensure that a family is not denied the opportunity to purchase because they don't have the money to be an all cash buyer. This program makes small loans where other lenders are reluctant and in this way supporting our HDFC and Mitchell Lama co-op communities in continuing to provide affordable housing.

The interest in co-ops and our work is expanding not just in New York City, but in upstate New York where residents can securely remain in their mobile homes; to New Haven, CT where the nearly 50-year old Seabury Co-op struggles to keep up with its aging infrastructure; and to Seattle, WA where a new permanently affordable co-op is being created. UHAB is excited to be assisting a new City financed co-op development program in Oakland, CA and we continue to meet with organizations and officials in other cities who are seriously considering the limited-equity model.

We have come a long way and welcome our next chapter of growth.

Sincerely,

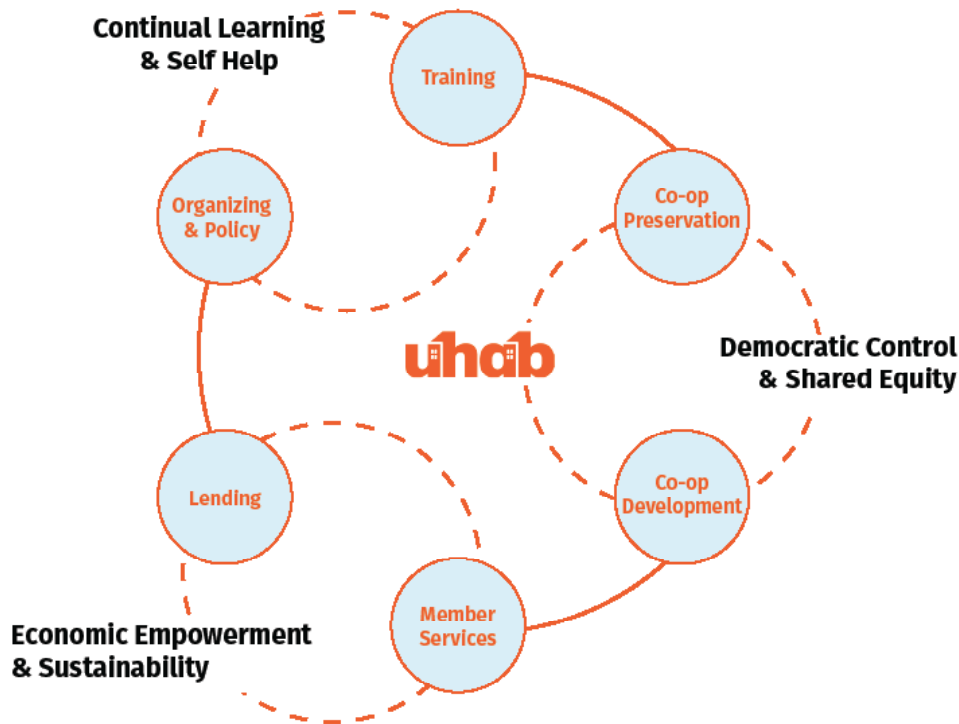
A handwritten signature in blue ink, appearing to read 'A. Reicher', with a stylized flourish at the end.

Andrew Reicher, Executive Director

# Community through Cooperation

UHAB empowers low- to moderate-income residents to take control of their housing and enhance communities by creating strong tenant associations and lasting affordable co-ops.

## Our Principles



### I. Continual Learning & Self Help

When residents take the lead on everything from creating, managing, and preserving their own co-ops to advocating for affordable housing policy reform, this not only improves buildings and neighborhoods, but it transforms lives as well. Ongoing education and training is the key to preserving affordable housing cooperatives and strong tenant associations.

### II. Democratic Residential Control & Shared Equity

Transparent leadership and the participation of a majority of residents—each contributing unique skills and perspectives—make democratic governing and organizing possible. This collective control of housing helps prioritize a shared equity that keeps affordability manageable for future incoming residents.

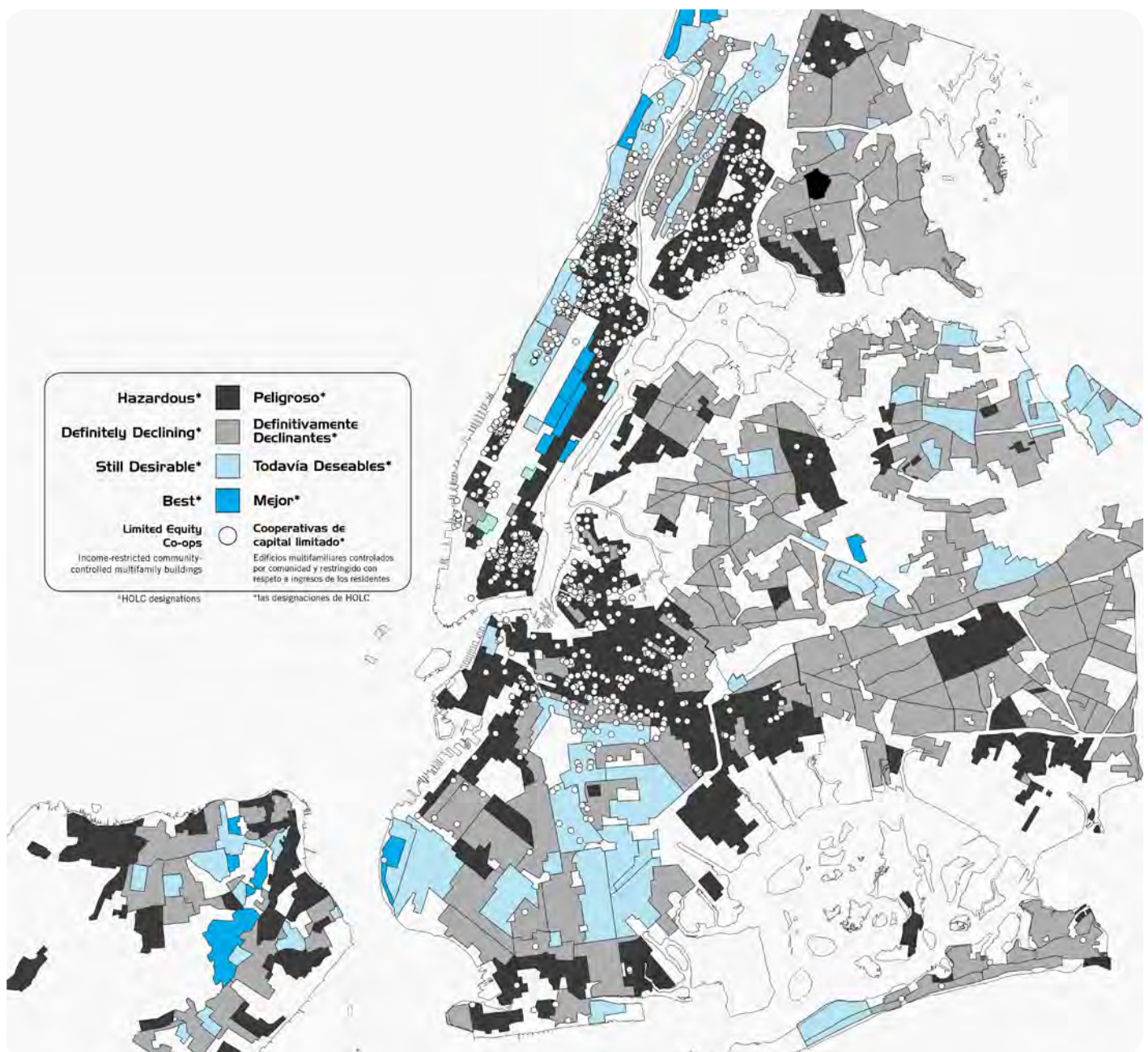
### III. Economic Empowerment & Sustainability

UHAB provides access to affordable, high-quality resources covering areas of energy, finance, democratic participation and education. These tools help residents maintain lower costs of living while helping to demystify financial technicalities. With support and guidance, all residents should be able to read and manage their finances, in order to make informed decisions about their operating costs.



# Housing Justice is Racial Justice

This map overlays the location of modern-day HDFC co-ops with redlined neighborhoods from the 1930s. Redlining was a discriminatory housing practice that devalued neighborhoods where people of color lived and made it difficult for people of color to secure safe, affordable housing. In this map, the deepest shade of grey represents the least economically desirable neighborhoods. In the 1970s and 1980s, landlord abandonment and arson led to City foreclosure on thousands of occupied buildings in these same neighborhoods, creating the conditions for the self-help housing movement and the creation of thousands of HDFCs.



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Through organizing and self-help initiatives, community-controlled housing arose as a way for low-income people and people of color to take control of their housing solutions when the government and private sector would not. Today, neighborhoods like Harlem, the South Bronx, and Central Brooklyn still struggle with the legacy of redlining; high air pollution, increased heat waves, higher poverty rates, and gentrification all threaten to displace longtime residents from neighborhoods that were once widely abandoned.

Through it all, community control remains a tool to provide New Yorkers with decent, affordable housing. HDFC co-ops are anchors in their neighborhoods, providing a safe haven to raise families and age in place. Tenant unions build power among renters and win victories like stronger rent laws.



Through our work, UHAB helps people of color control, manage, and improve their homes. We know from experience that most of the low- to moderate- income residents in the buildings we serve are Black or Latinx. Our goal is to have as many people from the communities we serve reflected in our organization's leadership and programs.

Currently, around 60% of our Board and program staff are people of color, and more than half of our organization is bilingual in English and Spanish, fulfilling an essential need for our Spanish-speaking HDFC board members and residents. We provide our technical assistance, homeownership advisement, energy advisement, bookkeeping services, quarterly newsletter, and entire training curriculum in both English and Spanish.

# UHAB BY THE NUMBERS: 2019

**125** fair elections monitored  
in practice of democratic  
community control



**9** HDFCs  
adopted solar,  
bringing the total  
number to  
**28**

**3,500,000** tenants protected  
under stronger rent laws



**115** budgets planned to  
preserve HDFCs' financial  
stability & affordability



**5**  
affordable  
homeowner-  
ship loans  
totaling  
**\$242,011**

**203**  
trainings for  
affordable  
co-op  
residents



**\$9,197,000**  
secured in loans to  
help HDFCs make  
capital  
improvements





Our Co-op  
Preservation  
team helped  
**15 co-ops**  
secure necessary  
loans to avoid City  
foreclosure last year.

This represents over  
**350 families**  
that were able to  
retain their equity  
and control of their  
homes through  
technical assistance  
and guidance  
from  
UHAB staff.



To date, UHAB is the  
foremost developer of  
limited-equity housing  
co-ops in NYC. we have  
developed **over**  
**1,300 units** of  
affordable housing  
with the support of a  
variety of City and State  
programs.



## FIRM BIO



### ACETO LANDSCAPE ARCHITECTS

ALA is a process-driven, landscape architecture and urban design firm committed to thoughtful, creative intervention at the intersection of environment, economics, art, and culture. ALA was founded on the notion that great design is a product of careful listening, inclusive decision-making, and unrelenting passion for enduring built spaces. We believe landscape architecture lies at the nexus of the built form and the ephemeral qualities of an ever-changing environment. ALA's team offers a unique set of skills and perspective, well-equipped to harmonize and reconcile the roles and value systems of varied design disciplines. We integrate expertise and intuition to craft powerful places, built upon a commitment to resiliency and sustainability. Our studio's passion for craft and technical savvy affords us the opportunity to collaborate across a broad geographic range and myriad project scales from intimate private spaces to large-tract master plans.

ALA was founded in 2014 by Principal, Nick Aceto. ALA has 5 employees, all of which are landscape architects, licensed in the states of Maine, Massachusetts, New York and Colorado.



## PROJECT TEAM KEY PERSONNEL



**NICK ACETO, PLA, ASLA**

ACETO LANDSCAPE ARCHITECTS

FOUNDING PARTNER, LANDSCAPE ARCHITECT | [NA@ACETOLA.COM](mailto:NA@ACETOLA.COM)

Nick is a licensed landscape architect and urban designer with a deep passion for the creative process. Nick believes in landscape as a framework for organizing the patterns and behaviors through which we live. From the private garden to the region, Nick has the ability to recognize and translate patterns into visual narratives which tell the unique story of a place through built form. Nick grew up in Portland, Maine where he developed a deep appreciation for the rich and varied New England landscape, from rocky shorelines of the Atlantic to the forested peaks of the Appalachians. As both a consummate urbanist and adventure-seeking outdoorsman, Nick is intrigued by the interplay between urban form, economics, wild nature, and ecology.



**CAITLIN ACETO, PLA, ASLA**

ACETO LANDSCAPE ARCHITECTS

FOUNDING PARTNER, LANDSCAPE ARCHITECT | [CA@ACETOLA.COM](mailto:CA@ACETOLA.COM)

Caitlin is a licensed landscape architect in the states of Maine, New Hampshire, and Colorado, who's passion for art and design began in the Chicagoland area where she was exposed to the architectural works of Frank Lloyd Wright and Olmsted's historic planned community of Riverside. Caitlin's project experience ranges in scale from circulation and wayfinding design at Grand Canyon National Park, to security barrier conceptualization for the Thomas Jefferson Memorial, to signage programming and design. Caitlin brings a distilled clarity to design that strives to embody the contextual heritage, textural richness and cultural integrity of place.



**SETH KIMBALL, PLA, ASLA**

ACETO LANDSCAPE ARCHITECTS

PRINCIPAL, LANDSCAPE ARCHITECT | [SK@ACETOLA.COM](mailto:SK@ACETOLA.COM)

Seth has been practicing Landscape Architecture for over 15 years. He has a Bachelor's degree in Landscape Architecture from the University of Massachusetts Amherst. Seth's project experience includes serving as project manager/lead designer for a master plan for the new Al Guhair University in Dubai, the Al Ain Oasis Cultural Quarter Master Plan in Abu Dhabi, institutional experience including Phillips Andover Academy, Bates College, George Stevens Academy, and Southern New Hampshire University, and a range of residential projects including homes in Texas, Idaho, Montana, New York, Arizona, and several throughout the northeast. Seth joined ALA in 2018, bringing to the practice his experience in civic, institutional, and residential projects. further ALA's commitment to achieve sustainable and resilient project outcomes.



## LIST OF SELECT CURRENT & ONGOING OR COMPLETED ALA PROJECTS

ALA has been fortunate to have made meaningful contributions to a vast array of projects across a wide gamut of scales over the last 5-6 years. Below is an abbreviated list of select project examples intended to provide a sense of our professional skill set, experience, and range as a design studio. We would be happy to provide more information about any of the below projects upon request.

### RESIDENTIAL

|                                  |                    |
|----------------------------------|--------------------|
| DBX 11 RESIDENCE                 | ASPEN, CO          |
| WHITE HORSE SPRINGS RESIDENCE    | ASPEN, CO          |
| TELLURIDE AGUIRRE ROAD RESIDENCE | TELLURIDE, CO      |
| PRIVATE RESIDENCE                | SOUTH FREEPORT, ME |
| SHADOW MOUNTAIN CONDOMINIUMS     | ASPEN, CO          |
| SMYTH RESIDENCE                  | SNOWMASS, CO       |

### COMMERCIAL/CAMPUS

|                                 |                      |
|---------------------------------|----------------------|
| 100 FORE STREET OFFICE BUILDING | PORTLAND, ME         |
| 66 STATE STREET                 | PORTLAND, ME         |
| LAAM 525 LIVE-WORK              | BASALT, CO           |
| HOTEL ASPEN                     | ASPEN, CO            |
| MEMORIAL PLAZA                  | QUANTICO, VA         |
| CUMBERLAND CLUB SITE PLAN       | PORTLAND, ME         |
| RIVERSIDE LIVE-WORK             | PORTLAND, ME         |
| WILLITS BEND LIVE-WORK          | BASALT, CO           |
| RED HAWK ELEMENTARY SCHOOL      | ERIE, CO             |
| CSU UNDERPASS STUDY             | FORT COLLINS, CO     |
| ANDERSON RANCH ARTS CAMPUS      | SNOWMASS VILLAGE, CO |

### HOUSING & DEVELOPMENT

|                               |                  |
|-------------------------------|------------------|
| SCARBOROUGH DOWNS MASTER PLAN | SCARBOROUGH, ME  |
| THE TREE FARM                 | BASALT CO        |
| 66 STATE STREET               | PORTLAND, ME     |
| BLOCK 11 MASTER PLAN          | BRECKENRIDGE, CO |
| BROKEN COMPASS BREWERY        | BRECKENRIDGE, CO |
| RIVERBEND COMMERCIAL CENTER   | TIMNATH, CO      |
| CUMBERLAND MULTI-GEN          | CUMBERLAND, ME   |

### PUBLIC

|                                  |              |
|----------------------------------|--------------|
| COMMERCIAL STREET TRANS. STUDY   | PORTLAND, ME |
| LIBBYTOWN PLAYSCAPE              | PORTLAND, ME |
| PORTLAND DOWNTOWN SQUARE         | PORTLAND, ME |
| BASALT POST SIGNAGE              | BASALT, CO   |
| TOWN WAYFINDING SIGNAGE          | BASALT, CO   |
| BAYSIDE ADAPTS MASTER PLAN       | PORTLAND, ME |
| ARBANEY PARK MASTER PLAN         | BASALT, CO   |
| BASALT OUR TOWN                  | BASALT, CO   |
| TIMNATH COMMUNITY PARK           | TIMNATH, CO  |
| PACTS SMART CORRIDOR STUDY       | PORTLAND, ME |
| LIBBYTOWN VISIONING              | PORTLAND, ME |
| BERTHOUD PARKS & OPEN SPACE PLAN | BERTHOUD, CO |

## REFERENCES

### CAITLIN CAMERON

CITY OF PORTLAND, URBAN DESIGNER  
207-874-8901  
CCAMERON@PORTLANDMAINE.GOV

"In my capacity as Urban Designer for the City of Portland, I interacted with Aceto Landscape Architects (ALA) on the 100 Fore Street project where they demonstrated thoughtful and creative design strategies for a challenging urban site. Speaking from my experience working with a diversity of landscape and urban design professionals in Southern Maine, I found ALA to have an innovative approach that demonstrates a value for and understanding of the role of public space and urban landscape for the livability and resiliency of cities and towns." - Caitlin Cameron

### BRUCE HYMAN

CITY OF PORTLAND, TRANSPORTATION PROGRAM MANAGER  
207-874-8717  
BHYMAN@PORTLANDMAINE.GOV

"Aceto Landscape Architecture's compelling graphics as part of the Portland-South Portland Smart Corridor Plan effort in 2017 enabled the public to readily visualize the benefits and trade-offs of various transportation alternatives being considered and highlighted the opportunities those alternatives could also have for placemaking, a key goal of the Plan." - Bruce Hyman

### RICH CIECIUCH

PROJECT WORKSHOP  
970-729-0126  
RICH@PROJECT-WORKSHOP.COM

"ALA is a key design collaborator in our design build approach, helping to navigate complex approval issues, participating seamlessly in the iterative design process that succeeds best when site attribute identification and organization melds with building design concepts. They are excellent listeners and always come back with creative and unexpected solutions. Community and Neighbor impacts of any development must be carefully contemplated and negotiated to a successful outcome, and ALA has all the skills and experience to shape and illustrate how new projects relate to the existing fabric of community and neighborhoods." - Rich Ciecuch

### DAN BACON

DEVELOPMENT DIRECTOR MR.HOLDINGS  
207.232.5154  
DBACON@MR.HOLDINGS

### MARK RUDOLF

PRINCIPAL / OWNER VELLUM ARCHITECTS  
970 618 1889  
MARK@VELLUMAD.COM

### JAY CHACE

PLANNING DIRECTOR, TOWN OF SCARBOROUGH  
207-730-4042  
JCHACE@SCARBOROUGHMAINE.ORG

### TROY MOON

CITY OF PORTLAND SUSTAINABILITY COORDINATOR  
THM@PORTLANDMAINE.GOV  
207.756.8362





## THE DOWNS | 510-ACRE MASTER PLAN & TOWN CENTER SCARBOROUGH ME

ALA has worked collaboratively with Gorrell Palmer Consulting Engineers along with a large team of consultants and stakeholders in developing a master plan for this 500+ acre former harness racing facility. The project was recently granted a TIF agreement based in large part on the attributes ALA visualized in their plans for the proposed Town Center which included a 4 acre community park with music venue, playground, and sport courts.

### KEY STAFF SERVICES STATUS REFERENCE

Nick Aceto, Seth Kimball  
Master Planning, Urban Design, Landscape Architecture, Visualization  
Planned  
Jay Chace, Planning Director, Town of Scarborough | [Jchace@Scarboroughmaine.org](mailto:Jchace@Scarboroughmaine.org)



ALA worked closely with an experienced Southern Maine builder to develop a neighborhood plan which begins to challenge conventional subdivision development rules with a compact pattern and highly walkable streetscape organized around a central woodland preserve which serves as a neighborhood playscape.

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## FRONTRUNNER PARK SCARBOROUGH ME

This third phase of The Downs master plan includes over 200 homes across a broad range of affordability including compact, lane-loaded single family and pocket homes as well as more than 75 apartment units and ground floor office space. The plan is organized around a series of small parks and a highly-walkable street grid.

### KEY STAFF

Nick Aceto, Seth Kimball

### SERVICES

Master Planning, Urban Design, Landscape Architecture, Visualization

### STATUS

Permitted, Expected Construction Fall 2020

### REFERENCE

Jay Chace, Planning Director, Town of Scarborough | [Jchace@Scarboroughmaine.org](mailto:Jchace@Scarboroughmaine.org)





## LAAM 525

### BASALT CO

Aceto Landscape Architects worked closely with architect, owner and contractor on this urban infill development, providing creative streetscape and urban plaza design interventions. The project included 8 affordable residential units, 5,000 SF of commercial / light industrial space, parking, and integration with the town's transit system.

#### KEY STAFF

Caitlin Aceto, Nick Aceto

#### SERVICES

Landscape Architecture, Urban Design

#### STATUS

Under Way Summer 2020

#### REFERENCE

Glenn Rappaport | [grappa@blackshack.net](mailto:grappa@blackshack.net)





## FREEPORT LIVE-WORK

### FREEPORT ME

Freeport Live-Work is a community master plan envisioned as a series of mixed-density neighborhoods including more compact, single-family pocket homes as well as mixed-use townhomes and commercial-office buildings

|           |                                                |
|-----------|------------------------------------------------|
| KEY STAFF | Nick Aceto, Caitlin Aceto                      |
| SERVICES  | Landscape Architecture, Urban Design, Planning |
| STATUS    | Planned                                        |
| REFERENCE | Undisclosed                                    |





## BASALT ON-CALL PLANNING

### BASALT CO

ALA was tasked with the study of two parcels within the Town of Basalt Growth Management Area for feasibility of alternative 'affordable' housing development options. ALA explored options for pocket neighborhoods, compact lot scenarios, and consolidation of infrastructure as a means to offset development cost and in turn reduce home pricing.

#### KEY STAFF

Lisa Cowan, Caitlin Aceto

#### SERVICES

Landscape Architecture, Visualization

#### STATUS

Planning Document Complete 2016

#### REFERENCE

Undisclosed | Undisclosed



# Blackstone Senior Living

**Location:** Falmouth, Maine

**Completion Date:** February 2018

**Size:** 15,000 square feet new

**Program:** 19 units new, 1-bedroom, and 2- bedroom apartments to Passive House performance levels; plus significant rehabilitation of 20 existing units

**Cost:** \$185 / sf

**Scope:** New Construction and rehabilitation

**Reference:**

Catherine Elliott

Avesta Housing

(207) 553-7780

[CElliott@avestahousing.org](mailto:CElliott@avestahousing.org)







48 Union Wharf | Portland, ME. 04101 | tel. 207.772.6022

[www.archetype-architects.com](http://www.archetype-architects.com)

## Company Background and History

Archetype Architects has, since 1983, developed an extensive portfolio of building projects in Maine and New England. We are a commercial architectural firm specializing in business, retail and housing developments. Our areas of service include master- planning, architectural design, and interior design. Prior to 1983 David Lloyd and Bill Hopkins maintained separate practices after having begun their careers in Boston and New York, respectively.

Archetype regularly designs and completes commercial projects in a very diverse field of typologies. Everything from hospitality and multi-family residential to offices and light industrial projects is well within our purview.

### Personnel:

Principals: David Lloyd  
William Hopkins

Architects: David Mele  
Barry Yudaken  
Virginie Stanley  
Katherine Detmer  
James Broadbent

Architectural Associates: Michael Hutchins  
Mike Coyne  
Devin Cough

Architectural Interns: Maryna Nelson  
Sam Berry

Interior Designer: Sally Anderson

Office Manager: Susan Geffers

### Registration Status:

Maine, New Hampshire, Massachusetts, Connecticut, New York, New Jersey, RI and US Virgin Islands

### Professional Affiliations:

National Council of Architectural Registration Board  
International Building Code  
National Fire Protection Association

## RELATED PROJECT EXPERIENCE

Archetype has provided Design Services for the following residential projects.

| Project & Location                  | Type of Project                                          | Client                                                                                  |
|-------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Osprey Circle<br>S. Portland, ME    | 48 Units Apartments<br>2 large multi-unit buildings      | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Oriole Way<br>Ellsworth, ME         | 50 Units Apartments<br>7 Buildings, Flats and Townhouses | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Webster Point<br>Orono, ME          | 15 Units Condos<br>7 Buildings Townhouses                | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Summer Street<br>Gardiner, ME       | 15 Units Apartments<br>2 Buildings, Flats and Townhouses | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Minot Ave.<br>Auburn, ME            | 36 Units Apartments<br>3 Buildings, Flats and Townhouses | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Maple Street<br>Augusta, ME         | 29 Units Apartments<br>3 Buildings, Flats and Townhouses | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Deering Place<br>Portland, ME       | 75 Units Apartments                                      | Avesta Housing<br>(207) 553-7780                                                        |
| Motherhouse<br>Portland, ME         | 88 Units Elderly Apartments                              | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Fox School<br>S. Paris, ME          | 12 Units Elderly Apartments                              | Avesta Housing<br>(207) 553-7780                                                        |
| Larrabee Commons<br>Westbrook, ME   | 38 Units Elderly Apartments                              | Christopher LaRoche – Westbrook Housing<br>(207) 854-6805-claroche@westbrookhousing.org |
| Millbrook Estates<br>Westbrook, ME  | 38 Units Elderly Apartments                              | Christopher LaRoche – Westbrook Housing<br>(207) 854-6805-claroche@westbrookhousing.org |
| St. Ignatius<br>Sanford, ME         | 66 Units Apartments                                      | Kevin Bunker - Developers Collaborative<br>(207) 766-1632 - bunker.kevin@gmail.com      |
| Eliot Housing<br>Eliot, ME          | 38 Units Elderly Apartments<br>HUD                       | David Bateman - Bateman Partners, LLC<br>(207) 772-2992-David@batemanpartnersllc.com    |
| Carleton Street<br>Portland, ME     | 37 Units Apartments                                      | Avesta Housing<br>(207) 553-7780                                                        |
| Huse School<br>Bath, ME             | 58 Units Apartments                                      | Nathan Szanton - The Szanton Company<br>(207) 8719811- nszanton@szantoncompany.com      |
| Hodgkins School<br>Augusta, Me      | 47 Units Apartments                                      | Amanda Bartlett - Augusta Housing<br>amanda.bartlett@augustahousing.org                 |
| 134 Washington Ave.<br>Portland, ME | 18 Units Veterans Housing                                | Avesta Housing<br>(207) 553-7780                                                        |

## RELATED PROJECT EXPERIENCE

Archetype has provided Design Services for the following residential projects.

| Project & Location                               | Type of Project       | Client                                                                                  |
|--------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------|
| Village Green<br>Cumberland, ME                  | 38 Units Apartments   | David Bateman - Bateman Partners, LLC<br>(207) 772-2992-David@batemanpartnersllc.com    |
| Sanford Mill<br>Sanford, ME                      | 36 Units Apartments   | Northland Enterprises, LLC<br>Rex Bell                                                  |
| Danforth on High<br>Portland, ME                 | 30 Units Apartments   | Random Orbit, Inc.<br>Peter Bass                                                        |
| Hyacinth Place<br>Westbrook, ME                  | 37 Units Apartments   | Avesta Housing<br>(207) 553-7780                                                        |
| Sullivan School Apartments<br>South Berwick, ME  | 34 Units Apartments   | David Bateman - Bateman Partners, LLC<br>(207) 772-2992-David@batemanpartnersllc.com    |
| Emery School Apartments<br>Biddeford, ME         | 24 Units Apartments   | Avesta Housing<br>(207) 553-7780                                                        |
| The Mill at Saco Falls<br>Biddeford, ME          | 66 Units Apartments   | The Szanton Company<br>(207) 8719811- nszanton@szantoncompany.com                       |
| Spring Crossing Elderly Housing<br>Westbrook, ME | 34 Elderly Apartments | Christopher LaRoche – Westbrook Housing<br>(207) 854-6805-claroche@westbrookhousing.org |
| 53 Danforth<br>Portland, ME                      | 43 Units Apartments   | The Szanton Company<br>(207) 8719811- nszanton@szantoncompany.com                       |
| Walker Terrace<br>Portland, ME                   | 40 Units Apartments   | The Szanton Company<br>(207) 8719811- nszanton@szantoncompany.com                       |
| Casco Terrace<br>Portland, ME                    | 27 Units Apartments   | The Szanton Company<br>(207) 8719811- nszanton@szantoncompany.com                       |









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Acorn Engineering, Inc. is a Portland-based civil and environmental engineering firm of nine full-time employees and four construction inspectors. Acorn's team has a diverse portfolio providing Maine with quality engineering and environmental services as well as state-wide construction administration on behalf of the Maine Department of Transportation.

A cornerstone of Acorn Engineering is the attention to quality and exceptional level of service on every project, regardless of size. Our engineers and scientists pride themselves on their extensive experience, which is backed by a broad knowledge of civil and environmental engineering practices from smaller residential projects to larger commercial projects that integrate environmental assessment and site redevelopment.

Acorn Engineering has demonstrated the ability to breakdown and synthesize widely disseminated regulations into accepted engineering practices and practical site assessment and development. As a result of Acorn's efforts, the Cumberland County Soil & Water Conservation District recently recognized Acorn as the Contractor of the Year. This was the first award associated with the nationally recognized Long Creek Restoration Project and the first time the Cumberland County Soil & Water Conservation District ever recognized an engineering firm as their Contractor of the Year.

Acorn's expertise covers the areas of: civil/site design, evaluation, development, and permitting; and construction phase services such as construction administration, construction documents, project bidding, and site inspection including erosion and sedimentation control. Acorn's experience also includes the field of environmental engineering and compliance such as: Phase I and Phase II environmental site assessments, soil and groundwater remediation planning and design; Maine's Voluntary Response Action Program (VRAP); and stormwater treatment system design and permitting.

Acorn's engineers have designed, permitted, and overseen construction on numerous single-family and multifamily residential projects including traditional subdivision designs featuring on-site sewage/septic disposal and drilled wells. Furthermore, Acorn has demonstrated extensive experience and capabilities with municipalities, the Maine Department of Transportation (MDOT), Maine Department of Environmental Protection (MDEP), soil & water conservation districts, conservation commissions, municipalities, and the private sector on environmental and site development projects as demonstrated by the following:

- Listed on Maine DEP's Pre-Qualified Vendor List for Environmental Consulting Services
- Listed on Maine DOT's Pre-Qualified Consultants for eight service areas (listed under Section I.D)
- Cumberland County Soil & Water Conservation District Contractor of the Year for work on the Long Creek Restoration Project

- **Public Works Redevelopment – Meeting House Hill**

Over the past two years, Acorn Engineering has worked in close association with the City of South Portland, neighbors, and private clients on the redevelopment of the former Public Works facility. The 6-acre site is nestled in the middle of the Meeting House Hill residential neighborhood and is currently



a mix of storage buildings, fuel fill stations, miscellaneous stockpiles, and pavement. The site will be redeveloped into a mix of multifamily townhomes and single-family dwellings comprising 38 units along with a public park and community gardens.

In addition to the environmental remediation, Voluntary Response Action Program (VRAP), and other environmental considerations given the previous land use, the project is subject to a Maine DEP stormwater management law. The redevelopment design results in a reduction in impervious area of over 50% and reduces land use intensity across the site. Though not required, several stormwater BMP's have been implemented into the site as a best practice, further attenuating and treating stormwater runoff. In addition to the significant redevelopment plan, Acorn has designed an infrastructure plan to separate the storm and sewer mains. This will include installing 400 feet of new storm drain along the existing O'Neil Street right-of-way and 700 feet of new storm drain along the proposed O'Neil Street right-of-way extension. Overall, this effort will reduce the effects of combined sewer overflows (CSO) into Casco Bay which occur due to wet-weather events and the wastewater treatment plant's inability to provide capacity for both storm and sanitary sewer flows.

As part of this project, Acorn held a multitude of meetings with the City including the assistant City manager, the former Mayor, the entire planning division, and the chief engineer of Public Works. Furthermore, Acorn has collaborated with department heads of the Fire, Parks, Public Works, and Water Resource departments to ensure a feasible and ideal project for all parties. As a result, the process was truly a collaborative effort with a number of stakeholders weighing in on the design.

- **Munjoy Heights**

Acorn provided civil/site engineering and permitting for the design of Munjoy Heights – a six townhome, 29-unit development on the steep slopes of Munjoy Hill in the City of Portland. Acorn designed and developed construction drawings for the sanitary sewers, storm drains, water mains, driveways and pedestrian circulation, retaining wall locations, building locations, and drainage infrastructure to be built in compliance with City standards.



A key component to the project was coordinating with the City on the future combined sewer separation project and the site's overall stormwater management. Additionally, discussions with neighbors and stakeholders were paramount in the project's success.

The innovative urban infill project compliments the Munjoy Hill neighborhood with a communal design and plentiful native landscaping that replaced invasive species which previously dominated the eroding banks prior to the development. The \$22 million project features a courtyard, terraced landscaping, a Portland Trails-maintained path that connects the redevelopment to the existing trail system, and low impact development (LID) techniques that meet MDEP Chapter 500 regulations. The stormwater management includes an underdrained sand filter and chambers that detain and treat stormwater on site in tandem with strategically placed rain gardens.

The project required extensive coordination and collaboration between the client, City of Portland, Portland Trails, the structural engineer, the architect, and the contractor to successfully complete the project with the first "woonerf" in the state and maintaining the existing public walking path through the property.



- **200 Valley St**

Working with Avesta Housing, Acorn Engineering provided civil engineering and permitting for Avesta's 60-unit project in the St. John Valley neighborhood. This urban infill project replaces the existing single-family house and abutting vacant lots into new affordable housing opportunities with two levels of covered parking, amenities, and a rebuilt project frontage with new sidewalks, street trees, and bicycle hitches.



As part of the project, Acorn developed a transportation and parking analysis to ensure that the provided parking will adequately serve the redevelopment. Furthermore, the design team identified and implemented multiple strategies to encourage residents to efficiently utilize the many modes of transportation available on the Portland peninsula.

- **Little Dolphin Drive & Jocelyn Place**

In collaboration with the South Portland Housing Authority and Risbara Holdings, Acorn provided civil engineering design and permitting of a multi-use subdivision at the end of Little Dolphin Drive in Scarborough. Proposed uses include a two-story office building and a three-story 60-unit senior housing facility with associated parking and landscaped areas.



In addition to a voluntary neighborhood meeting, the project went through a 3-step master plan phase with the Town of Scarborough in which the project was collaborated on with Planning Staff, the Planning Board, and neighbors.

The project is subject to Maine DEP and US Army Corps permits. To adequately treat stormwater on the site, Acorn has designed multiple stormwater BMPs meeting Maine DEP Chapter 500 regulations resulting in a low impact design.



- **89 Anderson Street**

In collaboration with Redfern properties and the East Bayside neighborhood, Acorn developed the civil/site engineering design of a mixed use 53-unit redevelopment of an existing under-utilized, urban infill lot in the East Bayside neighborhood. Acorn's scope of services included in the initial phase applying for and obtaining a zone change and



conducting Phase I and Phase II Environmental Site Assessments to evaluate potential environmental contamination at the site.

After conducting the environmental remediation efforts, Acorn developed the site layout and design of sanitary sewers, storm drains, water mains, site driveway, retaining wall locations, building locations, parking lot design, building drainage structures, utility connections and landscaping plan (with a landscape architecture subconsultant) to meet the City of Portland Technical Standards. Acorn also integrated sidewalk and improvements associated with the project into the City's Anderson Street ByWay project. Furthermore, the project team worked with a non-profit organization, the Telling Room, to provide public art along the Fox Street streetcape in lieu of traditional fencing.

Overall, the project established an important mixed use building on a prominent corner lot adjacent to Kennedy Park which contains popular recreation space. The building houses a restaurant and the Gear Hub bicycle school on the first floor with residential apartments above which encourages an active street presence with housing, goods, and services that help tie the neighborhood together and keep eyes on the street.

- **667 Congress Street – The Hiawatha**

The \$28 million project included the civil/site engineering design for the 8-story, first floor retail and 139-unit apartment building on Congress Street in Portland. Vehicle parking is served by two levels with separate access from Vernon and Avon St. The project featured building and site design in an historic district adjacent to Longfellow Square.

Services included, but is not limited to, permitting with the City of Portland, layout and design of sanitary sewers, storm drains, water mains, pedestrian and vehicle entrances, building locations, parking lot design, and parking garage grading and drainage. Acorn provided significant coordination between the Architect, Structural Engineer, Geotechnical Engineer, Construction Management Company, Owner, and the City.





# CREDERE

## ASSOCIATES, LLC

### **Brownfield Assessment & Cleanup**

Credere specializes in redevelopment planning, engineering, and environmental sciences with a goal of providing services that positively impact the community, economy, and environment using Smart Growth principles. Credere is SBA certified 8(a); DOT certified DBE in ME, NH and MA; and Self-Certified EDWOSB/WOSB.

The word “credere” means “to believe” in Italian. Credere is also an acronym for community revitalization, economic development, environmental remediation, and engineering. It was very important to Theresa and Rip Patten when naming the company that the name communicates something more than crediting the owners. The name should embody the company mission: what the company believes, what it aspires to do for its clients, and the means through which it can be achieved. To us, Credere is the perfect name. We believe that we can use our engineering education and our knowledge of environmental remediation to help our clients achieve community revitalization by successful completion of redevelopment projects. It is our small way to make the world a little better. Credere works with planning commissions, municipalities, economic development boards, private developers, and local and federal government agencies to overcome environmental issues that are hindering the redevelopment process.

***Credere’s mission is to provide services that positively impact the community, economy, and environment that our clients and employees work, live and play.***

Credere has extensive experience in completing long-term, sustainable Brownfields Programs and private redevelopment projects, which use smart growth principles. The projects include various tasks, such as, environmental assessment, re-use planning and remediation and redevelopment engineering.





**Marada Adams School – 48 Moody Street, Portland, Maine**

The 1.5-acre Marada Adams Community School was used as an educational facility from 1958 until 2006, when the school was closed and the property was vacated. Historically, the property contained a complex of buildings occupied by the Portland Railroad Company and a trolley railroad crossed the middle of the site. During the late 1800s, a portion

of the property was also used as the Burgess, Forbes & Company White Lead & Color Works facility (a can and hand grenade manufacturer). Credere performed a Phase I assessment at the property in anticipation of a transfer of ownership from the City of Portland to a private non-profit affordable housing developer, AVESTA Housing. Following the sale of the property, Credere performed Phase II activities to investigate potential hazardous building materials and contaminated soil. Based on the Phase II data, the developer was able to anticipate concerns with worker and future residential exposure, and waste soil disposal. Credere helped the development team minimize the financial and logistical impact of these issues through the re-design of the site layout, enrollment in the Maine DEP VRAP program, and attainment of a \$200,000 Brownfields cleanup grant. Between 2012 and 2013, Credere oversaw the remediation of hazardous building materials, contaminated soils, and the redevelopment of this site into 16 units of affordable homeownership housing, a public greenway and a playground. The project transformed an underutilized Brownfields site located in an otherwise vibrant neighborhood and returned it to the community.



**Thornton Heights Commons – 611 Main Street, South Portland, Maine**

The South Portland Housing Authority acquired the former St. John parish church, rectory (i.e. a residence for clergy), and a church school in Thornton Heights or South Portland, Maine. The buildings on the 1.81-acre site were severely dilapidated and contained substantial hazardous

building materials including lead, asbestos, and PCBs, and soil was contaminated from lead paint around all of the Site buildings. Credere performed several phases of environmental investigation, geotechnical investigation, assisted the housing authority in obtaining a \$500,000 EPA Brownfields cleanup grant, and cleanup and redevelopment planning. In 2020, Credere oversaw the solicitation of bids from cleanup contractors and subsequently implemented the abatement and remediation of the site, demolition of the Site buildings, and preparation of the site for redevelopment. The project is currently moving to construction of a 46,000 square foot four-story mixed-use affordable housing projected that will include parking for seventy vehicles,

a 10,000 s.f. community open space, and three new single-family house lots. The building will consist of 42 apartments on the three upper floors, a community space, and 7,000 s.f. of commercial space on the ground floor.

### **State Street School – 261 Center Street, Brewer, Maine**

The State Street School was a 6,630-square foot two-story building that was constructed in 1948. The Site building was operated as an elementary school from 1948 until June 2011 and was vacant thereafter. Based on assessment work completed at the Site by Credere and others, asbestos, lead, and universal and/or hazardous waste were considered to be contaminants of concern. Credere assisted the City in remediation planning and environmental clean activities, which included abatement and removal of asbestos; universal, special, and hazardous waste; and lead-based paint building debris in accordance with the Maine DEP VRAP. To support the redevelopment of the Site, Credere completed a geotechnical engineering evaluation and provided recommendations for the design and construction of the 48-unit Community Housing of Maine (CHOM) affordable housing development. This was the first multi-family passive building in ME and in New England, and at the time, was the largest passive housing building anywhere in the country. As part of this work, Credere conducted a subsurface exploration program, which included laboratory testing, evaluating subsurface conditions, and completing geotechnical engineering analyses including settlement and bearing capacity calculations and limited stability assessment of proposed excavations.



# **I. Conformity with Land Use Ordinance**

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526.

## **OVERVIEW**

The proposed mixed-use residential buildings have been designed to conform to City standards where possible, as well as improve upon existing non-conformities. This project conforms with the majority of the applicable standards of Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

### **(a) Transportation Standards**

#### **1. Impact on Surrounding Street Systems:**

The site is located along Douglass Street. It is classified as a local street according to the City of Portland Federal Street Classification map. A moderate traffic increase is expected for this project due to the change in use of the property. Congestion or worsening of the intersections is not anticipated.

#### **2. Access and Circulation:**

##### **a. Site Access and Circulation:**

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

- (i) The development will provide safe access and internal circulation for both pedestrians, vehicles and emergency vehicles as seen on the Site Plan.
- (ii) The proposed parking areas can be accessed from the existing access drive from Douglass Street.
- (iii) The site does not feature drive up services as mentioned in this requirement.

##### **b. Loading and Servicing:**

- (i) There are no anticipated loading and servicing needs. The site is access

##### **c. Sidewalks:**

- (i) Bituminous pavement sidewalks are proposed throughout the site, as seen on the Site Plan, to connect the existing sidewalk on Douglass Street to the site for pedestrian access.
- (ii) The existing sidewalks that will be disturbed during construction and utility



activities at the entrance to the site are proposed to be rebuilt in conformance with City standards.

3. Public Transit Access:

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

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) The proposed project will provide 78 parking spaces which is anticipated to meet the requirements of the proposed uses within the new buildings.
- (ii) Not applicable.
- (iii) The project is within a quarter mile of a transit facility and therefore is not technically required to provide any parking; however, at a ratio of 0.65 spaces per unit, the project team feels this proposal is appropriate. Please see the Parking Report for more information.
- (iv) The parking space and aisle dimensions are in conformance with the Technical Standards with the exception of a waiver request to reduce the drive aisle width from 24' to 22' given the residential use and low turnover rate. Please refer to the Site Plan for more information.
- (v) The driveway and parking areas will be constructed of bituminous pavement which will drain water without eroding.

b. Location and Required Number of Bicycle Parking Spaces:

- (i) A minimum of 50 bicycle spaces are proposed for the 120 residential units. Please refer to the Landscape Plan for more information.

c. Motorcycles and Scooter Parking:

- (i) There are no areas specifically designated for motorcycles or scooters at this time; however, parking is available through the on-site parking stalls.

d. Snow Storage:

- (i) Snow storage area is provided on the south and north ends of the site. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.



(ii) Not applicable.

5. Transportation Demand Management (TDM):

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

**(b) Environmental Quality Standards**

1. Preservation of Significant Natural Features:

- a. Not applicable.
- b. Not applicable.

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

- (i) There are 18 existing trees on site, all of which will be removed for construction activities.
- (ii) There are 5 trees 10 inches DBH or greater within the property.
- (iii) It is not anticipated that the project will necessitate any tree protection.
- (iv) A waiver is not requested.
- (v) Not applicable.

b. Site Landscaping.

(i) Landscaped Buffers:

- a. The solid waste location will be located adjacent to the parking lot on the east side of the development. The proposed transformer and solid waste container are anticipated to be screened by a decorative fencing, screening, or landscape plantings.
- b. Landscaping has been incorporated into the site design as such. Please refer to the Landscape/Planting plan.
- c. Not applicable.



d. Not applicable.

(ii) Parking Lot Landscaping:

- a. The proposed development will include one (1) tree and three (3) shrubs for every five (5) parking spaces within landscaped islands to screen shade and break up parking.
- b. A landscape island is provided to ensure uninterrupted parking will not exceed forty (40) parking spaces.
- c. Parking landscape islands will be curbed and a minimum of seven (7) feet in width.
- d. Not applicable.

(iii) Street Trees:

- a. Not applicable
- b. Not applicable

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater

- (i) The site drainage will not be directed to flow or pond onto adjacent lots. The runoff created from the site will be collected and directed to the MS4 within Douglass Street. Impervious area on the site will be decreased, reducing overall runoff from the site.
  - (ii) Provisions will be in place to ensure stormwater from the development will not exceed the pre-development flows.
  - (iii) The runoff from the site into the public way will not increase from the pre-development condition.
  - (iv) The runoff to the MS4 is anticipated to be of an increase, but is anticipated to be easily accommodated in the existing 60 inch storm drain within Douglass Street. When looking at all analysis points, the cumulative runoff from the site will be reduced.
- b. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Erosion & Sedimentation Control and Stormwater Management Plans, respectively, for more information.



- c. The project is not located in a watershed of an urban impaired stream as listed by the MEDEP.
- d. Not applicable.
- e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.
- f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

### **(c) Public Infrastructure and Community Safety Standards**

- 1. Consistency with City Master Plans:
  - a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.
  - b. The site plan will enhance and blend with the surrounding land and paved walking trails compared to its existing condition.
- 2. Public Safety and Fire Prevention:
  - a. The site has been designed to promote safe and inviting public access including connections to walking trails within Douglass Park.
  - b. Adequate emergency access has been provided. Fire trucks and ambulance will be able to access all of the site and buildings through a loop road.
  - c. The project will include a proposed private hydrant to serve the buildings on site and will be within 450 feet of the furthest structure.
- 3. Availability and Adequate Capacity of Public Utilities:
  - a. Ability to Serve letters have been sent to the respective companies. Responses are forthcoming.
  - b. The electrical service will be wired underground via a new pad-mounted transformer as shown on the Utility Plan.
  - c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.
  - d. The project will be served by connection to the public sewer system within Douglass Street.





- e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.
- f. A space allocated for solid waste storage can be seen on the Site Plan (C-10). The solid waste containers will be fully enclosed and screened from the public view.

#### **(d) Site Design Standards**

1. Massing, Ventilation and Wind Impact:
  - a. Please refer to Section O, Architectural Design Narrative.
  - b. Please refer to Section O, Architectural Design Narrative.
  - c. Please refer to Section O, Architectural Design Narrative.
2. Shadows:
  - a. Not applicable.
3. Snow and Ice Loading:
  - a. The structure will not distribute snow and ice onto adjacent properties.
4. View Corridors:
  - a. Please refer to Section O, Architectural Design Narrative.
5. Historic Resources:
  - a. The development is not located in a historic district, historic landscape district or City designated landmark.
  - b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district.
  - c. There are no known archaeological resources on the site.
6. Exterior Lighting:
  - a. Site Lighting.
    - (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual.



- (ii) The proposed buildings on site will employ house-side shielding to prevent adjacent residential properties from being adversely affected by exterior lighting.
  - b. Architectural and Specialty Lighting.
    - (i) No architectural or specialty lighting is proposed.
    - (ii) No up-lighting is proposed.
  - c. Street Lighting.
    - (i) No new street-lights are proposed.
7. Noise and Vibration:
- a. The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.
8. Signage and Wayfinding:
- a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.
    - (i) The project is not located in a historic district or subject to Article IX.
    - (ii) Signage will only be related to vehicular access.
    - (iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.
9. Zoning Related Design Standards:
- a. The project has been designed to meet the standards set forth in the R-5A zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.





United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

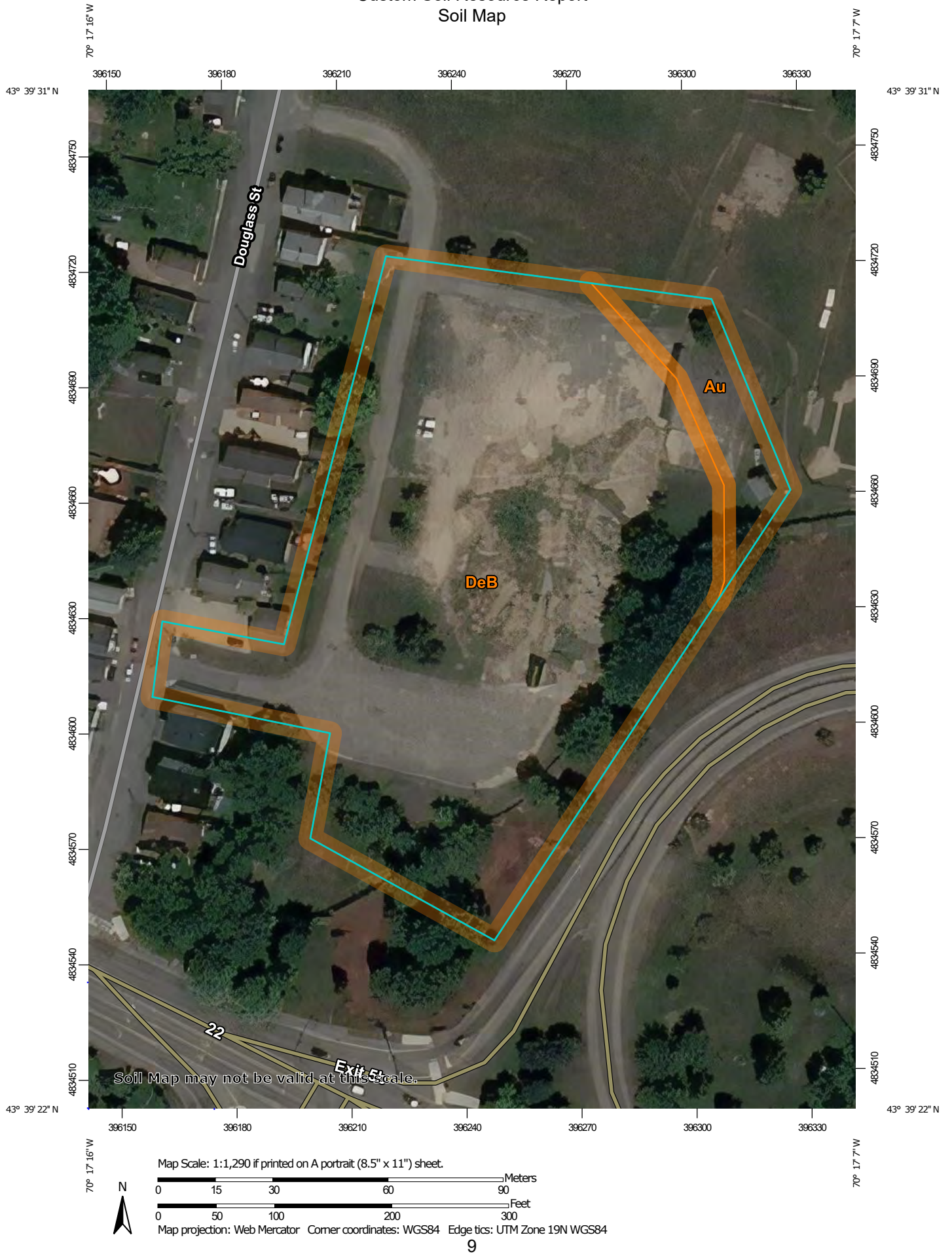
# Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



November 4, 2021



# Custom Soil Resource Report Soil Map



## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                    | Acres in AOI | Percent of AOI |
|------------------------------------|--------------------------------------------------|--------------|----------------|
| Au                                 | Au Gres loamy sand                               | 0.3          | 7.8%           |
| DeB                                | Deerfield loamy fine sand, 3 to 8 percent slopes | 3.7          | 92.2%          |
| <b>Totals for Area of Interest</b> |                                                  | <b>4.0</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

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

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

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

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



onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Cumberland County and Part of Oxford County, Maine

### Au—Au Gres loamy sand

#### Map Unit Setting

*National map unit symbol:* blgr  
*Elevation:* 200 to 1,800 feet  
*Mean annual precipitation:* 34 to 50 inches  
*Mean annual air temperature:* 41 to 45 degrees F  
*Frost-free period:* 90 to 130 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

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

#### Description of Au Gres

##### Setting

*Landform:* Outwash plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy glaciofluvial deposits derived from granite and gneiss

##### Typical profile

*H1 - 0 to 10 inches:* loamy sand  
*H2 - 10 to 32 inches:* loamy sand  
*H3 - 32 to 65 inches:* sand

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)  
*Depth to water table:* About 0 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 3.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

## **DeB—Deerfield loamy fine sand, 3 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2xfg9

*Elevation:* 0 to 1,190 feet

*Mean annual precipitation:* 36 to 71 inches

*Mean annual air temperature:* 39 to 55 degrees F

*Frost-free period:* 145 to 240 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Deerfield and similar soils:* 85 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Deerfield**

#### **Setting**

*Landform:* Kame terraces, outwash plains, outwash terraces, outwash deltas

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Concave, convex, linear

*Across-slope shape:* Convex, linear, concave

*Parent material:* Sandy outwash derived from granite, gneiss, and/or quartzite

#### **Typical profile**

*Ap - 0 to 9 inches:* loamy fine sand

*Bw - 9 to 25 inches:* loamy fine sand

*BC - 25 to 33 inches:* fine sand

*Cg - 33 to 60 inches:* sand

#### **Properties and qualities**

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (1.42 to 99.90 in/hr)

*Depth to water table:* About 15 to 37 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 1.9 mmhos/cm)

*Sodium adsorption ratio, maximum:* 11.0

*Available water supply, 0 to 60 inches:* Moderate (about 6.5 inches)

#### **Interpretive groups**

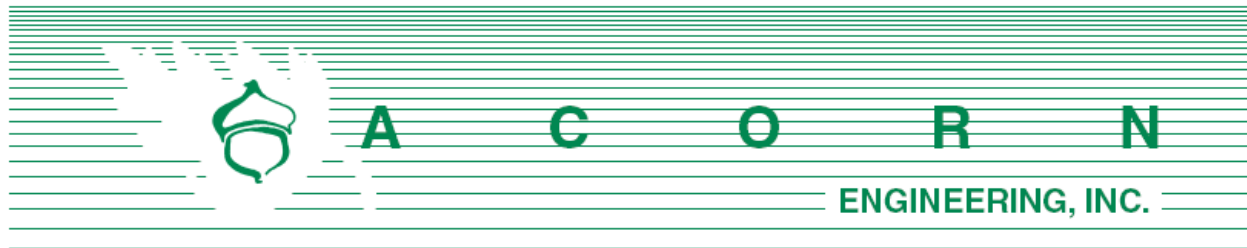
*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* A

*Ecological site:* F144AY027MA - Moist Sandy Outwash

*Hydric soil rating:* No



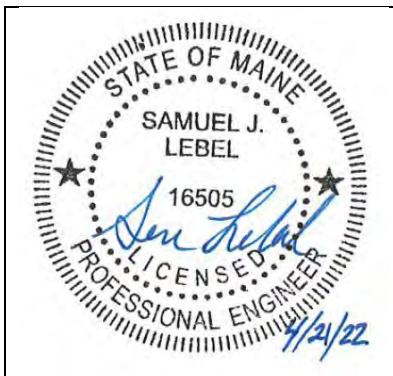
# **STORMWATER MANAGEMENT** **REPORT**

**Prepared For:**

**Douglass Commons, LLC.  
57 Douglass Street  
Portland, Maine 04101**

**Prepared By:**

**Acorn Engineering, Inc.  
PO Box 3372  
Portland, Maine 04104**



**April 2022**



## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by Douglass Commons, LLC. to provide civil engineering services for the proposed redevelopment of 57 Douglass Street located within the R-5A Zoning District in Portland, Maine. The 3.34-acre parcel was previously the site of a school building and is now vacant. The built-out site will consist of eight stand-alone buildings comprising 120 residential units, the majority of which will be deed-restricted for affordability.

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

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

The property consists of approximately 3.34 acres of land in Portland's Libbytown neighborhood. The site is currently composed of approximately 2.16 acres impervious area. The proposed project will decrease the impervious area by approximately 0.36 acres to 1.90 acres. The project will result in redevelopment of non-roof impervious area greater than 5,000 SF and therefore will be required to provide treatment for a portion of the site.

## **EXISTING CONDITIONS**

The proposed project site is located at 57 Douglass Street. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc., dated March 1, 2021.

The existing property is covered by approximately 65% impervious surfaces, whereupon a school and its associated infrastructure was formerly located. The existing site is vacant and has moderate slopes within the center of the site that form a plateau, grading down to perimeter. The site is split into three subcatchments, two larger and one smaller. Subcatchment 1 drains the gently sloping northerly portion of the site and a small section of the existing access driveway to the MS4 within Douglass Street. Subcatchment 2 drains the southerly portion of the site to a basin shared with the off-site drainage of residences and the western flanks of I-295, which were also modeled. Subcatchment 3 is a small section of the eastern part of the site that drains to the playing fields east and north of the site.

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





## **PROPOSED DEVELOPMENT**

The project features the development of a planned residential unit development (PRUD) and generally follows the principles of cluster subdivision planning where infrastructure is denser and more efficient and as a result, greater uninterrupted open space opportunities are available. The site will consist of eight separate residential buildings with a total of 120 dwelling units. Each building will be served with associated parking and utilities. Pedestrian access to the site will be provided along the access drive from Douglass Street and through paved foot paths from Dougherty Park. The development will be served by Portland Water District, Department of Public Works (sewer/storm), Unitil (natural gas), CMP (electric), Charter (cable), and Fairpoint (telephone).

The site has been graded to slope with the existing topography while providing for appropriate slopes in the parking lot. The slopes on the outside of the parking areas that are not part of a stormwater system will be appropriately stabilized per the specifications in the plans and are anticipated to be heavily landscaped for further slope protection and buffering. The majority of the site's runoff, including 100% of the new impervious area, will be collected via a storm drain system and directed to the Douglass Street Municipal Separated Storm Sewer System (MS4).

The proposed project will decrease the site's impervious area by approximately 0.36 acres, but will include redevelopment of non-roof impervious area greater than 5,000 square feet, triggering the City's water quality treatment requirement. Water quality treatment will be provided by collecting the runoff on over 75% of the parking lot area and allowing it to flow to a vegetated underdrained soil filter (VUSF) system and proprietary high-flow rain gardens for treatment prior to discharging into the MS4 within Douglass Street. The project has been designed to meet and exceed the Chapter 500 General Standards.

## **BASIC STANDARDS – EROSION & SEDIMENTATION CONTROL**

The development shall provide erosion and sedimentation control, inspection and maintenance, and housekeeping standards as specified in the attached Exhibit K: Erosion and Sedimentation Control Report. Grading and construction activity will not impede or otherwise alter drainageways to have an unreasonable adverse impact on an adjacent downgradient parcels.

## **GENERAL STANDARDS - WATER QUALITY**

When analyzing the Maine DEP Redevelopment Standards and the associated ranked impacts, the project results in a negative number and therefore treatment is not required per State law. However, the development will provide water quality treatment for no less than 50% of the non-roof redeveloped impervious area, consistent with the City of Portland's technical manual. Water quality treatment will be provided using an under-drained soil filter system and proprietary high-flow media rain gardens, which are approved systems per Appendix B of the Maine Stormwater BMP Manual. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff. The rain gardens are based off a Focal Point system manufactured by ACF Environmental. The footprint of the filter media is 20 square feet and has an



infiltration rate of 100 inches per hour. Above the media, the garden will allow for 6 inches of ponding before overflowing into an overflow beehive grate which bypasses the filter media. Given the site is reducing the net peak flow leaving the site and is discharging to a 60" MS4 that freely flows to a major river segment, storage tanks are not being proposed below the rain gardens. From a stormwater perspective, the focus is on providing water quality treatment given the watershed's discharge and conveyance system are not overburdened.

The treatment of the impervious areas are as follows:

| <b>Table 1 – Impervious Area Treatment Table</b> |                                     |                                           |                                                       |                                   |
|--------------------------------------------------|-------------------------------------|-------------------------------------------|-------------------------------------------------------|-----------------------------------|
| Existing Impervious Area (SF)                    | Total Proposed Impervious Area (SF) | Non-Roof Redeveloped Impervious Area (SF) | Proposed Non-Roof Impervious Area with Treatment (SF) | Treated Non-Roof Redeveloped Area |
| 94,185                                           | 80,382                              | 45,483                                    | 23,370                                                | 51%                               |

As shown above, the project anticipates meeting the required treatment for new impervious and developed surfaces with the soil filter BMPs.

#### *Filter Area Sizing*

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

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

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

| <b>Table 2 – Total Filter Surface Area</b> |                           |                         |
|--------------------------------------------|---------------------------|-------------------------|
|                                            | Required Filter Area (SF) | Actual Filter Area (SF) |
| VUSF 1                                     | 465                       | 465                     |

As shown above, the project anticipates meeting and exceeding the required treatment for 50% of the redeveloped impervious surfaces.

#### *Water Quality Volume*

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

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

| <b>Table 3 – Water Quality Volume</b> |                                      |                                    |                                          |                                           |
|---------------------------------------|--------------------------------------|------------------------------------|------------------------------------------|-------------------------------------------|
|                                       | Tributary<br>Impervious<br>Area (SF) | Tributary<br>Pervious Area<br>(SF) | Water Quality<br>Volume Required<br>(CF) | System Storage<br>Volume Provided<br>(CF) |
| VUSF 1                                | 8,274                                | 2,578                              | 775                                      | 1,052                                     |

As seen above, the provide water quality volume above the soil filter and below the overflow grate exceeds the requirement. Values from the HydroCAD calculations are attached to this report to demonstrate compliance with this standard.

As shown above, the project anticipates meeting and exceeding the required treatment for new impervious surfaces using the VUSF and proprietary high-flow media rain gardens.

### **FLOODING STANDARD – WATER QUANTITY**

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

#### *Time of Concentration (Tc)*

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slopes. HydroCAD then calculated the Tc's and incorporated the total Tc for each subcatchment into the model. When the calculated Tc was less than six minutes (0.1 hours), a direct entry of six minutes was used as advised by the TR-55 model. Consistent with previous submissions and best practices, the sheet flow length for any Tc path was capped at 100 feet.

#### *Curve Number (CN)*

Within the pre-development model, the vegetated areas were considered grass cover in fair or good condition, depending on the area. as demonstrated by aerial images and site visits. The post development landscaped areas were given a good rating all within the A hydrologic soil group. This is assumption is reinforced given the aggressive landscape plan which will feature more porous conditions that are appropriately mulched along with future extensive root systems and canopy cover that will exist once the landscaping has matured.



### *HydroCAD Adjustments*

A simulation water quality outlet (vertical orifice) is modeled to mimic the minimum 24-hour release time through the soil filter media. This is completed by adjusting the rainfall amount in HydroCAD until the inflow volume is equal to or greater than the calculated water quality volume. The storm events are modeled as type III, 24-hour storm events in HydroCAD.

### *Pre-development Calculations*

The site consists of gravel and grassed areas in the predevelopment condition. For the purposes of this analysis, the land has been divided into three sub-catchments. Subcatchment 1 drains the gently sloping northerly portion of the site and a small section of the existing access driveway, terminating in the storm drains and MS4 within Douglass Street (POI #1). Subcatchment 2 drains the southerly portion of the site to a basin shared with the off-site drainage of residences and the western flanks of I-295, which were also modeled. The slopes are in the 5-10% range. There is an existing culvert under the State's paved pathway that divides I-295 land with the proposed site, that facilitates flow from the grassed basin to the Site under the pathway. This low point was modeled as POI #2. Subcatchment 3 is a small section of the eastern part of the site with 2-5% slopes that drains to the playing fields east and north of the site which was modeled as POI #3.

Peak flow rates for the pre-development storm events are as follows:

| <b>Table 5 – Pre-Development Peak Stormwater Flows</b> |                                 |                                  |                                  |
|--------------------------------------------------------|---------------------------------|----------------------------------|----------------------------------|
| <b>Drainage Area</b>                                   | <b>2-Year Storm Event (cfs)</b> | <b>10-Year Storm Event (cfs)</b> | <b>25-Year Storm Event (cfs)</b> |
| POI #1                                                 | 3.2                             | 5.4                              | 7.3                              |
| POI #2                                                 | 0.4                             | 1.8                              | 3.5                              |
| POI #3                                                 | 0.7                             | 1.5                              | 2.1                              |

### *Post-development Calculations*

In the post development condition, over 95% of runoff from the site will be collected in stormwater infrastructure and piped to the MS4 within Douglass Street. The proposed project will decrease the site's impervious area by approximately 0.36 acres. Water quality treatment will be provided by collecting the runoff on over 75% of the parking lot area and allowing it to flow to an under-drained soil filter system and proprietary high-flow media rain gardens for treatment prior to discharging into the combined sewer within Douglass Street.

The post-development calculations include changes to the land use, and the compensation provided by the VUSF, rain gardens, and associated engineered orifices. The following table represents comparison of pre- development and post-development condition peak runoff rates for the proposed development and tributary areas.



| <b>Table 6 – Post-Development Peak Stormwater Flows</b> |                          |                           |                           |
|---------------------------------------------------------|--------------------------|---------------------------|---------------------------|
| Drainage Area                                           | 2-Year Storm Event (cfs) | 10-Year Storm Event (cfs) | 25-Year Storm Event (cfs) |
| POI #1                                                  | 3.8                      | 7.7                       | 11.0                      |
| POI #2                                                  | 0                        | 0.1                       | 0.3                       |
| POI #3                                                  | 0                        | 0                         | 0                         |

| <b>Table 7 – Comparison of Peak Flows</b> |                          |             |                           |             |                           |             |
|-------------------------------------------|--------------------------|-------------|---------------------------|-------------|---------------------------|-------------|
| Drainage Area                             | 2-Year Storm Event (cfs) |             | 10-Year Storm Event (cfs) |             | 25-Year Storm Event (cfs) |             |
|                                           | <i>Pre</i>               | <i>Post</i> | <i>Pre</i>                | <i>Post</i> | <i>Pre</i>                | <i>Post</i> |
| POI #1                                    | 3.2                      | 3.8         | 5.4                       | 7.7         | 7.3                       | 11.0        |
| POI #2                                    | 0.4                      | 0           | 1.8                       | 0.1         | 3.5                       | 0.3         |
| POI #3                                    | 0.7                      | 0           | 1.5                       | 0           | 2.1                       | 0           |
| POI #4 (Total Peak Discharge)             | <b>4.3</b>               | <b>3.8</b>  | <b>8.7</b>                | <b>7.8</b>  | <b>12.9</b>               | <b>11.3</b> |

As shown in Tables 6 and 7, the net impact of the post development peak flows will remain below the predevelopment levels. A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

## **SOILS**

Onsite soil information is sourced from the *Soil Conservation Service Medium Intensity Soil Survey for Cumberland County consistent with the USDA Soil Survey*.

The area within and surrounding the project includes soils types listed in the table below.

| <b>Table 8 – Hydrologic Soil Group</b> |            |
|----------------------------------------|------------|
| <b>Soils Type</b>                      | <b>HSG</b> |
| Deerfield Loamy Fine Sand, 3-8% slopes | A          |

The HSG for the soils, listed above, show soils having a high infiltration rate (low runoff potential). These consist mainly of deep, well drained sands, with a high rate of water transmission.

## **Conclusion**

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way.





## **Attachments**

Attachment A: Pre-Development Watershed Map

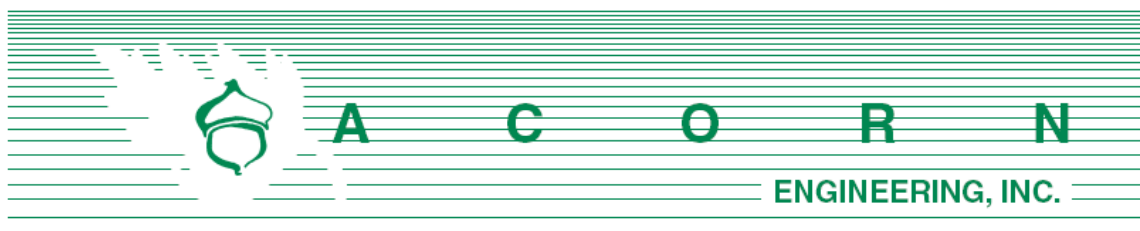
Attachment B: Post-Development Watershed Map

Attachment C: Redevelopment Pollutant Ranking Exhibit

Attachment D: HydroCAD Calculations

Attachment E: Soil Survey





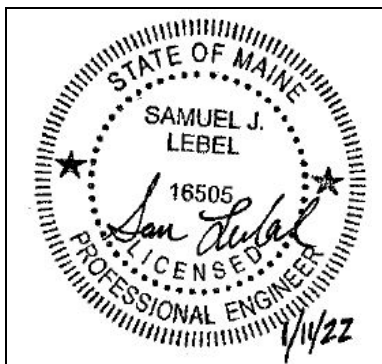
## **K. EROSION & SEDIMENTATION** **CONTROL REPORT**

**Prepared For:**

**Douglass Commons, LLC.  
43 & 91 Douglass Street  
Portland, Maine 04101**

**Prepared By:**

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



**January 2022**

## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by Douglass Commons, LLC. to provide civil engineering services for the proposed redevelopment of 57 Douglass Street located within the R-5a Zoning District in Portland, Maine. The 3.34-acre parcel was previously the site of a school building and is now vacant. The built-out site will consist of eight stand-alone buildings of 120 residential dwelling units.

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

### **1.0 EXISTING CONDITIONS**

The proposed project site is located off an access road from Douglass Street adjacent to Douglass Park and Interstate 295. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc., dated March 1, 2021.

The property is in the R-5A Residential Zone. Abutting Uses include:

- North                      Douglass Park
- West                        Residential
- South/East                Route 295

The site is currently vacant and was once occupied by the West School. The site in its existing condition is split a ridge middle of the property that drains water in roughly two directions, to the north and south. A small portion of the site drains to the playing fields to the east. The adjacent I-295 corridor basin contributes run-off to the site through an existing culvert. The grades on-site are mostly gentle in the 1 to 5% range with some steeper slopes of 10-15% on the edges of the property in the east and south .

#### **1.1 Existing Soils**

Onsite soil information includes the following:

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

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



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

| Table 1 - “K” Value       |            |            |
|---------------------------|------------|------------|
| Soils Type                | Subsurface | Substratum |
| Au Gres Loamy Sand        | .15        | .15        |
| Deerfield Loamy Fine Sand | .20        | .20        |

The soil “K” value for the soil, listed above, shows a low susceptibility to erosion, as derived from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although the soil “K” value shows a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be important to limit erosion during large storm events.

#### 1.2 Existing Erosion Problems

There are no signs of erosion.

#### 1.3 Critical Areas

There are no critical areas that require special attention during construction.

#### 1.4 Protected Natural Resource

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

#### 1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years. The West School was demolished on-site within the last few years.

#### 1.6 Timber Harvesting

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



## 2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

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

### 2.1 Temporary Erosion Control Measures

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

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

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

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

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

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American





Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

- 2.1.5 Douglass Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.
- 2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.
- 2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be “toed” into the ground.
- 2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached  $\frac{1}{2}$  the design height.
- 2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.
- 2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.
- 2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.
- 2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.
- 2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.



## 2.2 Permanent Erosion Control Measures

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

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

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

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

## 3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Construction Management & Erosion Control Plan is included within the plan set.

## 4.0 DETAILS AND SPECIFICATIONS

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

## 5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

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

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

The following measures shall be implemented during winter construction periods:

### 5.1 Sediment Barriers

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



## 5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1<sup>st</sup>, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

## 5.3 Soil Stockpiling

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

## 5.4 Seeding

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

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



## 5.5 Over winter stabilization of disturbed soils

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

- Stabilize the soil with temporary vegetation – By October 1<sup>st</sup>, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1<sup>st</sup>, then mulch the area for over-winter protection.
- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1<sup>st</sup>. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.
- Stabilize the soil with mulch – By November 15<sup>th</sup>, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

## 5.6 Over winter stabilization of disturbed slopes

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

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1<sup>st</sup> the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1<sup>st</sup>, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.
- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1<sup>st</sup>. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.



- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15<sup>th</sup>. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15<sup>th</sup>. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

## 6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a “storm event”. A “storm event” shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

### 6.1 Sediment Barriers

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

### 6.2 Stabilized Stone Construction Entrances

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

### 6.3 Mulched Areas





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

#### 6.4 Dust Control

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

#### 6.5 Stormwater Appurtenances

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

#### 6.6 Erosion and Sedimentation Control Inspections:

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

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

Qualifications:

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

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



## 7.0 IMPLEMENTATION SCHEDULE

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

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

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

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

## 8.0 CONCLUSION

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



## 9.0 ATTACHMENTS

- Temporary Seeding Plan



## TEMPORARY SEEDING PLAN

### Site Preparation

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

### Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O) or equivalent.

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

### Seeding

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

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

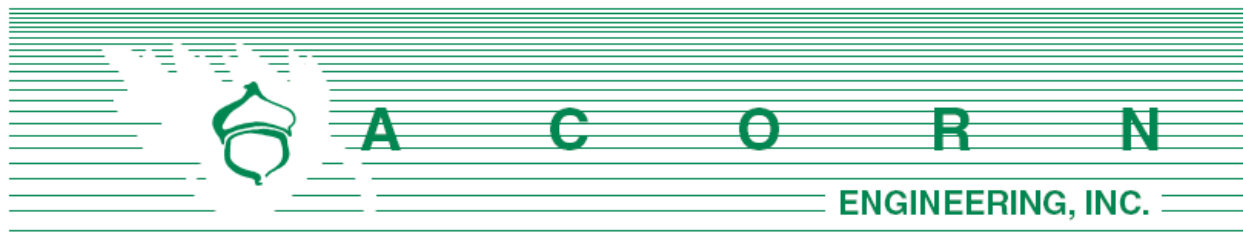
### Mulching

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

### Conclusion

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





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

January 21, 2022

Subject: 57 Douglass St Redevelopment – Fire Department Checklist  
 Section L of Application

On behalf of Douglass Commons, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

Douglass Commons, LLC.  
 10 Free Street, 3<sup>rd</sup> Floor  
 Portland, Maine 04101  
 (207) 805-3578

2. Name, address, telephone number of architect

Kaplan Thompson  
 102 Exchange Street  
 Portland, ME 04101  
 (207) 842-2888

Archetype PA  
 48 Union Wharf  
 Portland, ME 04101  
 (207) 772-6022

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

NFPA: Apartment Building IBC: B / R-2

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

| Existing Building     |          |           |
|-----------------------|----------|-----------|
| 1 <sup>st</sup> Floor | 0        | sf        |
| <b>Total</b>          | <b>0</b> | <b>sf</b> |



Kaplan Thompson:

| Proposed Building A (3) |              |           |
|-------------------------|--------------|-----------|
| Ground                  | 2,497        | sf        |
| 2 <sup>nd</sup> Floor   | 2,582        | sf        |
| 3 <sup>rd</sup> Floor   | 2,582        | sf        |
| <b>Total</b>            | <b>7,661</b> | <b>sf</b> |

| Proposed Building B (2) |              |           |
|-------------------------|--------------|-----------|
| Ground                  | 2,124        | sf        |
| 2 <sup>nd</sup> Floor   | 1,952        | sf        |
| <b>Total</b>            | <b>4,076</b> | <b>sf</b> |

| Proposed Building C (1) |              |           |
|-------------------------|--------------|-----------|
| Ground                  | 3,186        | sf        |
| 2 <sup>nd</sup> Floor   | 2,928        | sf        |
| <b>Total</b>            | <b>6,114</b> | <b>sf</b> |

| Proposed Building D (1) |              |           |
|-------------------------|--------------|-----------|
| Ground                  | 3,186        | sf        |
| 2 <sup>nd</sup> Floor   | 3,186        | sf        |
| 3 <sup>rd</sup> Floor   | 2,928        | sf        |
| <b>Total</b>            | <b>9,300</b> | <b>sf</b> |

Archetype PA:

| Proposed Building – E |               |           |
|-----------------------|---------------|-----------|
| Ground                | 12,000        | sf        |
| 1 <sup>st</sup> Floor | 12,000        | sf        |
| 2 <sup>nd</sup> Floor | 12,000        | sf        |
| 3 <sup>rd</sup> Floor | 12,000        | sf        |
| 4 <sup>th</sup> Floor | 12,000        | sf        |
| 5 <sup>th</sup> Floor | 12,000        | sf        |
| <b>Total</b>          | <b>72,000</b> | <b>sf</b> |

## 5. Elevation of all structures

The proposed building heights are consistent with the R5-a PRUD Zoning maximum allowance of 55':

A: 35'; B: 25'; C: 25'; D: 35'; E: 53'



## 6. Proposed fire protection of all structures

Building E will be serviced by a 6" sprinkler system while A, B, C, and D will be serviced with a 4" sprinkler line. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior the request for a building permit.

## 7. Hydrant locations

An existing hydrant is located at the corner of Congress and Douglass Streets, approximately 170' from the entrance to the site access road. The site anticipates the addition of a new hydrant within the development located 450' from the furthest proposed structure. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

## 8. Water main size and location

The redevelopment will be serviced by the existing 8" Ductile Iron water main within Douglass Street.

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

Access to the structures are provided through an access driveway and corridors with ample room for maneuvering through the site.

## 10. Code summaries will be provided by the Architects upon request.

# **NFPA 1 – Chapter 18 Fire Department Access and Water Supply**

## 18.2 Fire Department Access:

The project site is located behind a densely developed area with open areas on three other sides, and is accessed by a driveway. The following pavement street width is currently available:

- Douglass Street: 52 feet
- Access Driveway: 22 feet

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.



## City of Portland Technical Manual – Section 3 Public Safety

*3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).*

Response: Not applicable

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

Response: As depicted on the site plan, the proposed building layout provides a minimum of two access points to all of the structures.

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

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

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along a circuitous route through the site for emergency vehicles.

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

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

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

Response: The proposed site maintains the required clearance height of nine feet in all cases.

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

Response: The proposed elevator will meet this requirement.



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

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

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

Sincerely,



Sam Lebel, P.E.  
Project Manager  
Acorn Engineering, Inc.



## M. Calculation of Wastewater Flowrate for 43 & 91 Douglass Redevelopment

The proposed project will include the redevelopment of a site that was formerly occupied by a school. The lot is proposed to be redeveloped with one (1) five-story building consisting of 63 residential units and a further seven (7) buildings consisting of 57 residential units.. Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

| Estimate of Design Flows                                                                   |                 |                          |                       |
|--------------------------------------------------------------------------------------------|-----------------|--------------------------|-----------------------|
| Classification of Water Demand                                                             | Number of Units | Gallons per Day per Unit | Total Gallons per Day |
| <i>Existing</i>                                                                            |                 |                          |                       |
| <i>Proposed</i>                                                                            |                 |                          |                       |
| Multiple family dwelling unit<br>(1-bedroom)                                               | 48              | 120                      | 5,760                 |
| Multiple family dwelling unit<br>(2-bedroom)                                               | 40              | 180                      | 7,200                 |
| Multiple family dwelling unit<br>(3-bedroom)                                               | 32              | 270                      | 8,640                 |
| <b>Total Existing</b>                                                                      |                 |                          | <b>0</b>              |
| <b>Total Proposed</b>                                                                      |                 |                          | <b>21,600</b>         |
| <b>Net Change</b>                                                                          |                 |                          | <b>+21,600 GPD</b>    |
| *Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition |                 |                          |                       |





# 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: 1/11/22

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

Site Address: 57 Douglass Street

Chart Block Lot Number: 078 B007001

Proposed Use: Residential  
Previous Use: School  
Existing Sanitary Flows: 0 GPD  
Existing Process Flows: 0 GPD  
Description and location of City sewer that is to  
receive the proposed building sewer lateral.  
Douglass Street (8" SS)

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

|                                     |
|-------------------------------------|
| <input type="checkbox"/>            |
| <input type="checkbox"/>            |
| <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> |
| <input type="checkbox"/>            |

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

## 2. Please, Submit Contact Information.

City Planner's Name: TBD Phone: 207-874-8719  
Owner/Developer Name: Douglass Commons, LLC.  
Owner/Developer Address: 10 Free Street, 3rd Floor, Portland, ME 04101  
Phone: (207) 805-3578 Fax:  E-mail: cszanton@szantoncompany.com  
Engineering Consultant Name: Acorn Engineering  
Engineering Consultant Address: 65 Hanover Street, Portland, ME 04010  
Phone: 207-775-2655 Fax:  E-mail: slebel@acorn-engineering.com

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

## 3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: +21,600 GPD  
Peaking Factor/ Peak Times: Diurnal  
Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine,"  
"Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)  
Handbook of Subsurface Wastewater Disposal in Maine

*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.*

|                                           |     |
|-------------------------------------------|-----|
| Total Drainage Fixture Unit (DFU) Values: | N/A |
| Size of External Grease Interceptor:      |     |
| Retention Time:                           |     |
| Peaking Factor/ Peak Times:               |     |

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

## **N. Lighting**

Please find attached the cut sheets and photometric plans for the proposed site lighting.

- NOTES:
- 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
  - 2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
  - 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
  - 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
  - 5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
  - 6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
  - 7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

| Calculation Summary |      |     |     |         |         |
|---------------------|------|-----|-----|---------|---------|
| Label               | Avg  | Max | Min | Avg/Min | Max/Min |
| SITE                | 0.79 | 5.5 | 0.0 | N.A.    | N.A.    |

| Luminaire Schedule (note fixture catalogue numbers are not complete) |     |        |       |        |            |                  |                           |
|----------------------------------------------------------------------|-----|--------|-------|--------|------------|------------------|---------------------------|
| Type                                                                 | Qty | Lumens | LLF   | Watts  | BUG Rating | Mounting Ht (FT) | Description               |
| A                                                                    | 42  | 1051   | 0.900 | 14.906 | B1-U0-G1   | 10               | P810015-030-30            |
| B                                                                    | 24  | 311    | 0.900 | 9.32   | B0-U0-G0   | 9                | P5634 prorated            |
| C1                                                                   | 4   | 1805   | 0.900 | 14.9   | B0-U0-G1   | 9                | GEO1-24L-15-3K7-3-UNV-DBT |
| C2                                                                   | 2   | 1718   | 0.900 | 14.9   | B0-U0-G1   | 9                | GEO1-24L-15-3K7-4-UNV-DBT |
| S24                                                                  | 4   | 4297   | 0.900 | 45.9   | B1-U0-G1   | 16               | TWIN - K4X-T4-MO-5030     |
| S3                                                                   | 9   | 3863   | 0.900 | 46.1   | B1-U0-G1   | 16               | K4X-T3-MO-5030            |
| S4                                                                   | 8   | 4297   | 0.900 | 45.9   | B1-U0-G1   | 16               | K4X-T4-MO-5030            |
| SP3                                                                  | 6   | 2563   | 0.900 | 32.7   | B1-U0-G0   | 12               | MK4-T3-MO-3030            |

DOUGLASS STREET  
PORTLAND, ME  
SITE LIGHTING LAYOUT

GENERATED FOR:  
ACEITO LA  
SCALE: NOT TO SCALE



NOTICE: THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SWANEY LIGHTING ASSOCIATES. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SWANEY LIGHTING ASSOCIATES. THIS DRAWING IS TO BE USED FOR NO PURPOSE OTHER THAN AS DETAILED HEREIN. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE, AND IT IS NOT TO BE COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SWANEY LIGHTING ASSOCIATES. ANY VARIATION IN FIXTURE PERFORMANCE SHOWN IN FILES IS NOT THE RESPONSIBILITY OF THE MANUFACTURER. IT'S USE FOR ANY OTHER PURPOSE IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.



## LED Flush Mount EdgeLit

Surface mounted • Wet location listed



### Description:

EVERLUME Edgelit technology provides a large glare free, bright, and evenly illuminated surface for a variety of applications for both residential and commercial settings. Offering a very slim profile, the LED Edgelit flush mount is available in three sizes. The 7" fixture gives 1056 lumens (delivered), 90CRI and is 3000K. The integrated driver does not recess into junction box, allowing for easy install in 4" octagonal, 4" round PVC and 4-1/2" ceiling pan junction boxes. This fixture is wet location listed and offers a 50,000 hour LED life.

### Specifications:

- White (-030) (painted)
- Polycarbonate Construction
- Frosted Polycarbonate lens
- 7 " EVERLUME Edgelit flush mount with LED technology 3,000K, 90 CRI, 1056 lumens (delivered)
- Simple installation to steel mounting plate
- Light weight non-conductive polycarbonate luminaire construction
- Polycarbonate diffuser controls glare and provides an evenly illuminated surface
- Integrated DC LED power supply capable of flicker-free dimming to 10% brightness with many Triac/Forward Phase dimmers
- Can be installed to 4" octagonal j-box, 4x1/2" round shallow j-box, 4" round PVC j-box and single gang switch boxes
- Can be mounted on ceiling or wall
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements.
- Suitable for use in IC or Non-IC applications
- Dimmable to 10% brightness (See Dimming Notes)
- Fixture covers a standard 4" octagonal recessed outlet box
- Mounting mounting plate for outlet box included
- 6" of wire supplied
- Complies with "Americans with Disabilities Act" - ADA
- ENERGY STAR® qualified
- Meets California Title 24 JA8-2016

### Performance:

|                        |                                    |
|------------------------|------------------------------------|
| Number of Modules      | 1                                  |
| Input Power            | 15w                                |
| Input Voltage          | 120 V                              |
| Input Frequency        | 60 Hz                              |
| Lumens/LPW (Source)    |                                    |
| Lumens/LPW (Delivered) | 1056/70.4 (LM-79)                  |
| CCT                    | 3000 K                             |
| CRI                    | 90 CRI                             |
| Life (hours)           | 54,000 (L70/TM-21)                 |
| FCC                    | FCC Part 15 Class B                |
| Min. Start Temp        | -30 °C                             |
| Max. Operating Temp    | 30 °C                              |
| Warranty               | 5 Year Warranty                    |
| Labels                 | cCSAus Wet location listed         |
|                        | ENERGY STAR® qualified             |
|                        | Meets California Title 24 JA8-2016 |

**P810015-030-30**

### Images:



### Dimensions:

Diameter: 7"  
Length: 7"  
Height: 1-1/16"

Lens  
Width: 6.03"  
Length: 6.03"  
Height: 0.039"



# LED Flush Mount EdgeLit

Surface mounted • Wet location listed



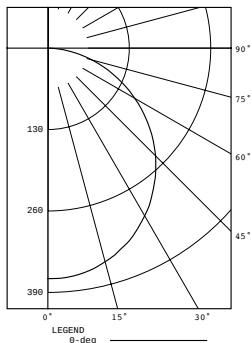
## Photometrics:

**P810015-030-30**

|                                                     |                       |
|-----------------------------------------------------|-----------------------|
| <b>ELECTRICAL DATA</b>                              | <b>P810015-030-30</b> |
| Input Voltage                                       | 120 V                 |
| Input Frequency                                     | 60 Hz                 |
| Input Current                                       | 0.128 A               |
| Input Power                                         | 15                    |
| Power Factor                                        | 0.968                 |
| THD                                                 | <20%                  |
| FCC                                                 | FCC Part 15 Class B   |
| Operating Temperature                               | -30 °C to 30 °C       |
| Dimming                                             | Yes*                  |
| Over-voltage, over-current, short-circuit protected |                       |
| *See Dimming Notes for more information             |                       |

### P810015-030-30

LED Light Engine: 3000K 90  
System Wattage: 15  
Fixture delivered lumens: 1051  
Fixture Efficacy: 70  
Spacing Criteria: 1.25



| CANDELA DISTRIBUTION |         |        |
|----------------------|---------|--------|
| DEG                  | CANDELA | LUMENS |
| 0                    | 368     |        |
| 5                    | 367     | 35     |
| 15                   | 353     | 100    |
| 25                   | 327     | 151    |
| 35                   | 289     | 181    |
| 45                   | 243     | 187    |
| 55                   | 189     | 169    |
| 65                   | 131     | 130    |
| 75                   | 73      | 77     |
| 85                   | 20      | 22     |
| 90                   | 0       |        |

| ZONAL ZONE | LUMEN LUMENS | SUMMARY %FIXT |
|------------|--------------|---------------|
| 0-30       | 285          | 27.1          |
| 0-40       | 466          | 44.3          |
| 0-60       | 822          | 78.2          |
| 0-90       | 1051         | 100.0         |
| 90-180     | 0            | 0.0           |
| 0-180      | 1051         | 100.0         |

Test 18.01777 Test Date 12/10/18

## P810015-030-30

### Dimming Notes:

---

P810015 is designed to be compatible with many Triac/Forward Phase or ELV/Reverse Phase controls.

The following is a partial list of known compatible dimmer controls.

### Dimming Controls

---

Idevices\_IDEV009

Leviton\_LPI06-1LZ

Leviton\_6672

Lutron\_NTEVL-300

Lutron\_DVELV-300P

Lutron\_Caseta\_Wireless

Lutron\_AYCL-153P

Lutron\_TGCL-153-PH-WH

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation. Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.

## One-Light Wall Sconce W/HAL AC LED Module

Wall mounted • Wet location listed



### Description:

Modern geometric outdoor LED sconces are designed to complement a range of residential and commercial architectural styles. ADA compliant. 9w LED is 3000K, 90+ CRI in a Black cast aluminum shade. Dark Sky compliant.

### Specifications:

- Black (-31) (powder coat paint)
- Cast aluminum Construction
- Black cast aluminum shade, White acrylic Diffuser
- LED Module is replaceable (part # 93054049)
- Modern geometric outdoor LED sconces.
- Designed to complement a range of residential and commercial architectural styles.
- Dark Sky compliant.
- 623 lumens 69.2 lumens/watt per module (source)
- 3000K color temperature, 90+ CRI.
- Dimmable to 10% brightness (See Dimming Notes)
- Unit covers a standard 4" octagonal recessed outlet box
- Mounting strap for outlet box included
- 6" of wire supplied
- Complies with "Americans with Disabilities Act" - ADA
- ENERGY STAR® qualified
- Meets California Title 24 high efficacy requirements for outdoor use only

### Performance:

|                        |                                                                           |
|------------------------|---------------------------------------------------------------------------|
| Number of Modules      | 1                                                                         |
| Input Power            | 9w                                                                        |
| Input Voltage          | 120 V                                                                     |
| Input Frequency        | 60 Hz                                                                     |
| Lumens/LPW (Delivered) | 388/49.7 (LM-79)                                                          |
| CCT                    | 3000 K                                                                    |
| CRI                    | 90+                                                                       |
| Life (hours)           | 60,000 (L70/TM-21)                                                        |
| FCC                    | Meets FCC Title 47, Part 15 Class B                                       |
| Min. Start Temp        | -30 °C                                                                    |
| Max. Operating Temp    | 30 °C                                                                     |
| Warranty               | 5 year warranty                                                           |
| Labels                 | cCSAus Wet location listed                                                |
|                        | ENERGY STAR® qualified                                                    |
|                        | Meets California Title 24 high efficacy requirements for outdoor use only |

## P5634-3130K9

### Images:



### Dimensions:

Width: 5-1/4"  
Depth: 4"  
Height: 4-3/4"  
H/CTR: 2-3/8"

Glass  
Width: 4-1/16"  
Length: 5-3/16"  
Height: 4-11/16"  
Glass 2  
Width: 2-7/8"  
Length: 2-7/8"  
Height: 0-11/16"

**P5634-3130K9****Dimming Notes:**

---

P5634 is designed to be compatible with many ELV/Reverse Phase controls.

The following is a partial list of known compatible dimmer controls.

**Dimming Controls**

---

Lutron Nova T NTELV-300

Lutron Vienti VTELV-600

Lutron Ariadni AYCL-153P

Lutron Diva DVCL-153P

Lutron Maestro MAELV-600

Lutron spacer/system SPSELV-600

Leviton Renoir II AWRMG-EAW

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation.  
Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.

## FEATURES

- Integral Motion Sensor
- Staggered twin mounting
- ANSI C136.31-2010 4G Rated
- IES Type II, III and IV distributions
- 3000K , 4000K, 5000K CCT
- Integral thermal protection



3000K and warmer CCTs only

See Certification Specifications

## SPECIFICATIONS

### CONSTRUCTION

- Housing shroud is made of fabricated 5052-H32 aluminum alloy with a rear mounting interface that is made of fabricated 304 stainless steel
- Housing mounting interface is a stamped silicone gasket
- Luminaire housing is free of any visible heat fins, hardware or fasteners
- Bracketry and hardware is made of stainless steel
- Base is made of cast aluminum #356 alloy and heat treated to a T-6 condition
- Shaft is extruded aluminum 6061 alloy and heat treated to a T-6 condition
- Anchor bolts are hot dip galvanized steel. Eight galvanized hex nuts and flat washers, and a bolt circle template are provided. Anchor bolt for poles are 3/4" x 24" x 3"
- Luminaire finish consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish
- Luminaire finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance

### LED/OPTICS

- LEDs are mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features
- Optical lenses is made of clear injection molded PMMA acrylic
- Each MCPCB and optic are sealed to an extruded 6063-T6 aluminum alloy heat spreader and sealed with a continuous one piece injection molded silicone rubber gasket. IP66

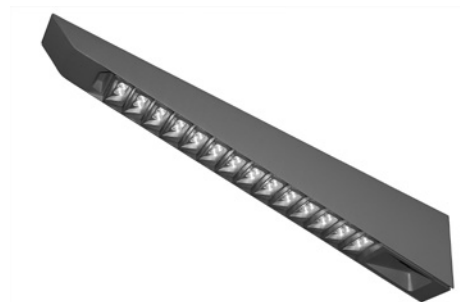
### LED/OPTICS (CONTINUED)

- Patent Pending design of optical array is independently shielding each LED optic across the length of the aperture
- Optical surfaces are painted white unless the optional fixture finish (FO) or matte black finish (MO) is selected
- Optional matte black finish optics (MO) are required to meet UO classification with zero percent uplight
- Optional fixture finish optical surfaces (FO) do not exceed BUG ratings of the standard white finish and will be greater than or equal to the delivered lumens of the optional matte black optical surface finish (MO)

### INSTALLATION

- Integral pole mount luminaires require assembly of fixture(s) to the pole, mounting hardware, anchor bolts and anchor bolt template is included. See page 6 for additional considerations specific to the integral pole
- Tenon mount luminaires require assembly of fixture(s) to the tenon adapter, mounting hardware is included. Tenon adapter secures to the tenon with eight 5/16-18 stainless steel set screws
- Side mount luminaires are supplied with hardware compatible with AAL mountings.
- Twin mounted staggered height fixtures are configured separately
- Service access to the optical array and driver assembly is via a tool-less internal latch and have an audible click.
- Optical array has to hang freely in an open service position for inspection of internal wire connections. Once in service position, the optical array is able to be removed for service by lifting the assembly up off the rear hinge and disconnecting the wiring plugs.
- Driver assembly is mounted to a prewired internal tray with quick disconnects for removal

KICK™



Kick Small

### RELATED PRODUCTS

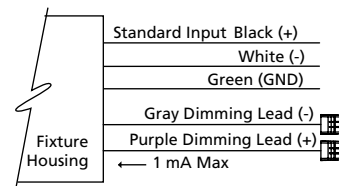
[K5](#)

[KM5](#)

[K6](#)

### ELECTRICAL

- Drivers are in direct contact with the aluminum housing across the entire surface area of the widest face for maximum thermal transfer
- Luminaires have integral surge protection that is U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device is wired in series
- Drivers are U.L. recognized
- Drivers are not compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV
- Luminaire are capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C
- Luminaires not configured with a control system or ANSI C136 receptacle option are provided with 0-10 purple and gray dimming leads



continued on page 3

| KEY DATA             |               |
|----------------------|---------------|
| LUMEN RANGE          | 3,820–7,691   |
| WATTAGE RANGE        | 46–64         |
| EFFICACY RANGE (LPW) | 79–120        |
| WEIGHT               | 15 lbs 6.8 kg |
| EPA                  | 1.03          |



|               |           |
|---------------|-----------|
| DATE: 1/11/22 | LOCATION: |
| TYPE:         | PROJECT:  |
| CATALOG #:    |           |

## ORDERING GUIDE

Example: K41-T2-FO-5040-MCPCR-SF-347-PS412-125-SBC-BLT

CATALOG #

| Model (4" wide luminaire)           | Optics (Distribution)  | Optics Finish                          | Light Engine <sup>1</sup>               | Control                                                                                      |
|-------------------------------------|------------------------|----------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------|
| <b>K41</b> Single Fixture           | <b>T2</b> IES Type II  | <b>WO</b> Standard White Finish        | <b>5030</b> 3000K CCT, CRI 70, 46 Watts | <b>MCPCR</b> Multi-Channel 7-Pin Photocell Receptacle                                        |
| <b>K42</b> Two Fixtures 180° Apart  | <b>T3</b> IES Type III | <b>FO</b> Optics in Fixture Finish     | <b>5040</b> 4000K CCT, CRI 70, 46 Watts | <b>WIR</b> wiScape Connectivity Ready                                                        |
| <b>K43</b> Three Fixtures 90° Apart | <b>T4</b> IES Type IV  | <b>MO</b> Optics in Matte Black Finish | <b>5050</b> 5000K CCT, CRI 70, 46 Watts | <b>WIRSC</b> wiScape + Motion Sensor                                                         |
| <b>K44</b> Four Fixtures 90° Apart  |                        |                                        | <b>7030</b> 3000K CCT, CRI 70, 64 Watts | <b>SCP</b> Motion Sensor + Photocell <sup>2</sup>                                            |
|                                     |                        |                                        | <b>7040</b> 4000K CCT, CRI 70, 64 Watts | <b>SWP</b> SiteSync Pre-commissioned <sup>3</sup>                                            |
|                                     |                        |                                        | <b>7050</b> 5000K CCT, CRI 70, 64 Watts | <b>SWF</b> SiteSync Field Commission <sup>3</sup>                                            |
|                                     |                        |                                        |                                         | <b>SWPM</b> SiteSync Pre-commissioned + Motion Sensor <sup>3</sup>                           |
|                                     |                        |                                        |                                         | <b>SWFM</b> SiteSync Field Commission + Sensor <sup>3</sup>                                  |
|                                     |                        |                                        |                                         | <b>SCPREMOTE</b> Handheld Commissioning Tool <sup>2</sup>                                    |
|                                     |                        |                                        |                                         | <b>SWUSB</b> SiteSync loaded on USB flash drive (Windows® operating system only <sup>4</sup> |
|                                     |                        |                                        |                                         | <b>SWTAB</b> SiteSync Window® based Tablet <sup>4</sup>                                      |
|                                     |                        |                                        |                                         | <b>SWBRG</b> SiteSync Wireless Bridge Node <sup>4</sup>                                      |
|                                     |                        |                                        |                                         | <b>SW7PR</b> SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC         |

| Fuse (may choose one)              | Voltage                  | Mounting                                                         | Mounting Options                                                                 | Fixture Finish                          |
|------------------------------------|--------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------|
| <b>SF</b> 120, 277, 347 Volt Input | <b>120-277V</b> 120-277V | <b>Integral Pole</b>                                             | <b>Twin mount at staggered heights</b>                                           | <b>Standard Color</b>                   |
| <b>DF</b> 208, 240, 480 Volt Input | <b>347</b> 347V          | <b>PS410-125</b> 10' Luminaire Height                            | Mounting holes for a fixture at 180°, K41...PS4... only, may choose one          | <b>BLS</b> Black Gloss Smooth           |
|                                    | <b>480</b> 480V          | <b>PS412-125</b> 12' Luminaire Height                            |                                                                                  | <b>BLT</b> Black Matte Textured         |
|                                    |                          | <b>PS414-125</b> 14' Luminaire Height                            | <b>TS8</b> 8' from bottom                                                        | <b>DBS</b> Dark Bronze Gloss Smooth     |
|                                    |                          | <b>PS416-125</b> 16' Luminaire Height                            | <b>TS10</b> 10' from bottom                                                      | <b>DBT</b> Dark Bronze Matte Textured   |
|                                    |                          | <b>PS418-125</b> 18' Luminaire Height                            | <b>TS12</b> 12' from bottom                                                      | <b>GTT</b> Graphite Matte Texture       |
|                                    |                          | <b>PS420-125</b> 20' Luminaire Height                            | <b>TS14</b> 14' from bottom                                                      | <b>LGS</b> Light Grey Gloss Smooth      |
|                                    |                          | <b>Tenon Mount</b>                                               | <b>TS16</b> 16' from bottom                                                      | <b>LGT</b> Light Grey Matte Textured    |
|                                    |                          | <b>TA23</b> Slips over a 2 3/8" / 60mm Ø x 4" / 102mm tall tenon | <b>TS18</b> 18' from bottom                                                      | <b>PSS</b> Platinum Silver Gloss Smooth |
|                                    |                          | <b>Side Mount</b>                                                | <b>Base Options</b>                                                              | <b>VGT</b> Verde Green Matte Textured   |
|                                    |                          | <b>SMK</b> Mounts to the side of a square pole, K41 only         | <b>SBC</b> Standard Base Cover                                                   | <b>WHS</b> White Gloss Smooth           |
|                                    |                          | <b>Wall Mount</b>                                                | <b>Pole Accessories(may choose one)</b>                                          | <b>WHT</b> White Matte Textured         |
|                                    |                          | <b>WMK</b> K41 only                                              | <b>GFI</b> GFCI receptacle, 24" from top of pole                                 | <b>CC</b> Custom Color <sup>5</sup>     |
|                                    |                          |                                                                  | <b>RBC</b> Duplex receptacle box with clear cover, wiring device(s) not included |                                         |

### Notes:

- 595nm monochromatic amber and or custom lumen package available by request
- Handheld commissioning tool is required to separately configure or adjust any number of SCP sensors
- Specify group and zone at time of order. See [www.hubbellighting.com/sitesync](http://www.hubbellighting.com/sitesync) for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node
- Consult factory for custom color, marine and corrosive finish

## SPECIFICATIONS (CONTINUED)

| MODEL         | HEIGHT<br>OVERALL | POLE | SHAFT<br>SECTION | WT     | MAXIMUM ALLOWABLE EPA (MPH) |      |      |      |      |      |      |      |
|---------------|-------------------|------|------------------|--------|-----------------------------|------|------|------|------|------|------|------|
|               |                   |      |                  |        | 85                          | 90   | 100  | 110  | 120  | 130  | 140  | 150  |
| K4X-PS410-125 | 10' 7.5" / 3.24m  | 10'  | 4" SQ x .125"    | 28 lbs | 15.4                        | 13.5 | 10.4 | 8.1  | 6.4  | 5.0  | 4.0  | 3.1  |
| K4X-PS412-125 | 12' 7.5" / 3.85m  | 12'  | 4" SQ x .125" 45 | 32 lbs | 11.8                        | 10.2 | 7.6  | 5.7  | 4.3  | 3.2  | 2.3  | 1.6  |
| K4X-PS414-125 | 14' 7.5" / 4.46m  | 14'  | 4" SQ x .125"    | 37 lbs | 9.1                         | 7.7  | 5.5  | 3.9  | 2.6  | 1.7  | 0.95 | 0.33 |
| K4X-PS416-125 | 16' 7.5" / 5.07m  | 16'  | 4" SQ x .125"    | 42 lbs | 6.9                         | 5.7  | 3.8  | 2.3  | 1.3  | 0.46 | -    | -    |
| K4X-PS418-125 | 18' 7.5" / 5.68m  | 18'  | 4" SQ x .125"    | 48 lbs | 4.9                         | 3.9  | 2.2  | 0.95 | 0.01 | -    | -    | -    |
| K4X-PS420-125 | 20' 7.5" / 6.29m  | 20'  | 4" SQ x .125"    | 53 lbs | 3.2                         | 2.2  | 0.75 | -    | -    | -    | -    | -    |

\* - Consult factory for thicker shaft profiles and or custom heights not shown above.

## CONTROLS

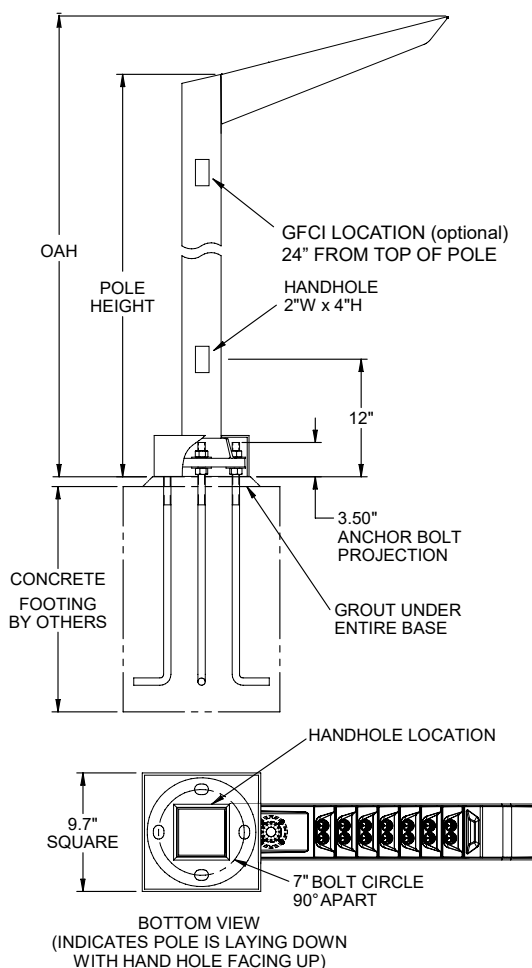
- Wireless enabled fixtures shall support bi-directional radio frequency (RF) communications utilizing IEEE 802.15.4 operating in the 2.4GHZ ISM band.
- Up to 1000' wireless range may be reduced by physical obstructions between lighting fixtures.
- Motion Sensor shall use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
  - High mode: 10V
  - Low mode: 1V
  - Ramp-up rate: disabled
  - Fade-down rate: disabled
  - Photocell: Off
  - Sensitivity: Full
  - Time Delay: Fade to low: 5 minutes
  - Time Delay: Fade to off: 1 hour

## CERTIFICATIONS

- Luminaire is listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250
- ANSI C136.31-2010 4G Vibration tested and compliant
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. [See Buy American Solutions](#)

## WARRANTY

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



|               |           |
|---------------|-----------|
| DATE: 1/11/22 | LOCATION: |
| TYPE:         | PROJECT:  |
| CATALOG #:    |           |

## DELIVERED LUMENS

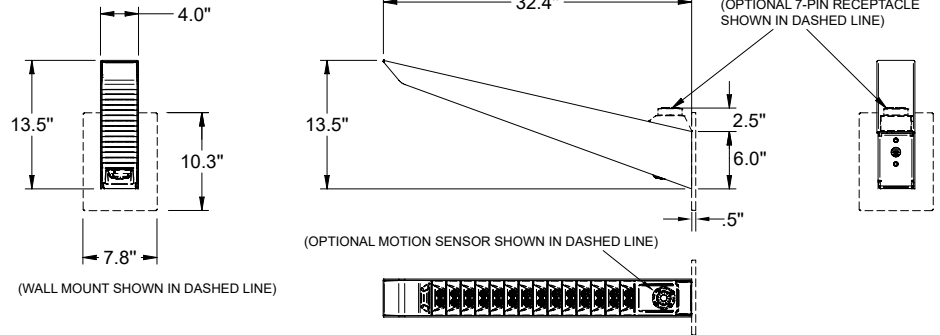
| System Watts | Optical Finish | Distribution | Ordering Code | 3000K 70CRI |            |   |   |                 | 4000K 70CRI |            |   |   |                 | 5000K 70CRI |            |   |   |                 |
|--------------|----------------|--------------|---------------|-------------|------------|---|---|-----------------|-------------|------------|---|---|-----------------|-------------|------------|---|---|-----------------|
|              |                |              |               | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) |
|              |                |              |               |             | B          | U | G |                 |             | B          | U | G |                 |             | B          | U | G |                 |
| 46           | Standard White | Type 2       | T2            | 4999        | 1          | 2 | 1 | 108             | 5234        | 2          | 2 | 1 | 114             | 5239        | 1          | 2 | 1 | 113             |
|              |                | Type 3       | T3            | 4895        | 1          | 2 | 1 | 106             | 5125        | 1          | 2 | 1 | 112             | 5130        | 1          | 2 | 1 | 111             |
|              |                | Type 4       | T4            | 5207        | 1          | 2 | 1 | 113             | 5451        | 1          | 2 | 1 | 118             | 5456        | 1          | 2 | 1 | 118             |
|              | Fixture Match  | Type 2       | T2-FO         | 3820        | 1          | 2 | 1 | 83              | 4010        | 2          | 2 | 1 | 87              | 4003        | 1          | 2 | 1 | 87              |
|              |                | Type 3       | T3-FO         | 3863        | 1          | 2 | 1 | 84              | 4044        | 1          | 2 | 1 | 88              | 4048        | 1          | 2 | 1 | 88              |
|              |                | Type 4       | T4-FO         | 4297        | 1          | 2 | 1 | 93              | 4524        | 1          | 2 | 1 | 98              | 4503        | 1          | 2 | 1 | 98              |
|              | Matte Black    | Type 2       | T2-MO         | 3820        | 1          | 0 | 1 | 83              | 4000        | 1          | 0 | 1 | 87              | 4003        | 1          | 0 | 1 | 87              |
|              |                | Type 3       | T3-MO         | 3863        | 1          | 0 | 1 | 84              | 4045        | 1          | 0 | 1 | 88              | 4048        | 1          | 0 | 1 | 88              |
|              |                | Type 4       | T4-MO         | 4297        | 1          | 0 | 1 | 93              | 4499        | 1          | 0 | 1 | 98              | 4503        | 1          | 0 | 1 | 98              |
| 64           | Standard White | Type 2       | T2            | 6536        | 2          | 2 | 2 | 102             | 6775        | 2          | 2 | 2 | 106             | 6932        | 2          | 2 | 2 | 108             |
|              |                | Type 3       | T3            | 6554        | 1          | 2 | 1 | 102             | 6795        | 1          | 2 | 1 | 106             | 6952        | 1          | 2 | 1 | 108             |
|              |                | Type 4       | T4            | 7250        | 2          | 2 | 1 | 113             | 7516        | 2          | 2 | 2 | 117             | 7691        | 2          | 2 | 2 | 120             |
|              | Fixture Match  | Type 2       | T2-FO         | 5292        | 2          | 2 | 2 | 83              | 5486        | 2          | 2 | 2 | 85              | 5614        | 2          | 2 | 2 | 87              |
|              |                | Type 3       | T3-FO         | 5456        | 1          | 2 | 1 | 79              | 5646        | 1          | 2 | 1 | 82              | 5788        | 1          | 2 | 1 | 84              |
|              |                | Type 4       | T4-FO         | 5780        | 2          | 2 | 1 | 90              | 5992        | 2          | 2 | 2 | 94              | 6131        | 2          | 2 | 2 | 96              |
|              | Matte Black    | Type 2       | T2-MO         | 5281        | 1          | 0 | 1 | 83              | 5475        | 2          | 0 | 1 | 86              | 5602        | 2          | 0 | 1 | 88              |
|              |                | Type 3       | T3-MO         | 5442        | 1          | 0 | 1 | 85              | 5656        | 1          | 0 | 1 | 88              | 5773        | 1          | 0 | 1 | 90              |
|              |                | Type 4       | T4-MO         | 5767        | 2          | 0 | 1 | 90              | 5979        | 2          | 0 | 1 | 93              | 6117        | 2          | 0 | 1 | 96              |

## DIMENSIONS

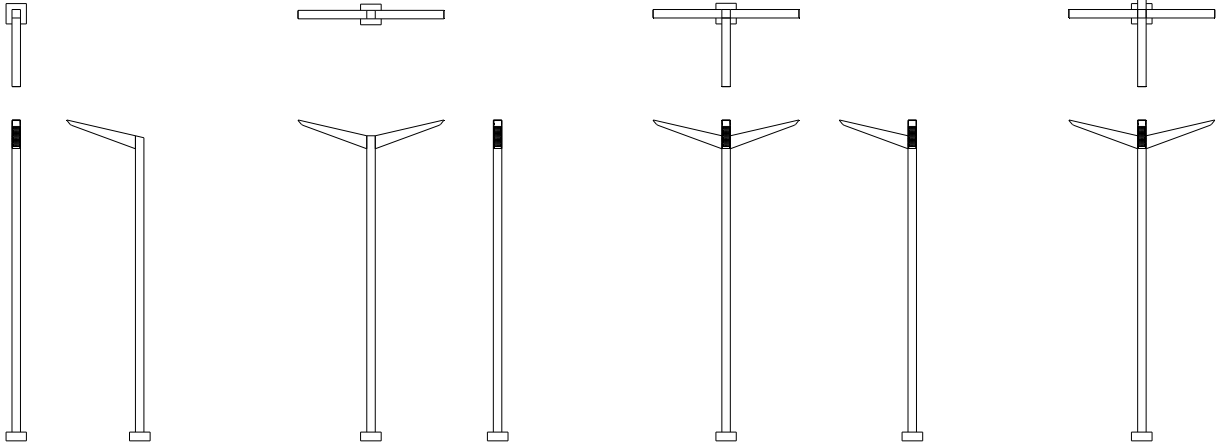
### SIDE MOUNTED LUMINAIRE

Mounts to the side of 4"/102mm square pole.

|                |               |
|----------------|---------------|
| MODEL          | K41-...-SMK   |
| OVERALL HEIGHT | 13.5" / 343mm |
| OVERALL LENGTH | 32.4" / 823mm |
| OVERALL WIDTH  | 4" / 102mm    |
| WEIGHT         | 15 lbs.       |
| EPA            | 1.03          |



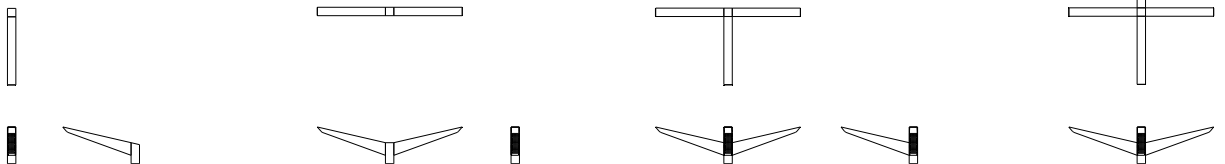
### INTEGRAL POLE LUMINAIRE



|                |                   |                   |                   |                   |
|----------------|-------------------|-------------------|-------------------|-------------------|
| MODEL          | K41-...-PS4XX-125 | K42-...-PS4XX-125 | K43-...-PS4XX-125 | K44-...-PS4XX-125 |
| OVERALL LENGTH | 36.4" / 925MM     | 10" / 254MM       | 36.4" / 925MM     | 68.9" / 1750MM    |
| OVERALL WIDTH  | 10" / 254MM       | 68.9" / 1750MM    | 68.9" / 1750MM    | 68.9" / 1750MM    |
| WEIGHT         | 15 LBS.           | 30 LBS.           | 45 LBS.           | 60 LBS.           |
| EPA*           | 1.03              | 2.06              | 2.61              | 2.61              |

### TENON MOUNT LUMINAIRE

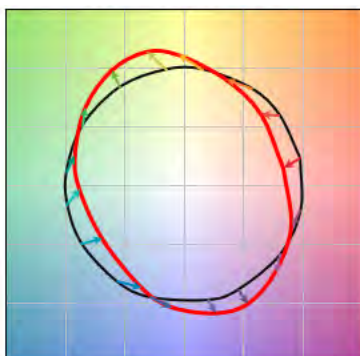
Slips over a 2 3/8"/60mm diameter by 4"/102mm tall tenon



|                |               |                |                |                |
|----------------|---------------|----------------|----------------|----------------|
| MODEL          | K41-...-TA23  | K42-...-TA23   | K43-...-TA23   | K44-...-TA23   |
| OVERALL HEIGHT | 17.5" / 445MM | 17.5" / 445MM  | 17.5" / 445MM  | 17.5" / 445MM  |
| OVERALL LENGTH | 36.4" / 925MM | 10" / 254MM    | 36.4" / 925MM  | 68.9" / 1750MM |
| OVERALL WIDTH  | 4" / 102MM    | 68.9" / 1750MM | 68.9" / 1750MM | 68.9" / 1750MM |
| WEIGHT         | 18.5 LBS.     | 33.5 LBS.      | 48.5 LBS.      | 63.5 LBS.      |
| EPA*           | 1.33          | 2.42           | 2.61           | 2.61           |

## TM-30 DATA

### COLOR VECTOR GRAPHIC

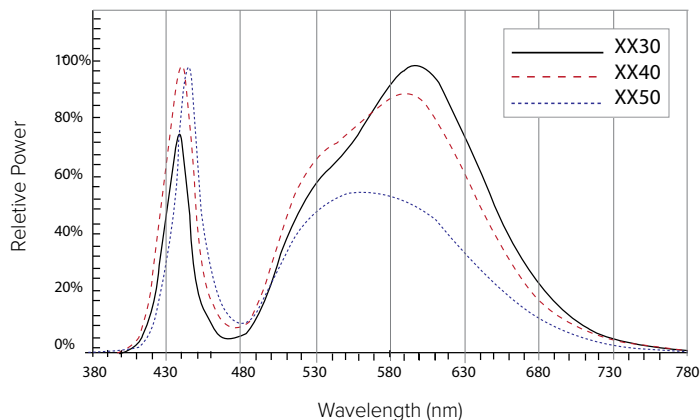


— Reference Illuminant — Test Source

### TEST SOURCE

| VALUE  | ORDERING CODE |        |        |
|--------|---------------|--------|--------|
|        | XX30          | XX40   | XX50   |
| Rf     | 69            | 69     | 71     |
| Rg     | 99            | 99     | 98     |
| CCT(K) | 3122          | 3852   | 5020   |
| Duv    | 0.001         | 0.0004 | 0.0005 |
| CIE Ra | 74            | 73     | 74     |

### SPECTRAL POWER DISTRIBUTION COMPARISON



## ELECTRICAL CHARACTERISTICS

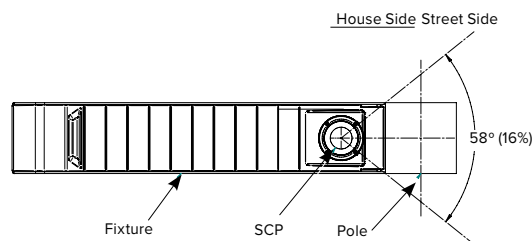
| ORDERING CODE | LED CURRENT (MA) | SYSTEM WATTAGE (W) | INPUT   |      |     |      | MIN. POWER FACTOR | MAX THD (%) | DIMMING RANGE (V) | SOURCE/ SINK CURRENT (MA) | INRUSH CURRENT PEAK |     |     |     |     |            |     |     |     |
|---------------|------------------|--------------------|---------|------|-----|------|-------------------|-------------|-------------------|---------------------------|---------------------|-----|-----|-----|-----|------------|-----|-----|-----|
|               |                  |                    | AMPS AC |      |     |      |                   |             |                   |                           | HZ                  | (A) |     |     |     | T@50% (MS) |     |     |     |
|               |                  |                    | 120     | 277  | 347 | 480  |                   |             |                   |                           |                     | 120 | 277 | 347 | 480 | 120        | 277 | 347 | 480 |
| 50XX          | 500              | 46                 | 0.4     | 0.17 | 0.1 | 0.10 | 50/60             | >0.9        | 20                | 0-10                      | 1                   | 15  | 32  | 41  | 63  | 50         | 155 |     |     |
| 70XX          | 700              | 64                 | 0.5     | 0.23 | 0.2 | 0.13 |                   |             |                   |                           |                     |     |     |     |     |            |     |     |     |

### TM-21 LIFETIME CALCULATION (500MA)

| LUMEN PACKAGE | AMBIENT ENVIRONMENT °C | PROJECTED LUMEN MAINTENANCE (KHRS) |     |            |     |     | REPORTED L70 |
|---------------|------------------------|------------------------------------|-----|------------|-----|-----|--------------|
|               |                        | 25                                 | 50  | 60 (TM-21) | 75  | 100 |              |
| 2,500         | 25                     | 98%                                | 95% | 94%        | 92% | 90% | >60Khrs.     |
|               | 40                     | 98%                                | 96% | 95%        | 93% | 91% |              |

### SENSOR DETECTION RANGE

|                      |       | SENSOR MOUNTING HEIGHT |     |     |     |     |     |     | RATIO |
|----------------------|-------|------------------------|-----|-----|-----|-----|-----|-----|-------|
|                      |       | 8'                     | 10' | 12' | 14' | 16' | 18' | 20' |       |
| COVERAGE<br>DIAMETER | SCP   | 20'                    | 25' | 30' | 35' | 40' | 45' | 50' | 1:2.5 |
|                      | WIRSC | 16'                    | 20' | 24' | 28' | 32' | 36' | 40' | 1:2   |





## FEATURES

- Integral Motion Sensor
- Staggered twin mounting
- ANSI C136.31-2010 4G Rated
- IES Type II, III and IV distributions
- 3000K , 4000K, 5000K CCT
- Integral thermal protection



3000K and warmer CCTs only

See Certification Specifications

## SPECIFICATIONS

### CONSTRUCTION

- Housing shroud is made of fabricated 5052-H32 aluminum alloy with a rear mounting interface that is made of fabricated 304 stainless steel
- Housing mounting interface is a stamped silicone gasket
- Luminaire housing is free of any visible heat fins, hardware or fasteners
- Bracketry and hardware is made of stainless steel
- Base is made of cast aluminum #356 alloy and heat treated to a T-6 condition
- Shaft is extruded aluminum 6061 alloy and heat treated to a T-6 condition
- Anchor bolts are hot dip galvanized steel. Eight galvanized hex nuts and flat washers, and a bolt circle template are provided. Anchor bolt for poles are 3/4" x 24" x 3"
- Luminaire finish consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish
- Luminaire finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance

### LED/OPTICS

- LEDs are mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features
- Optical lenses is made of clear injection molded PMMA acrylic
- Each MCPCB and optic are sealed to an extruded 6063-T6 aluminum alloy heat spreader and sealed with a continuous one piece injection molded silicone rubber gasket. IP66

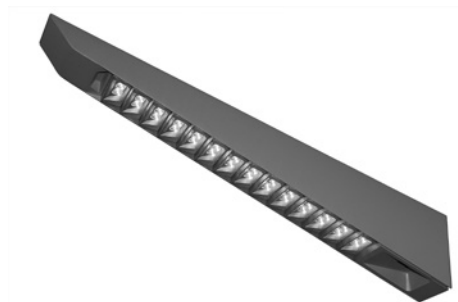
### LED/OPTICS (CONTINUED)

- Patent Pending design of optical array is independently shielding each LED optic across the length of the aperture
- Optical surfaces are painted white unless the optional fixture finish (FO) or matte black finish (MO) is selected
- Optional matte black finish optics (MO) are required to meet UO classification with zero percent uplight
- Optional fixture finish optical surfaces (FO) do not exceed BUG ratings of the standard white finish and will be greater than or equal to the delivered lumens of the optional matte black optical surface finish (MO)

### INSTALLATION

- Integral pole mount luminaires require assembly of fixture(s) to the pole, mounting hardware, anchor bolts and anchor bolt template is included. See page 6 for additional considerations specific to the integral pole
- Tenon mount luminaires require assembly of fixture(s) to the tenon adapter, mounting hardware is included. Tenon adapter secures to the tenon with eight 5/16-18 stainless steel set screws
- Side mount luminaires are supplied with hardware compatible with AAL mountings.
- Twin mounted staggered height fixtures are configured separately
- Service access to the optical array and driver assembly is via a tool-less internal latch and have an audible click.
- Optical array has to hang freely in an open service position for inspection of internal wire connections. Once in service position, the optical array is able to be removed for service by lifting the assembly up off the rear hinge and disconnecting the wiring plugs.
- Driver assembly is mounted to a prewired internal tray with quick disconnects for removal

KICK™



Mini Small

### RELATED PRODUCTS

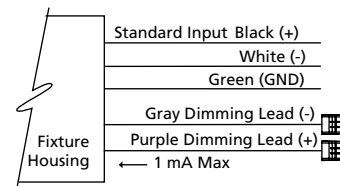
[K5](#)

[KM5](#)

[K6](#)

### ELECTRICAL

- Drivers are in direct contact with the aluminum housing across the entire surface area of the widest face for maximum thermal transfer
- Luminaires have integral surge protection that is U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device is wired in series
- Drivers are U.L. recognized
- Drivers are not compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV
- Luminaire are capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C
- Luminaires not configured with a control system or ANSI C136 receptacle option are provided with 0-10 purple and gray dimming leads



continued on page 3

| KEY DATA             |                  |
|----------------------|------------------|
| LUMEN RANGE          | 1,9090–3,576     |
| WATTAGE RANGE        | 24–33            |
| EFFICACY RANGE (LPW) | 77–115           |
| WEIGHT               | 8.95 lbs 4.05 kg |
| EPA                  | 0.56             |

|               |           |
|---------------|-----------|
| DATE: 1/11/22 | LOCATION: |
| TYPE:         | PROJECT:  |
| CATALOG #:    |           |

## ORDERING GUIDE

Example: KM41-T2-FO-2050-MCPCR-SF-347-PS412-125-SBC-BLT

|           |  |
|-----------|--|
| CATALOG # |  |
|-----------|--|

| Model (4" wide luminaire)            | Optics (Distribution)  | Optics Finish                          | Light Engine <sup>1</sup>               | Control                                                            |
|--------------------------------------|------------------------|----------------------------------------|-----------------------------------------|--------------------------------------------------------------------|
| <b>KM41</b> Single Fixture           | <b>T2</b> IES Type II  | <b>WO</b> Standard White Finish        | <b>2030</b> 3000K CCT, CRI 70, 24 Watts | <b>MCPCR</b> Multi-Channel 7-Pin Photocell Receptacle              |
| <b>KM42</b> Two Fixtures 180° Apart  | <b>T3</b> IES Type III | <b>FO</b> Optics in Fixture Finish     | <b>2040</b> 4000K CCT, CRI 70, 24 Watts | <b>SCP</b> Motion Sensor + Photocell <sup>2</sup>                  |
| <b>KM43</b> Three Fixtures 90° Apart | <b>T4</b> IES Type IV  | <b>MO</b> Optics in Matte Black Finish | <b>2050</b> 5000K CCT, CRI 70, 24 Watts | <b>SWPM</b> SiteSync Pre-commissioned + Motion Sensor <sup>3</sup> |
| <b>KM44</b> Four Fixtures 90° Apart  |                        |                                        | <b>3030</b> 3000K CCT, CRI 70, 33 Watts | <b>SCPREMOTE</b> Handheld Commissioning Tool <sup>2</sup>          |
|                                      |                        |                                        | <b>3040</b> 4000K CCT, CRI 70, 33 Watts |                                                                    |
|                                      |                        |                                        | <b>3050</b> 5000K CCT, CRI 70, 33 Watts |                                                                    |

| Fuse (may choose one)              | Voltage                                              | Mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Mounting Options                                                                                                                                                                                                                                                                                                                                                                                                                 | Fixture Finish                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SF</b> 120, 277, 347 Volt Input | <b>120-277V</b> 120-277V                             | <b>Integral Pole</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Twin mount at staggered heights</b>                                                                                                                                                                                                                                                                                                                                                                                           | <b>Standard Color</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DF</b> 208, 240, 480 Volt Input | <b>347</b> 347 VAC input<br><b>480</b> 480 VAC input | Square Straight Aluminum, 10.5" Ø Bolt Circle<br><b>PS410-125</b> 10' Luminaire Height<br><b>PS412-125</b> 12' Luminaire Height<br><b>PS414-125</b> 14' Luminaire Height<br><b>PS416-125</b> 16' Luminaire Height<br><b>PS418-125</b> 18' Luminaire Height<br><b>PS420-125</b> 20' Luminaire Height<br><b>Tenon Mount</b><br><b>TA23</b> Slips over a 2 3/8" / 60mm Ø x 4" / 102mm tall tenon<br><b>Side Mount</b><br><b>SMK</b> Mounts to the side of a square pole, KM41 only<br><b>Wall Mount</b><br><b>WMK</b> KM41 only | <b>TS8</b> 8' from bottom<br><b>TS10</b> 10' from bottom<br><b>TS12</b> 12' from bottom<br><b>TS14</b> 14' from bottom<br><b>TS16</b> 16' from bottom<br><b>TS18</b> 18' from bottom<br><b>Base Options</b><br><b>SBC</b> Standard Base Cover<br><b>Pole Accessories(may choose one)</b><br><b>GFI</b> GFCI receptacle, 24" from top of pole<br><b>RBC</b> Duplex receptacle box with clear cover, wiring device(s) not included | <b>BLS</b> Black Gloss Smooth<br><b>BLT</b> Black Matte Textured<br><b>DBS</b> Dark Bronze Gloss Smooth<br><b>DBT</b> Dark Bronze Matte Textured<br><b>GTT</b> Graphite Matte Texture<br><b>LGS</b> Light Grey Gloss Smooth<br><b>LGT</b> Light Grey Matte Textured<br><b>PSS</b> Platinum Silver Gloss Smooth<br><b>VGT</b> Verde Green Matte Textured<br><b>WHS</b> White Gloss Smooth<br><b>WHT</b> White Matte Textured<br><b>CC</b> Custom Color <sup>4</sup> |

### Notes:

- 595nm monochromatic amber and or custom lumen package available by request
- Handheld commissioning tool is required to separately configure or adjust any number of SCP sensors
- Specify group and zone at time of order. See [www.hubbellighting.com/sitesync](http://www.hubbellighting.com/sitesync) for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- Consult factory for custom color, marine and corrosive finish

## SPECIFICATIONS (CONTINUED)

| MODEL          | HEIGHT<br>OVERALL | POLE | SHAFT<br>SECTION | WT     | MAXIMUM ALLOWABLE EPA (MPH) |      |      |      |      |      |      |      |
|----------------|-------------------|------|------------------|--------|-----------------------------|------|------|------|------|------|------|------|
|                |                   |      |                  |        | 85                          | 90   | 100  | 110  | 120  | 130  | 140  | 150  |
| KM4X-PS410-125 | 10' 7.5" / 3.24m  | 10'  | 4" SQ x .125"    | 28 lbs | 15.4                        | 13.5 | 10.4 | 8.1  | 6.4  | 5.0  | 4.0  | 3.1  |
| KM4X-PS412-125 | 12' 7.5" / 3.85m  | 12'  | 4" SQ x .125"45  | 32 lbs | 11.8                        | 10.2 | 7.6  | 5.7  | 4.3  | 3.2  | 2.3  | 1.6  |
| KM4X-PS414-125 | 14' 7.5" / 4.46m  | 14'  | 4" SQ x .125"    | 37 lbs | 9.1                         | 7.7  | 5.5  | 3.9  | 2.6  | 1.7  | 0.95 | 0.33 |
| KM4X-PS416-125 | 16' 7.5" / 5.07m  | 16'  | 4" SQ x .125"    | 42 lbs | 6.9                         | 5.7  | 3.8  | 2.3  | 1.3  | 0.46 | -    | -    |
| KM4X-PS418-125 | 18' 7.5" / 5.68m  | 18'  | 4" SQ x .125"    | 48 lbs | 4.9                         | 3.9  | 2.2  | 0.95 | 0.01 | -    | -    | -    |
| KM4X-PS420-125 | 20' 7.5" / 6.29m  | 20'  | 4" SQ x .125"    | 53 lbs | 3.2                         | 2.2  | 0.75 | -    | -    | -    | -    | -    |

\* - Consult factory for thicker shaft profiles and or custom heights not shown above.

## CONTROLS

- Wireless enabled fixtures shall support bi-directional radio frequency (RF) communications utilizing IEEE 802.15.4 operating in the 2.4GHZ ISM band.
- Up to 1000' wireless range may be reduced by physical obstructions between lighting fixtures.
- Motion Sensor shall use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
  - High mode: 10V
  - Low mode: 1V
  - Ramp-up rate: disabled
  - Fade-down rate: disabled
  - Photocell: Off
  - Sensitivity: Full
  - Time Delay: Fade to low: 5 minutes
  - Time Delay: Fade to off: 1 hour

## CERTIFICATIONS

- Luminaire is listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250
- ANSI C136.31-2010 4G Vibration tested and compliant
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. [See Buy American Solutions](#)

## WARRANTY

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

|               |           |
|---------------|-----------|
| DATE: 1/11/22 | LOCATION: |
| TYPE:         | PROJECT:  |
| CATALOG #:    |           |

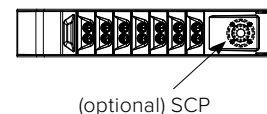
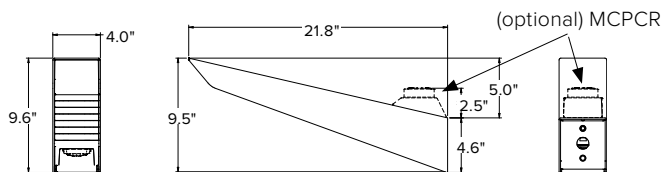
## DELIVERED LUMENS

| System Watts | Optical Finish | Distribution | Ordering Code | 3000K 70CRI |            |   |   |                 | 4000K 70CRI |            |   |   |                 | 5000K 70CRI |            |   |   |                 |
|--------------|----------------|--------------|---------------|-------------|------------|---|---|-----------------|-------------|------------|---|---|-----------------|-------------|------------|---|---|-----------------|
|              |                |              |               | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) | Lumen       | Bug Rating |   |   | Efficacy (Lm/W) |
|              |                |              |               |             | B          | U | G |                 |             | B          | U | G |                 |             | B          | U | G |                 |
| 24           | Standard White | Type 2       | T2            | 2507        | 1          | 2 | 1 | 106             | 2613        | 1          | 2 | 1 | 111             | 2647        | 1          | 2 | 1 | 112             |
|              |                | Type 3       | T3            | 2447        | 1          | 1 | 1 | 104             | 2555        | 1          | 1 | 1 | 108             | 2589        | 1          | 1 | 1 | 110             |
|              |                | Type 4       | T4            | 2561        | 1          | 1 | 1 | 109             | 2670        | 1          | 1 | 1 | 113             | 2704        | 1          | 1 | 1 | 115             |
|              | Fixture Match  | Type 2       | T2-FO         | 1909        | 1          | 2 | 1 | 81              | 2058        | 1          | 2 | 1 | 87              | 2015        | 1          | 2 | 1 | 85              |
|              |                | Type 3       | T3-FO         | 1930        | 1          | 1 | 1 | 82              | 2061        | 1          | 1 | 1 | 87              | 2038        | 1          | 1 | 1 | 86              |
|              |                | Type 4       | T4-FO         | 2174        | 1          | 1 | 1 | 92              | 2343        | 1          | 1 | 1 | 99              | 2295        | 1          | 1 | 1 | 97              |
|              | Matte Black    | Type 2       | T2-MO         | 1909        | 1          | 0 | 0 | 81              | 2058        | 1          | 0 | 0 | 87              | 2015        | 1          | 0 | 0 | 85              |
|              |                | Type 3       | T3-MO         | 1930        | 1          | 0 | 0 | 82              | 2081        | 1          | 0 | 0 | 88              | 2038        | 1          | 0 | 0 | 86              |
|              |                | Type 4       | T4-MO         | 2174        | 1          | 0 | 0 | 92              | 2343        | 1          | 0 | 0 | 99              | 2295        | 1          | 0 | 0 | 97              |
| 33           | Standard White | Type 2       | T2            | 3315        | 1          | 2 | 1 | 101             | 3455        | 1          | 2 | 1 | 105             | 3500        | 1          | 2 | 1 | 106             |
|              |                | Type 3       | T3            | 3242        | 1          | 2 | 1 | 99              | 3379        | 1          | 2 | 1 | 103             | 3423        | 1          | 2 | 1 | 104             |
|              |                | Type 4       | T4            | 3387        | 1          | 1 | 1 | 103             | 3530        | 1          | 1 | 1 | 107             | 3576        | 1          | 1 | 1 | 109             |
|              | Fixture Match  | Type 2       | T2-FO         | 2535        | 1          | 2 | 1 | 77              | 2716        | 1          | 2 | 1 | 83              | 2676        | 1          | 2 | 1 | 81              |
|              |                | Type 3       | T3-FO         | 2563        | 1          | 2 | 1 | 78              | 2746        | 1          | 2 | 1 | 83              | 2706        | 1          | 2 | 1 | 82              |
|              |                | Type 4       | T4-FO         | 2886        | 1          | 1 | 1 | 88              | 3093        | 1          | 1 | 1 | 94              | 3047        | 1          | 1 | 1 | 93              |
|              | Matte Black    | Type 2       | T2-MO         | 2535        | 1          | 0 | 1 | 77              | 2716        | 1          | 0 | 1 | 83              | 2676        | 1          | 0 | 1 | 81              |
|              |                | Type 3       | T3-MO         | 2563        | 1          | 0 | 0 | 78              | 2746        | 1          | 0 | 0 | 83              | 2706        | 1          | 0 | 0 | 82              |
|              |                | Type 4       | T4-MO         | 2886        | 1          | 0 | 1 | 88              | 3093        | 1          | 0 | 1 | 94              | 3047        | 1          | 0 | 1 | 93              |

## DIMENSIONS

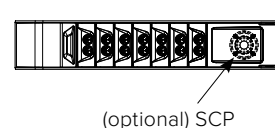
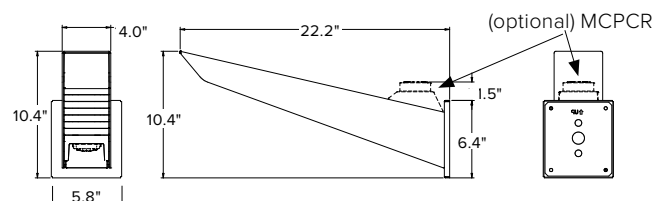
### SIDE MOUNTED LUMINAIRE (S)

|                |               |
|----------------|---------------|
| MODEL          | KM4X-...-SMK  |
| OVERALL HEIGHT | 9.6" / 244mm  |
| OVERALL LENGTH | 21.8" / 554mm |
| OVERALL WIDTH  | 4" / 102mm    |
| WEIGHT         | 8.95 lbs.     |
| EPA            | 0.56          |

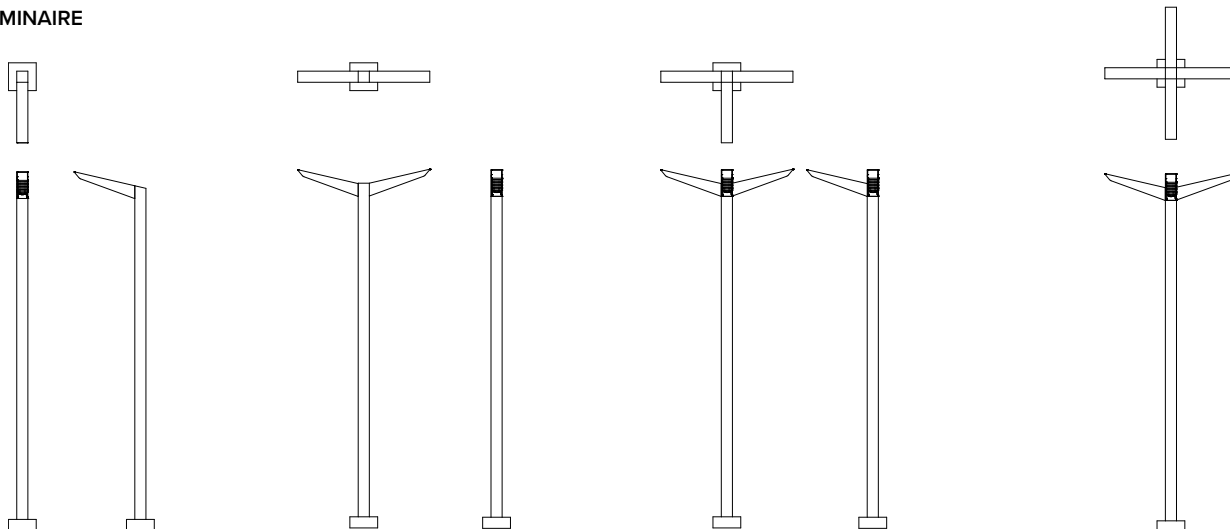


### WALL MOUNTED LUMINAIRE (S)

|                |               |
|----------------|---------------|
| MODEL          | KM41-...-WMK  |
| OVERALL HEIGHT | 10.4" / 264mm |
| OVERALL LENGTH | 22.2" / 564mm |
| OVERALL WIDTH  | 5.8" / 147mm  |
| WEIGHT         | 10 lbs.       |



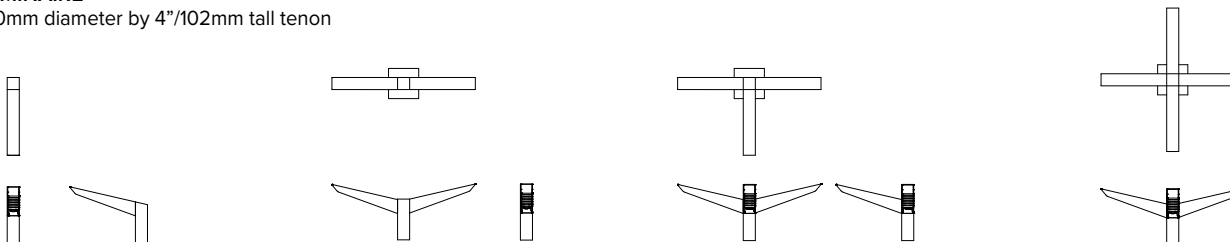
### INTEGRAL POLE LUMINAIRE



|                |                    |                    |                    |                    |
|----------------|--------------------|--------------------|--------------------|--------------------|
| MODEL          | KM41-...-PS4XX-125 | KM42-...-PS4XX-125 | KM43-...-PS4XX-125 | KM44-...-PS4XX-125 |
| OVERALL LENGTH | 25.8" / 655MM      | 10" / 254MM        | 25.8" / 655MM      | 47.5" / 1206MM     |
| OVERALL WIDTH  | 10" / 254MM        | 47.5" / 1206MM     | 47.5" / 1206MM     | 47.5" / 1206MM     |
| WEIGHT         | 8.95 LBS.          | 8.95 LBS.          | 8.95 LBS.          | 8.95 LBS.          |
| EPA*           | 0.56               | 1.12               | 1.44               | 1.44               |

### TENON MOUNT LUMINAIRE

Slips over a 2 3/8"/60mm diameter by 4"/102mm tall tenon

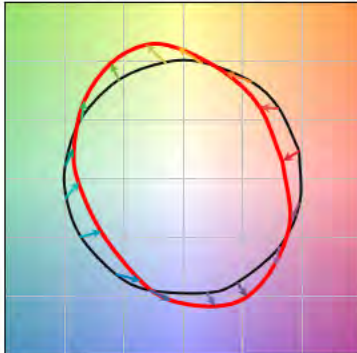


|                |               |                |                |                |
|----------------|---------------|----------------|----------------|----------------|
| MODEL          | KM41-...-TA23 | KM42-...-TA23  | KM43-...-TA23  | KM44-...-TA23  |
| OVERALL HEIGHT | 13.5" / 343MM | 13.5" / 343MM  | 13.5" / 343MM  | 13.5" / 343MM  |
| OVERALL LENGTH | 25.8" / 655MM | 10" / 254MM    | 25.8" / 655MM  | 47.5" / 1206MM |
| OVERALL WIDTH  | 4" / 102MM    | 47.5" / 1206MM | 47.5" / 1206MM | 47.5" / 1206MM |
| WEIGHT         | 8.95 LBS.     | 8.95 LBS.      | 8.95 LBS.      | 8.95 LBS.      |
| EPA*           | 0.87          | 1.44           | 1.62           | 1.62           |



## TM-30 DATA

### COLOR VECTOR GRAPHIC

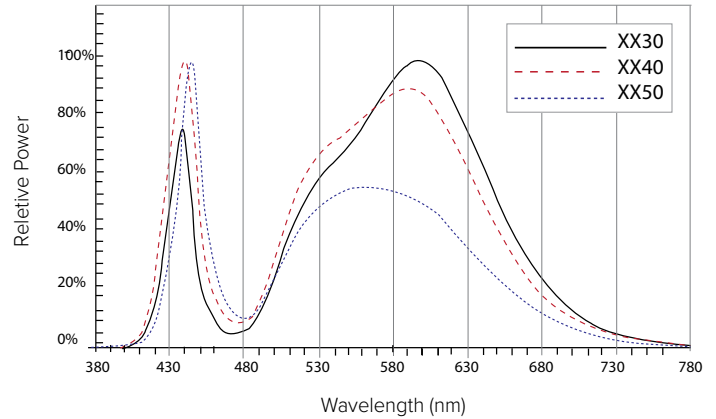


— Reference Illuminant — Test Source

### TEST SOURCE

| VALUE  | ORDERING CODE |        |        |
|--------|---------------|--------|--------|
|        | XX30          | XX40   | XX50   |
| Rf     | 69            | 69     | 71     |
| Rg     | 99            | 99     | 98     |
| CCT(K) | 3122          | 3852   | 5020   |
| Duv    | 0.001         | 0.0004 | 0.0005 |
| CIE Ra | 74            | 73     | 74     |

### SPECTRAL POWER DISTRIBUTION COMPARISON



## ELECTRICAL CHARACTERISTICS

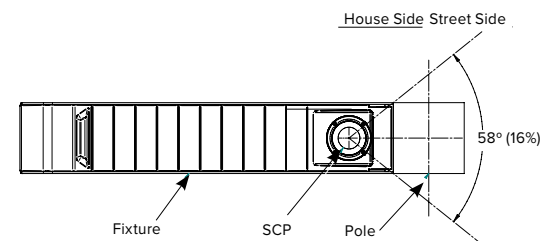
| ORDERING<br>CODE | LED<br>CURRENT<br>(MA) | SYSTEM<br>WATTAGE<br>(W) | LINE<br>INPUT |       | INPUT   |     | MIN.<br>POWER<br>FACTOR | MAX<br>THD<br>(%) | MIN.<br>POWER | INRUSH CURRENT<br>PEAK |     |               |     | DIMMING                 |                                    |
|------------------|------------------------|--------------------------|---------------|-------|---------|-----|-------------------------|-------------------|---------------|------------------------|-----|---------------|-----|-------------------------|------------------------------------|
|                  |                        |                          |               |       | AMPS AC |     |                         |                   |               | (A)                    |     | T@50%<br>(MS) |     | DIMMING<br>RANGE<br>(V) | SOURCE/<br>SINK<br>CURRENT<br>(MA) |
|                  |                        |                          | VAC           | HZ    | 120     | 277 |                         |                   |               | 120                    | 277 | 120           | 277 |                         |                                    |
| 20XX             | 500                    | 24                       | 120-277       | 50/60 | 0.2     | 0.1 | >0.9                    | 20                |               | 65                     |     | 100           |     | 0-10                    | 1                                  |
| 30XX             | 700                    | 33                       | 120-277       |       | 0.3     | 0.1 |                         |                   |               |                        |     |               |     |                         |                                    |

### TM-21 LIFETIME CALCULATION (500MA)

| AMBIENT ENVIRONMENT °C | PROJECTED LUMEN MAINTENANCE (KHRS) |     |            |     |     | REPORTED L70 |
|------------------------|------------------------------------|-----|------------|-----|-----|--------------|
|                        | 25                                 | 50  | 60 (TM-21) | 75  | 100 |              |
| 25                     | 98%                                | 95% | 94%        | 93% | 90% | >60Khrs.     |
| 40                     | 98%                                | 96% | 95%        | 93% | 90% |              |

### SENSOR DETECTION RANGE

|                   |     | SENSOR MOUNTING HEIGHT |     |     |     |     |     |     |       |     |       | RATIO |       |
|-------------------|-----|------------------------|-----|-----|-----|-----|-----|-----|-------|-----|-------|-------|-------|
|                   |     | 8'                     | 10' | 12' | 14' | 16' | 18' | 20' | 25'   | 30' | 35'   |       | 40'   |
| COVERAGE DIAMETER | SCP | 20'                    | 25' | 30' | 35' | 40' | 45' | 50' | 62.5' | 75' | 87.5' | 100'  | 1:2.5 |



## **O. Architectural Design Narrative**

Please find attached the design narrative completed by Kaplan Thompson & Archetype PA.



January 6, 2022

## DOUGLASS COMMONS

### Architectural Narrative

We are proposing three different building types on the site in addition to the five-story building to the east. The two-story Townhouses are arranged along the western property line behind the current residential neighborhood. Three-story Rowhouses line the northern edge, while the three-story Community Flats buildings occupy the central portion of the site. The intent is to gradually increase the scale of the buildings from west to east as you move through the site, keeping the shortest buildings closer to Douglass Street and the existing two-to-three-story homes.

Our approach to the roof form of the height-limited Community Flats building is to develop a series of low-pitched roof planes that undulate across the facade of the buildings and are occasionally tipped down to denote the entrances below. This undulating roof form carries across the site from building to building, which establishes a language that is reflected in the Townhouses and Rowhouses where roofs are occasionally tipped up to highlight corners and connections. The Townhouse entrances are highlighted by a simple entry canopy that matches the pitch of the larger Community Flats buildings. The Rowhouse has a more elaborate series of similarly pitched entrance canopies that dance along the facade to individualize the unit entries as well as to help reduce the scale of the overall building.

We intend to use common siding materials and alter their installation methods to help break up the facades by a change in texture, spacing, and orientation. There are shared cladding materials between buildings that reinforce their connection and establish the rhythm of textural and material changes at the unit entrances. We've also altered the heights of the windows at various locations in reference to the undulating roof forms.

The Community Flats buildings provide exterior deck spaces on the upper levels which add visual interest and provide a recessed area for a specific cladding treatment. The entry spaces are clad with a locally sourced natural Eastern White Cedar in locations where the building is experienced in close proximity.

The building's architectural design details, along with the careful attention to landscape design and public circulation spaces will provide a welcoming and interactive neighborhood experience for this unique site.



**Phil Kaplan**

*Maine Licensed Architect, AIA*

Kaplan Thompson Architects



# ARCHETYPE ARCHITECTS

## DOUGLASS COMMONS

### ARCHITECTURE NARRATIVE

Although we are a campus-like setting, we feel strongly that all buildings do not need to be similar and there are many existing instances of campuses where unique architectural moments are what strengthen it. At the same time, we do believe there are color and material choices that do, in fact, relate the buildings but because the building type is quite different from those of Kaplan Thompson, we feel it is appropriate for it to carry its own language.

In response to the comments from city staff, we have increased the size of the windows on the stair element.

As for the material choices on our building, we believe it is crucial to our design to have the contrasting, yet complimentary materials. Because of the affordable aspect of the project, the phenolic application has to be limited to only a portion of the massing, but the design would also suffer if it were made more similar to the rest of the material choices. The colors of the remaining materials have been adjusted so they are more complimentary to the wood-look.

We have incorporated a stone base with clapboard and a building cap with metal shingle that has a well-established cornice helping to emphasize the base, middle and top of the building and allowing the phenolic elements to differentiate appropriately. The metal shingle also creates more interest in the façade as it changes with the lighting.

Finally, we have established a porch as an inviting feature to the building both visually and functionally.

Respectfully submitted,  
David Lloyd

## P. Utilities

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

### *Water:*

The existing 2" service line to the site will be retired in accordance with Portland Water District standards. It is proposed to tap an 8" line off the existing 8" ductile iron water main within Douglass Street that will serve both fire and domestic on-site. The 8" line will require a meter pit and will run through an aboveground testable double-check backflow preventer. Additionally, a private fire hydrant will be installed to serve the buildings on site. Ability to serve confirmation will be submitted upon receipt.

### *Sewer:*

A new 8" PVC lateral will be installed throughout the site in conjunction with a doghouse manhole to accept the wastewater from each unit.

### *Stormwater:*

Overall, the impervious area will decrease by approximately 0.32 acres, effectively lowering the peak runoff on the site. The project will include redevelopment of non-roof impervious areas greater than 5,000 sf, triggering the City's water quality treatment requirement. Water quality treatment will be provided by allowing it to flow from a portion of the parking lot to an under-drained soil filter system and engineered rain gardens prior to discharging into the MS4 within Douglass Street. Please refer to the Grading & Drainage plans as well as the Stormwater Management Report for more information.

### *Electric/Communications:*

Three-phase power is currently supplied cross-country to the site from Congress Street. It is proposed to replace the existing poles on site and with underground primaries to six (5) transformers on the site, four of which will be single-phase along with one 3-phase transformer to serve the 5-story building. New conduits are proposed for telephone, fiber, and cable that will run down from the existing utility pole on Douglass Street. See the Sheet C-20, Utility Plan, for more information.

### *Gas:*

An existing gas main traverses the site and it is proposed tap this service to serve the 5-story building. See Sheet C-20, Utility Plan, for more information.

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





## **Q. Construction Management Plan**

**Project Address:**

57 Douglass Street

**Project Description:**

The proposed project includes the construction of eight stand-alone residential buildings to be occupied by 120 units. The project will include the construction of parking lots and stormwater management features.

**Project Team Summary:**

|                                 |                                           |
|---------------------------------|-------------------------------------------|
| Owner:                          | Douglass Commons, LLC.                    |
| Owner's Representative:         | TBD                                       |
| General Contractor:             | TBD                                       |
| Civil & Environmental Engineer: | Acorn Engineering, Inc.                   |
| Architect:                      | Archetype & Kaplan Thompson Architects    |
| Structural Engineer:            | Structural Integrity Consulting Engineers |
| Geotechnical Engineer:          | Summit Geoengineering Services            |

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

### **A. Construction Management Principles**

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

### **B. Development Review of Construction Management Plan**

Logistics and safety program shall be submitted at or prior to the preconstruction



meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

### **C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits**

Guarantees and fees will be paid at the time of the respective application. Sections 14-530 and 13-532 will be complied with all necessary permits will be obtained prior to work.

#### **1. Street Opening and Street Occupancy Permits:**

Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

#### **2. Blasting:**

Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

#### **3. Building Code:**

Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

### **D. Construction Administration and Communication**

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor and Subcontractor contact information shall be posted somewhere along the project's street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project.

### **E. Construction Schedule**

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



Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

|                            |             |
|----------------------------|-------------|
| <u>Project Start Date:</u> | Spring 2023 |
| <u>Project End Date:</u>   | Summer 2024 |

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

## **F. Security**

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
  - o Good Housekeeping
  - o On-site security
  - o Installation of new fire protection systems as construction progresses
  - o Preservation of existing systems during demolition
  - o Organization and training of an on-site fire brigade
  - o Development of a pre-fire plan with the local fire department
  - o Rapid communication
  - o Consideration of special hazards resulting from previous occupancies
  - o Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

## **G. Construction Permitting and Traffic Control Plans**

1. Construction Activity in Public Streets

Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction



activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

## 2. Sewer and Stormwater

Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

## 3. Traffic Control Plans

Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

The MOT will address the work required for utility connections in Douglass Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of Douglass Street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic.
- Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
- Flaggers will be utilized when necessary.

All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.



- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

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

## **H. Site Management and Controls**

1. Regular trash and debris shall be managed appropriately, and its removal shall comply with all local, state, and federal regulations.
2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.
3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.
4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.
5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.
6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:
  - a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
  - b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
  - c. Clear all walks and ramps within the work zone
  - d. Sand or salt as needed
  - e. Clear all basin or drainage to help snow melt
  - f. The above steps shall be carried out Sunday-Saturday including holidays.

## **I. Erosion & Sedimentation Control**

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection





- by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.
2. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.
  3. Stored materials shall be identified and avoid being located under/near trees.

#### **J. Construction Staging Area**

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.
3. All deliveries for materials shall comply with the City's noise requirements.

#### **K. Parking During Construction**

1. Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided.
2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:
  - Gravel & Stone – 3,640 CY. Earthwork subcontractor(s) pit to project site.
  - Hot Mix Asphalt – 460 Tons. Paving subcontractor pit to project site.



## **L. Dewatering Plans**

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

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

## **M. Special Measures as Necessary**

No special measures are necessary for the proposed reconstruction.

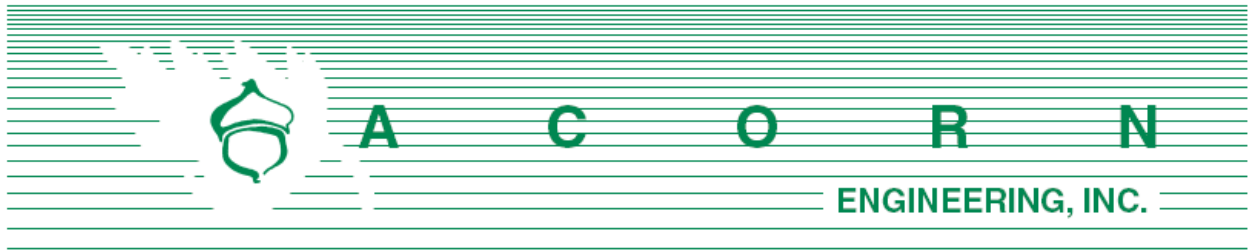


## **R. Solid Waste Disposal**

The property management company or Owner shall be responsible for locating the solid waste and recyclable material to the space allocated for solid waste storage as noted on the Site Plan (C-10).

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





## T. Traffic Memo

## Traffic Memo

The proposed 120-unit development is located at 57 Douglass Street and provides 79 parking spaces throughout the site via the paved parking and woonerf area. Pedestrian access to the site is provided with a connection to the Douglass St sidewalk. The site will be connected to the Portland Trails Network (Dougherty Field Path) by providing a hardscaped walking path to the east of the site for residents, additionally further pedestrian routes are provided as the internal sidewalk will connect to the public sidewalk along Douglass Street. Further multimodal transportation opportunities exist with multiple Metro Bus Lines making stops in proximity of the site along Congress Street. This will offer site users with a variety of transportation options other than standard vehicular travel. Also given the site's proximity to the Portland peninsula, we expect bicycle travel to be another major form of transportation for site users.

The trip generation for the proposed project has been estimated using the Institute of Transportation Engineers (ITE) "Trip Generation" 10<sup>th</sup> Edition publication. The land uses utilized in the calculations consists of residential low and mid-rise apartments, as well as a private K-12 school to model the previous and proposed trip generation produced from the site. Please note that this analysis slightly overestimates the total trip generation as 74 of the dwelling units will be workforce housing. Although the ITE has not yet published trip generation values for affordable housing, it's our understanding that these rates are forthcoming, consistent with the ITE parking generation for affordable housing that was recently added to the latest parking publication (Parking Generation 5<sup>th</sup> Edition). The parking generation for market rate vs affordable housing features a factor of 1.3. Based upon this factor, as well as demonstrated built affordable housing in the Greater Portland area, the following trip generation numbers are determined to be inflated to an extent due to lack of industry standard trip generation rates for affordable housing.

### Trip Generation

Trip generation is based upon tables presented in the tenth edition of the Institute of Transportation's Engineers "TRIP GENERATION" manual. The following trip rates were applied:

#### Existing Land-Use #536: Private School

|                                  |                   |
|----------------------------------|-------------------|
| Weekday AM Peak Hour (Street)    | = 0.80 trips/unit |
| Weekday PM Peak Hour (Street)    | = 0.17 trips/unit |
| Weekday AM Peak Hour (Generator) | = 0.81 trips/unit |
| Weekday PM Peak Hour (Generator) | = 0.58 trips/unit |



**Proposed Land-Use #220: Multi-family Housing (Low-Rise)**

|                                  |                   |
|----------------------------------|-------------------|
| Weekday AM Peak Hour (Street)    | = 0.46 trips/unit |
| Weekday PM Peak Hour (Street)    | = 0.56 trips/unit |
| Weekday AM Peak Hour (Generator) | = 0.56 trips/unit |
| Weekday PM Peak Hour (Generator) | = 0.67 trips/unit |
| Saturday Peak Hour (Generator)   | = 0.70 trips/unit |
| Sunday Peak Hour (Generator)     | = 0.67 trips/unit |

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

|                                  |                   |
|----------------------------------|-------------------|
| Weekday AM Peak Hour (Street)    | = 0.36 trips/unit |
| Weekday PM Peak Hour (Street)    | = 0.44 trips/unit |
| Weekday AM Peak Hour (Generator) | = 0.32 trips/unit |
| Weekday PM Peak Hour (Generator) | = 0.41 trips/unit |
| Saturday Peak Hour (Generator)   | = 0.44 trips/unit |
| Sunday Peak Hour (Generator)     | = 0.39 trips/unit |

Table 1, below, provides a summary of the trip generation for the proposed development. This analysis also accounts for the estimated trip generation for the former school system that existed on site within the last 10 years. It was assumed that an average of 38 students attended the “West Program” school, based upon a Bangor Daily News article that stated the 2014 enrollment and capacity.

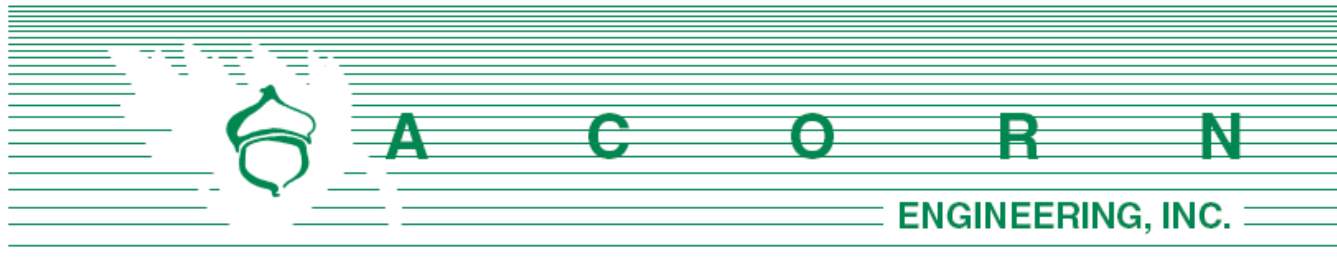
| <b>Table 1 – Peak Hour Trip Generation</b>                 |                                      |                                                      |
|------------------------------------------------------------|--------------------------------------|------------------------------------------------------|
|                                                            | <b>Peak Hour PCE Trip Generation</b> | <b>Net Peak Hour PCE Trip Generation<sup>1</sup></b> |
| AM Peak Hour (Street)                                      | 42 trips                             | 12 trips                                             |
| PM Peak Hour (Street)                                      | 52 trips                             | 46 trips                                             |
| AM Peak Hour (Generator)                                   | 40 trips                             | 9 trips                                              |
| PM Peak Hour (Generator)                                   | 50 trips                             | 28 trips                                             |
| Saturday Peak Hour (Generator)                             | 54 trips                             | 54 trips                                             |
| Sunday Peak Hour (Generator)                               | 48 trips                             | 48 trips                                             |
| <sup>1</sup> Accounts for trip credits from prior site use |                                      |                                                      |



## Crash Data

Crash data was obtained from MaineDOT for the most recent available three-year period (2018 to 2021). As seen in the appendix, there have been six crashes on Douglass Street and two crashes at the intersection of Douglass and Brighton Ave. Of the eight crashes recorded, only one of them resulted in an injury and this occurred at the intersection of Douglass and Brighton Ave. The seven other crashes were side swipes or rear ends and were property damage only. The intersection of Douglass and Brighton Ave allows left and right hand turns from both roads and is mediated by a stop sign at the end of Douglass. The intersection of Douglass and Congress does not have any reported crashes in the specified time window and has a curbed median in the middle of Congress Street to prohibit left-hand turns. Based on the relative minor nature of reported crashes and existing intersection conditions, the project's generated trips will not exacerbate an existing issue.





Maine Department of Environmental Protection  
City of Portland, Maine

January 20, 2022

Subject: Delegated Review: Stormwater Management Permit  
57 Douglass St. Redevelopment – Portland, Maine

To Whom It May Concern:

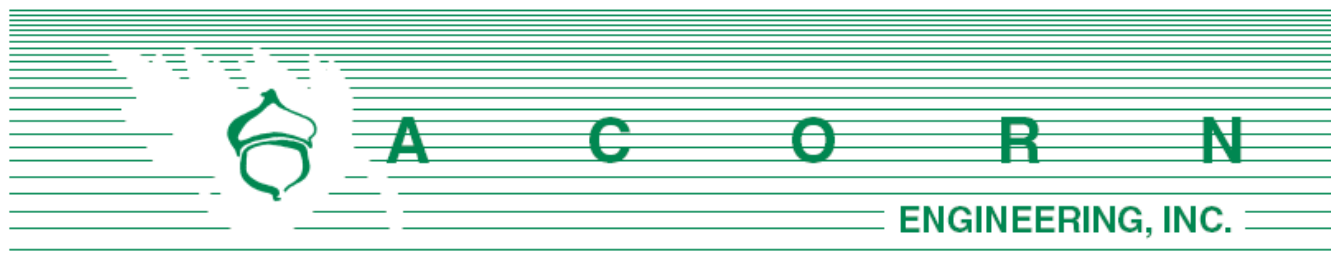
Acorn Engineering, Inc. has been retained by Douglass Commons, LLC. to provide civil engineering services for the proposed redevelopment of 57 Douglass Street located within the R-5A Zoning District in Portland, Maine. The 3.34-acre parcel was previously the site of a school building and is now vacant. The built-out site will consist of eight stand-alone buildings comprising 120 residential units, the majority of which will be deed-restricted for affordability. On behalf of our client, we are pleased to submit a Stormwater Management Permit application for this beneficial redevelopment subject to Delegated Review by the City of Portland. Concurrently, the project is anticipated to undergo a Major Site Plan/ review subject to approval from the Portland Planning Board.

The existing property is covered by approximately 65% or 2.16 acres of impervious surfaces, whereupon a school and its associated infrastructure was formerly located. The proposed redevelopment includes reducing the overall impervious by approximately 0.36 acres to a total of 1.90 acres. In addition to net reduction in runoff and pollutant loading, there are stormwater treatment systems provided to improve the current state of the site, including an under drained soil filter, proprietary rain gardens, and the routing of all stormwater from the site to the separated storm drain within Douglass Street. Lastly, the weighted average of land use and pollutant ranking decreases from the existing to the proposed condition.

We look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please do not hesitate to contact us.

Sincerely,

Samuel J. Lebel, P.E.  
Project Manager  
Acorn Engineering, Inc.



The following documents are included as part of this application.

Documents:

1. Stormwater Management Law Permit Application
2. Fee Worksheet
3. Notice of Intent to File
4. Certificate of Good Standing
5. Title, Right, or Interest
6. Photos of the Project Site
7. Basic Standards Submissions (Erosion & Sedimentation Control Report)
8. General Standards Submissions (Stormwater Management Report)

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF LAND RESOURCES

Stormwater Application Form

FOR DEP USE

L- \_\_\_\_\_

ATS# \_\_\_\_\_

FEES PAID \_\_\_\_\_

DATE RECEIVED \_\_\_\_\_

PLEASE TYPE OR PRINT IN INK

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     |                                                                                                                |                                                                                                                                                                                                                                              |                                                                                                                                 |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| This application is for (Check the one that applies):      |                                                                                                                                                                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> New application |                                                                                                                | <input type="checkbox"/> Amendment                                                                                                                                                                                                           |                                                                                                                                 |
| 1. Name of Applicant:                                      | Douglass Commons, LLC                                                                                                                                                                                                                                                                                                                                                                                                     |                                                     | 5. Name of Agent:                                                                                              | Sam Lebel                                                                                                                                                                                                                                    |                                                                                                                                 |
| 2. Applicant's Mailing Address:                            | 10 Free St, 2nd Floor Portland, ME 04101                                                                                                                                                                                                                                                                                                                                                                                  |                                                     | 6. Agent's Mailing Address:                                                                                    | 65 Hanover St., Portland, ME 04101                                                                                                                                                                                                           |                                                                                                                                 |
| 3. Applicant's Phone #:                                    | 207-805-3578                                                                                                                                                                                                                                                                                                                                                                                                              |                                                     | 7. Agent's Phone #:                                                                                            | 207-775-2655                                                                                                                                                                                                                                 |                                                                                                                                 |
| 4. Email address (REQUIRED-license will be sent via email: | cszanton@szantoncompany.com                                                                                                                                                                                                                                                                                                                                                                                               |                                                     | 8. E-mail address (REQUIRED-license will be sent via email                                                     | slebel@acorn-engineering.com                                                                                                                                                                                                                 |                                                                                                                                 |
| 9. Location of Project: (Road, Street, Rt.#)               | 57 Douglass Ave.                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     | 10. Town:                                                                                                      | Portland                                                                                                                                                                                                                                     |                                                                                                                                 |
|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     | 11. County:                                                                                                    | Cumberland                                                                                                                                                                                                                                   |                                                                                                                                 |
| 12. Type of Direct Watershed: (Check all that apply)       | <input type="checkbox"/> Lake not most at risk<br><input type="checkbox"/> Lake most at risk<br><input type="checkbox"/> Lake most at risk, severely blooming<br><input type="checkbox"/> River, stream or brook<br><input type="checkbox"/> Urban impaired stream<br><input type="checkbox"/> Freshwater wetland<br><input type="checkbox"/> Coastal wetland<br><input type="checkbox"/> Wellhead of public water supply |                                                     | 13. Amount of Disturbed Area:                                                                                  | Total Amt.= 3.13 acres                                                                                                                                                                                                                       |                                                                                                                                 |
|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     | 14. Amount of Developed Area:                                                                                  | <input checked="" type="checkbox"/> 1 or more acres, but less than 5 acres<br><input type="checkbox"/> 5 acres or more<br>Total Amt.= 2.86 acres                                                                                             |                                                                                                                                 |
|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     | 15. Amount of Impervious Area:                                                                                 | <input type="checkbox"/> less than 20,000 sq. ft.<br><input type="checkbox"/> 20,000 sq. ft. to 1 acre<br><input checked="" type="checkbox"/> 1 to 3 acres<br><input type="checkbox"/> 3 or more acres<br>Total Amount of Impervious Acres = |                                                                                                                                 |
| 16. Applicable Standards: (Check all that apply)           | <input type="checkbox"/> Stormwater PBR<br><input checked="" type="checkbox"/> Basic standards<br><input checked="" type="checkbox"/> General standards: BMP<br><input type="checkbox"/> General standards: phosphorus<br><input type="checkbox"/> Flooding standard<br><input type="checkbox"/> Urban impaired stream standards<br><input type="checkbox"/> Other: _____                                                 |                                                     | 17. Type of Stormwater Control:                                                                                | <input type="checkbox"/> Vegetative (e.g. buffers)<br><input checked="" type="checkbox"/> Structural (e.g. underdrained filters, ponds, infiltration structures)                                                                             |                                                                                                                                 |
| 18. Exceptions &/or Waivers Requested:                     | BMP Standards ▼                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     | Urban impaired stream standard ▼                                                                               |                                                                                                                                                                                                                                              | Flooding Standard ▼                                                                                                             |
|                                                            | <input type="checkbox"/> Pretreatment measures<br><input type="checkbox"/> Discharge to ocean/major river segment<br><input type="checkbox"/> Linear portion of project<br><input type="checkbox"/> Utility corridor<br><input checked="" type="checkbox"/> Redevelopment                                                                                                                                                 |                                                     | <input type="checkbox"/> Developed area not landscaped or impervious<br><input type="checkbox"/> Redevelopment |                                                                                                                                                                                                                                              | <input type="checkbox"/> Discharge to ocean/major river segment<br><input type="checkbox"/> Insignificant increase in peak flow |
| 19. Proposed Start Date and Brief Project Description:     | The proposed project includes the redevelopment of the existing Portland Public Works garage into a 8-story mixed use building. With 171 proposed residential units and 7,600 SF of retail units (4 units).                                                                                                                                                                                                               |                                                     |                                                                                                                |                                                                                                                                                                                                                                              |                                                                                                                                 |
| 20. Size of Lot or Parcel:                                 | <input type="checkbox"/> _____ sq. ft., or<br><input checked="" type="checkbox"/> 3.34 acres                                                                                                                                                                                                                                                                                                                              | UTM Easting:                                        | 2920817.53                                                                                                     | UTM Northing:                                                                                                                                                                                                                                | 300346.97                                                                                                                       |
| 21. Title, Right or Interest:                              | <input type="checkbox"/> own <input type="checkbox"/> lease <input type="checkbox"/> purchase option <input checked="" type="checkbox"/> written agreement                                                                                                                                                                                                                                                                |                                                     |                                                                                                                |                                                                                                                                                                                                                                              |                                                                                                                                 |
| 22. Deed Reference Numbers:                                | Book#: xxx                                                                                                                                                                                                                                                                                                                                                                                                                | Page: xxx                                           | 24. Map and Lot Numbers:                                                                                       | Map #: 78                                                                                                                                                                                                                                    | Lot #: C2 B7                                                                                                                    |
| 23. DEP Staff Previously Contacted:                        |                                                                                                                                                                                                                                                                                                                                                                                                                           | 25. Project started prior to application?           | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                         | Completed?                                                                                                                                                                                                                                   | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                     |

SIGNATURES / CERTIFICATIONS ON PAGE 2

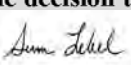


|                                                                                                                                                                                                                                  |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 26. Resubmission of Application?                                                                                                                                                                                                 | <input type="checkbox"/> Yes →<br><input checked="" type="checkbox"/> No | If yes, previous application #                                                                                                                                                                                                                                                                                                                                                           |  | Previous project manager:                                                                                                                                                                                                                                                                                                                                                        |  |
| 27. Written Notice of Violation?                                                                                                                                                                                                 | <input type="checkbox"/> Yes →<br><input checked="" type="checkbox"/> No | If yes, name of DEP enforcement staff involved:                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 28. Detailed Directions to the Project Site:                                                                                                                                                                                     |                                                                          | From I-295N, take exit 5B, merge onto Congress St., first right on Douglass Street, and first right is access driveway.                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 29. Stormwater Permit by Rule Submissions ▼                                                                                                                                                                                      |                                                                          | 30. Stormwater Application Submissions ▼                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |
| <input type="checkbox"/> This form (including signature page)<br><input type="checkbox"/> Fee<br><input type="checkbox"/> Topographic Map<br><input type="checkbox"/> Plan or Drawing<br><input type="checkbox"/> Photos of Area |                                                                          | <input checked="" type="checkbox"/> This form (including signature page)<br><input checked="" type="checkbox"/> Fee<br><input checked="" type="checkbox"/> Proof of title, right or interest<br><input checked="" type="checkbox"/> Certificate of good standing (if applicable)<br><input checked="" type="checkbox"/> Photos of Area<br><input type="checkbox"/> Copy of Public Notice |  | <input type="checkbox"/> Professional & Notice Certification<br><input checked="" type="checkbox"/> Basic standards submissions<br><input checked="" type="checkbox"/> General standards submissions<br><input type="checkbox"/> Flooding standard submissions<br><input type="checkbox"/> Other standard submissions<br><input type="checkbox"/> Compensation Fee (if required) |  |
| 31. FEES, Amount Enclosed:                                                                                                                                                                                                       |                                                                          | DELEGATED REVIEW - FEE THROUGH CSS PORTAL                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |
| Does the agent have an interest in the project? If yes, what is the interest?: <input type="checkbox"/> Yes → <input checked="" type="checkbox"/> No                                                                             |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                  |  |

**IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.**

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following:

#### CERTIFICATIONS/ SIGNATURES

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.</p> |                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by</p> <p>E-mailing the decision to the electronic address located on the front page of this application (see #4 for the applicant and #9 for the agent."</p>                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>Signed: </p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Title: Project Manager Date: 1.20.2022</p>                                                                                                                                                                                                                                                                                                                                           |
| <p>Notice of Intent to Comply with Maine Construction General Permit</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>With this Stormwater Law application form and my signature below, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.</p> <p>Signed:  Date: 1.20.2022</p> |

**NOTE: If a Notice of Intent is required, you must file a Notice of Termination (attached as Form G) within 20 days of completing permanent stabilization of the project site.**

### ADDITIONAL SIGNATURES/CERTIFICATIONS

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

Signature: Sam Lebel

Name (print): Sam Lebel, PE

Date: 1.20.2022

Re/Cert/Lic No: \_\_\_\_\_

Engineer X

Geologist \_\_\_\_\_

Soil Scientist \_\_\_\_\_

Land Surveyor \_\_\_\_\_

Site Evaluator \_\_\_\_\_

Active Member of the Maine Bar \_\_\_\_\_

Professional Landscape Architect \_\_\_\_\_

## Fee Worksheet

Use this form to help determine the permit fee. The fee is based upon the amount of disturbed area associated with the project. **THE EXAMPLE BELOW IS NOT BASED ON CURRENT FEES.** To determine current stormwater licensing fees, please visit the Department's website at: <http://www.maine.gov/dep/permits/>

**NOTE:** Ditches, swales, ditch turn-outs, level spreaders, and similar Best Management Practices (BMPs) used solely to convey or discharge water to a vegetated buffer are not considered, by themselves, to constitute structural BMPs, provided that the applicant assumes that all water quality treatment takes place in the buffer. If any treatment is assumed within the BMPs used to convey water to the buffer, they are treated as structural BMPs for the purposes of determining the applicable fee (and review period). "Disturbed area" and "impervious area" are defined in Chapter 500, Section 2(F) and (L).

**Example (a):** If solely vegetative control measures are used (e.g. buffers), using an example fee of \$250.00\* for up to one acre of disturbed area, plus \$125.00† for each additional whole acre of disturbed area, the total fee is calculated as shown below.

Project will create 2.34 acres of disturbed area.

$$\text{Fee} = \$250.00 + [\$125.00 \times (1)] = \$375.00$$

**Your fee:**

Current fee from fee schedule plus [ 1/2 current fee times # additional whole acres ] equals application fee  
 \$ \_\_\_\_\_ + [ \$ \_\_\_\_\_ X (\_\_\_\_) ] = \$ \_\_\_\_\_

**Example (b):** If any structural control measures are used (e.g. underdrained filters, ponds, infiltration systems), using an example fee of \$500.00 for up to one acre of disturbed area, plus \$250.00 for each additional whole acre of disturbed area, the total fee is calculated as shown below.

Project will create 2.34 acres of disturbed area.

$$\text{Fee} = \$500.00 + [\$250.00 \times (1)]. \text{ Fee} = \$750.00.$$

**Your fee:**

Current fee from fee schedule plus [ 1/2 current fee times # additional whole acres ] equals application fee  
 \$ 500 + [ \$ 250 X ( 1 ) ] = \$ 750

\* The total fee for the first acre of disturbed area is obtained by combining the processing and licensing fees contained in the current fee schedule.

† The fee for each additional whole acre of disturbed area is one-half the combined processing and licensing fee.

**Public Notice: Notice of Intent to File**

Please take notice that

Douglass Commons, LLC 10 Free St. 2nd Floor, Portland ME, 04101

(Name, Address and Phone # of Applicant)

phone: (207) 805-3578

is intending to file a Stormwater Law permit application with the Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S.A. § 420-D on or about January 15, 2022

(anticipated filing date)

This application is for

The proposed redevelopment of a vacant lot to 8 buildings of 120 residential units.

(description of the project)

43/91 Douglass Ave., Portland, ME 04101 (Former West School)

(project location)

A request for a public hearing or a request that the Board of Environmental Protection assume jurisdiction over this application must be received by the Department in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in Portland, Augusta or Bangor) (circle one) during normal working hours. A copy of the application may also be seen at the municipal

offices in Portland, Maine.  
(town)

Written public comments may be sent to the regional office in Portland, Augusta, or Bangor where the application is filed for public inspection.

MDEP, Central Maine Regional Office, 17 State House Station, Augusta, Maine 04333  
MDEP, Southern Maine Regional Office, 312 Canco Road, Portland, Maine 04103  
MDEP, Eastern Maine Regional Office, 106 Hogan Road, Bangor, Maine 04401

## **4. Certificate of Good Standing**

Please see the attached Certificate of Good Standing from the Department of the Secretary of State for Douglass Commons, LLC.







# MAINE

Department of the Secretary of State  
Bureau of Corporations, Elections and Commissions

**Corporate Name Search**

## Information Summary

[Subscriber activity report](#)

**This record contains information from the CEC database and is accurate as of: Wed Jan 12 2022 11:34:21. Please print or save for your records.**

| Legal Name               | Charter Number | Filing Type                             | Status           |
|--------------------------|----------------|-----------------------------------------|------------------|
| DOUGLASS<br>COMMONS, LLC | 20217618DC     | LIMITED LIABILITY<br>COMPANY (DOMESTIC) | GOOD<br>STANDING |

| Filing Date | Expiration Date | Jurisdiction |
|-------------|-----------------|--------------|
| 03/03/2021  | N/A             | MAINE        |

**Other Names** (A=Assumed ; F=Former)

NONE

### Clerk/Registered Agent

AMY CULLEN  
C/O THE SZANTON COMPANY  
482 CONGRESS ST STE 203  
PORTLAND, ME 04101

[Back to previous screen](#)

[New Search](#)

**Click on a link to obtain additional information.**

List of Filings

[View list of filings](#)

**Obtain additional information:**

Certificate of Existence ([more info](#))

|                                                                 |                                                             |
|-----------------------------------------------------------------|-------------------------------------------------------------|
| <a href="#">Short Form without<br/>amendments<br/>(\$30.00)</a> | <a href="#">Long Form with<br/>amendments<br/>(\$30.00)</a> |
|-----------------------------------------------------------------|-------------------------------------------------------------|

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.  
If you encounter problems, visit the [troubleshooting page](#).



If you encounter technical difficulties while using these services, please contact the [Webmaster](#). If you are unable to find the information you need through the resources provided on this web site, please contact the Bureau's Reporting and Information Section at 207-624-7752 or [e-mail](#) or visit

## **5. Title, Right or Interest**

Please see attached for purchase agreements.



## PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this “Agreement”) is made this 21st day of May, 2021 (the “Effective Date”) by and between the CITY OF PORTLAND, a body politic and corporate located in Cumberland County, Maine, (hereinafter referred to as “Seller” or “City”), and Douglass Commons, LLC, a Maine limited liability company having a mailing address as provided below (hereinafter referred to as “Buyer”).

### RECITALS

WHEREAS, the CITY is the owner of approximately 3.40 acres of land at or near 43 & 91 Douglass Street, Portland, Maine (the “Premises”) and did advertise RFP #20067 dated April 10, 2020, entitled Request for Proposals for Disposition and Development of City-Owned Property Located at 43 and 91 Douglass Street, a copy of which is attached hereto as Exhibit A and incorporated herein (the “Request for Proposals”) (the Premises is identified in the City’s tax records as CBL 078 C002 and a portion of 078 B007 together with the 60 ft. wide proposed street situated between the two parcels, as is generally depicted on the Boundary Survey dated March 1, 2021 prepared by Owen Haskell, Inc. for The Szanton Company, a copy of which is attached as Exhibit B); and

WHEREAS, Buyer submitted a proposal dated June 15, 2020 in response to the Request for Proposals, a copy of which is attached hereto as Exhibit C and incorporated herein (the “Proposal”); and

WHEREAS, Buyer desires to purchase and develop the Premises, and the City desires to convey the Premises to Buyer, subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **SALE.** City agrees to sell the Premises to Buyer, and Buyer agrees to purchase the Premises in accordance with the terms and conditions set forth in this Agreement. This Agreement is for the sale of land only.
2. **CONSIDERATION.** The purchase price for the Premises shall be Four Hundred Seventy-Five Thousand Dollars (\$475,000.00) (the “Purchase Price”), subject to the following cost adjustments and conditions:
  - a. Buyer shall deliver to the City the sum of Ten Thousand Dollars (\$10,000.00) (the “Deposit”) within 3 business days after the full execution of this Agreement, which the City shall hold in a non-interest bearing account. The Deposit shall be governed by the terms and conditions of this Agreement and shall be fully refundable until the end of the Due Diligence Period as that term is defined below.
  - b. The Buyer shall pay the remainder of the Purchase Price to the City by wire transfer (or as otherwise reasonably requested by the City) at closing.

### 3. TITLE AND DUE DILIGENCE.

- a. Due Diligence Period. Buyer will have from the Effective Date until 4:00 PM Eastern Time on the day that is eighteen (18) months after the Effective Date (the “Due Diligence Period”) to complete any surveys, environmental review, inspections, and title examinations, and to obtain any zone change, site plan approval, and any other permits and regulatory approvals required for the Project. Buyer may, in its sole discretion, notify the City in writing that the Buyer elects to terminate the Due Diligence Period sooner and proceed to closing. Within ten days of the Effective Date, the City shall provide copies of, or reasonable access to, all known, non-confidential City files regarding the Premises, including without limitation title files.
- b. Property Description. The legal description of the Premises contained in the deed will be a survey description based upon a survey plan that will more specifically describe the Premises. The parties acknowledge and agree that the survey attached as Exhibit B is a preliminary draft prepared by Buyer and is subject to change after review, amendment, and approval by both parties. The City will notify Buyer of any objections to the survey within 30 days after the Effective Date. Within 10 days after receipt of any such objection, the Buyer will either provide the City with a revised survey addressing City’s objections to City’s satisfaction, or notify the City that Buyer will not change the survey, in which case the City, will have the right to terminate this Agreement, return the Deposit to Buyer, and neither party shall have any further obligation to the other. Upon City’s acceptance of the survey, Buyer will provide the City with a draft legal description for the Premises, which shall be based on the survey and be subject to the City’s review and approval. The survey and description of the Premises will be prepared by the Buyer at its sole expense. The parties will work together in good faith to complete their review and approval of the survey and legal description on or before the day that is 90 days after the Effective Date.
- c. Rezoning Contingency. Buyer proposes to obtain the Portland City Council’s approval to rezone the Premises (the “Rezoning Approval”) to increase residential density for its development of the Premises as described in the Proposal (the “Project”). The Buyer will be responsible for obtaining, at its sole expense, the Rezoning Approval and any other regulatory approvals required for the Project prior to Closing. Buyer may terminate this Agreement and receive a full refund of the Deposit if the Rezoning Approval is not received.
- d. Financing Contingency. The Buyer’s obligation to close is contingent on obtaining construction and permanent financing for the Project that the Buyer, in its discretion, determines is sufficient to put the Project on a sound financial footing. That financing is anticipated to include, but not be limited to, the following: (i) for the residential rental portion of the project an allocation of Federal low-income housing tax credits (“LIHTCs”), other

financing provided by Maine State Housing Authority (“MaineHousing”) and affordable housing tax increment financing from the City including a Credit Enhancement Agreement and (ii) for the cooperative housing portion of the project permanent financing under the U.S. Department of Housing and Urban Development section 213 program and affordable housing tax increment financing from the City including a Credit Enhancement Agreement. Buyer may terminate this Agreement and receive a full refund of the Deposit if the financing contingency described above is not met during the Due Diligence Period.

- e. Title and Survey Objections. Buyer will have until the end of the Due Diligence Period to deliver to City any written objections to title, environmental, or survey matters (other than the permitted exceptions identified herein) that materially affect insurability or use. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record environmental, or survey matters first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.
- f. Option to Cure. In the event of a title or survey objection, City will have the option, but not the obligation, to cure the objection and will notify Buyer of its election within ten (10) business days after receipt of the objection. In the event that the City elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the City does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to Buyer’s reasonable satisfaction, Buyer will have the option to (1) terminate this Agreement and obtain a refund of the Deposit (after which neither party will have any further obligation or liability to the other under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).
- g. Deed. City shall convey the Premises to Buyer at the closing in fee simple by a municipal quitclaim deed without covenant. Title shall be good and insurable title, free and clear of all encumbrances except (i) easements of record and easements described herein, including, without limitation, an easement to be reserved by, and in form and substance satisfactory to the City and Buyer, the City for access to, and maintenance, repair, and replacement of, the trail located between the Premises and the I-295 corridor; (ii) easements for utilities servicing the property, in form and substance satisfactory to the City and Buyer, including, without limitation, Utility and sewer (iii) zoning ordinances, and (iv) real estate taxes not yet due and payable. Further, Buyer acknowledges that the deed shall contain a restriction stating that in the event that the Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount equal to



the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Such restriction shall also confirm that Buyer and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine. The City shall provide a draft of the deed, and of any declaration of covenants and restrictions pursuant to section 11, to Buyer one month before the end of the Due Diligence Period, and the City and Buyer shall in good faith endeavor to agree on the form of the deed prior to the end of the Due Diligence Period.

- h. Existing Natural Gas Equipment and Easement. The City has informed Buyer that the City believes that all or a portion of the existing natural gas pipe and other equipment depicted on Exhibit B may be actually located outside of the easement provided by the City to Unitil. The City shall use best efforts to work with Unitil to resolve the actual location of the gas pipeline and equipment and amend the easement, if necessary, within three months of the Effective Date. If City is unable to amend the Unitil easement to Buyer's satisfaction, Buyer shall have the right to terminate this Agreement as set forth in subsection (i) below.
- i. Buyer's Right to Terminate. The Buyer may terminate this Agreement at any time during the Due Diligence Period if, in the exercise of its sole discretion, it decides to not proceed with the Project by giving written notice of termination to the City in which case the City shall return the Deposit to Buyer and neither party shall have any further obligations to the other.

#### **4. INSPECTIONS.**

- a. During the Due Diligence Period, Buyer and its employees, consultants, contractors and agents shall have the right, at Buyer's expense, to enter on the Premises at reasonable times in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as Buyer determines, it is sole discretion, to be required to determine the suitability of the Premises for Buyer's intended use (collectively, the "Inspections"). The City acknowledges that such Inspections may include the digging of test pits, which the City hereby approves.
- b. Buyer agrees to defend, indemnify and hold harmless the City against any mechanics liens that may arise from the activities of Buyer and its employees, consultants, contractors and agents on the Premises.
- c. Buyer shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and Buyer hereby releases the City from, and

agrees to indemnify, defend, and hold the City harmless against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by the City on account of any injury to person or damage to property arising out of the exercise by Buyer of its rights hereunder, except to the extent that such Damages result from the act or omission of the City.

- d. Buyer shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance, if applicable, and commercial general liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars (\$400,000.00) per occurrence for bodily injury, death and property damage, listing the City as an additional insured thereon, and also Workers' Compensation Insurance coverage to the extent required by law; the forms of all such insurance to be subject to City's Corporation Counsel's reasonable satisfaction.
- e. In the event that Buyer does not purchase the Premises, Buyer agrees to either return the Premises as nearly as possible to its original condition after conducting the Inspections; provided, however, the City hereby acknowledges and agrees Buyer shall have no obligation to clean-up, remove or take any other action with respect to any disturbance of any pre-existing environmental contamination on the Premises caused by such inspections, studies, tests, exams, and assessments, and that Buyer shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.
- f. The parties hereto acknowledge and agree that it is a condition to Buyer's obligations under this Agreement that the results of the Inspections be acceptable to Buyer in its sole discretion. If the results of such due diligence are not acceptable to Buyer in its sole discretion, and if Buyer exercises its right to terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

- 5. **REAL ESTATE TAXES, PRORATIONS AND TRANSFER TAX.** Buyer shall be liable for all real estate taxes beginning as of the start of fiscal year following the closing and continuing thereafter. Because the Property is currently owned by the City of Portland, which is exempt from real estate taxes, no taxes were assessed or will be due for any portion of the tax year during which the closing occurs, and no taxes will be prorated at the closing. Any utilities for the Property shall be prorated as of the closing. The Maine real estate transfer tax shall be paid for by Buyer in accordance with 36 M.R.S.A. § 4641-A. City is exempt from paying the transfer tax pursuant to 36 M.R.S.A. § 4641-C. The recording fee for the deed of conveyance and any expenses relating to Buyer's financing or closing shall be paid for by Buyer.
- 6. **DEFAULT AND REMEDIES.** Prior to Closing, in the event that Buyer defaults hereunder for a reason other than the default of the City, the City may terminate this Agreement and retain the Deposit, and neither party shall have any further obligation

to the other. In the event that Buyer defaults on any matters addressed in this Agreement that survive Closing, Seller may pursue all available legal and equitable remedies. In the event City defaults under this Agreement, and if Buyer is not then in default hereunder, Buyer shall have the right to pursue specific performance or terminate this Agreement and elect in substitution therefor, as its sole remedy, the right to a return of the Deposit.

7. **RISK OF LOSS.** The risk of loss or damage to the Premises by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the City. The Premises is to be delivered in substantially the same condition as of the Effective Date unless otherwise stated. In the event City is not able to deliver the Premises as stated, Buyer may terminate this Agreement, obtain a return of the Deposit, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.
8. **PROPERTY SOLD "AS IS, WHERE IS."** Buyer acknowledges that Buyer has had an opportunity to inspect the Premises, and to hire professionals to do so, and that Premises will be sold "as is, where is" and "with all faults." City, and its agents, make no representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the Premises, or as to the fitness of the Premises for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the Premises. Acceptance by Buyer of the Deed at closing and payment of the purchase price shall be deemed to be full performance and discharge by the City of every agreement and obligation contained herein.
9. **ENVIRONMENTAL INDEMNIFICATION.** Buyer covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Buyer or the City and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the City's release, handling or storage of hazardous wastes or hazardous materials on the Premises. This duty to indemnify, defend, and hold harmless shall be included in a covenant in the deed and shall run with the land conveyed and be binding upon Buyer's successors, assigns, and transferees.
10. **CLOSING.** Time is of the essence in the performance of this agreement. The closing shall be held at the offices of Buyer's counsel at a date and time specified by

two weeks' written notice from Buyer to the City on or before the day that is twenty (20) months after the Effective Date (the "Closing Date"). At the Closing:

- a. The City shall execute, acknowledge and deliver to Buyer a municipal quitclaim deed conveying to Buyer good and insurable title to the Premises, free and clear of all encumbrances except as otherwise set forth herein.
- b. Buyer shall deliver the Purchase Price to the City.
- c. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement.
- d. Buyer shall deliver evidence, reasonably satisfactory to City's Corporation Counsel, that the entity receiving title to the Premises is in good standing under Maine law, and that the individuals acting at Closing and executing documents on behalf of Buyer are authorized to do so.

**11. BUYER'S POST CLOSING OBLIGATIONS; RIGHTS OF CITY TO REPURCHASE PROPERTY.**

As set forth in the Proposal, the Project includes a rental housing project and a limited equity cooperative housing project (hereinafter referred to as the "Rental Housing Project" and the "Cooperative Housing Project," respectively). Within thirty-two (32) months of the Effective Date, Buyer shall commence construction of both the Rental Housing Project and the Cooperative Housing Project.

**a. Rental Housing Project.**

- i. The Rental Housing Project will consist of an apartment building including no less than 56 units, with a mixture of one-, two- and three-bedroom units. In no event shall the Rental Housing Project include fewer than 17 two-bedroom units and 10 three-bedroom units.
- ii. For a period of 99 years after the Rental Housing Project has been completed, at least 40 units in the Rental Housing Project shall be affordable to households earning less than or equal to 60% of the area median income (AMI), adjusted for family size, based on figures published annually by HUD for the Portland Metropolitan Statistical Area. If at a time in the future, HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability. For purposes of this Agreement, "affordable" means that the percentage of income a household is charged in rent and other housing expenses including utilities, shall not exceed 30% of the household's gross monthly income, except as provided below if the Project is financed with the LIHTC program. Minimum household size allowed per unit and the formula for calculating maximum allowable monthly rent is detailed on Exhibit D, which is attached hereto and made a part hereof. However, if the Rental Housing Project is financed under the Federal Low Income Housing Tax Credit (LIHTC) Program, maximum allowable rent shall

be the maximum allowable rent under the Federal LIHTC Program during the applicable time period for that Program. Upon expiration of any affordability restrictions recorded in the Cumberland County Registry of Deeds under the Federal LIHTC Program, the provisions of Exhibit D shall apply to the Rental Housing Project for the remainder of the 99-year period.

**b. Cooperative Housing Project.**

- i. The Cooperative Housing Project will include at least 52 units, with a mixture of one-, two-, and three-bedroom units owned by a Limited Equity Cooperative Corporation (the “Co-op”) and leased individually to the resident shareholders of the Co-op (the holding of a Co-op share and lease agreement together constituting a resident’s “cooperative interest”). In no event shall the Cooperative Housing Project include fewer than 12 two-bedroom units and 22 three-bedroom units.
- ii. Upon the issuance of a certificate of occupancy for all or a portion of the Cooperative Housing Project, or at such earlier or later time as the Buyer, in its discretion, may determine, the Buyer shall convey the Cooperative Housing Project to the Co-op organized in accordance with the Maine Cooperative Affordable Housing Ownership Act, 13 M.R.S.A. §1741-1762, as may be amended or any successor provisions thereto (the “Act”). References below to particular provisions of the Act include any successor provisions to the provisions referenced.
- iii. Rent Restrictions. For a period of 99 years after the Cooperative Housing Project has been completed, all residential units in the Cooperative Housing Project shall be affordable to households earning less than or equal to 100% of the area median income (AMI), adjusted for family size, based on figures published annually by HUD for the Portland Metropolitan Statistical Area. If, at a time in the future, HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability. For purposes of this Agreement, “affordable” means that the percentage of income a household is charged in connection with (i) its cooperative interest and other housing expenses, including utilities, shall not exceed 30% of the household’s gross monthly income or (ii) its rent and other housing expenses, including utilities, shall not exceed 30% of the household’s gross income. Minimum household size allowed per unit and the formula for calculating maximum allowable purchase price and monthly rent is detailed on Exhibit D, which is attached hereto and made a part hereof.
- iv. Income Restrictions. Except as provided below regarding the initial sale of cooperative interests, a household may only purchase a cooperative interest in a unit or if its income is not more than 100% of the AMI, adjusted for family size, as published by the U.S. Department of Housing and Urban Development (“HUD”) at the time of purchase. This income test will be used only at the time of the household’s purchase. No income test shall apply for subsequent



transfers to family members (as reasonably defined by the Co-Op Entity) or to a cooperative membership interest which is inherited or transferred upon death to a beneficiary. At the time of the initial sale of cooperative membership interests in the Co-op, up to 20% of the cooperative membership interest may be sold to households earning up to 120% AMI. All subsequent sales must be to households earning no more than 100% of AMI.

- v. The articles of organization for the Co-op shall provide that in the event the Co-op shall be dissolved, its assets will be distributed in accordance with §1754 (6) of the Act. In such dissolution, the Co-Op's assets will be used first to pay all debts and other obligations of the Co-op, then to make any distributions to members required under the Co-Op's limited equity organizational documents, then any remaining balance shall be paid to the City or, at the Buyer's option with the consent of the City not to be unreasonably withheld, to another organization permitted under §1754 (6) of the Act.

c. **Option to Repurchase All or a Portion of the Premises.**

(i) If Buyer, its successors, assigns, or transferees commences no construction of any portion of the Project to be located on the Premises within 32 months of the Effective Date, the City shall have the right, but not the obligation, to repurchase the Premises and all improvements thereon (collectively, the "Property") at the Purchase Price (the "Property Repurchase Price") plus all commercially reasonable and documented, design, development, construction, and regulatory approval expenses ("Approved Expenses") incurred by Buyer, or successors, to the date on which the City notifies Buyer, its successors or assigns, of its intent to exercise its option to repurchase the Property. The parties acknowledge and agree that the Approved Expenses are intended to include only costs incurred directly in connection with the development of the Property for documents, agreements, designs, plats, plans, approvals, and construction, the rights to which may be assigned or transferred to the City. In no event shall the **Approved** Expenses include salaries, developer fees, or the like paid by Buyer, its successors or assigns to their members, shareholders, partners, employees, or agents.

(ii) If Buyer conveys a portion of the Property (the "Co-Op Site"), which conveyance may be by creating and conveying a land condominium unit, to a separate entity (the "Co-Op Entity") for purposes of that entity developing the Cooperative Housing Project, and the Co-Op Entity fails to commence construction of the Cooperative Housing Project within 32 months of the date of this agreement or fails to complete construction of the Cooperative Housing Project within fifty (50) months of the date of this agreement, the City shall have the right, but not the obligation, to purchase the Co-Op Site and all improvements thereon for a price equal to One Hundred Thousand Dollars (\$100,000) ("Co-Op Repurchase Price") plus Approved Expenses incurred by Buyer, or successors, for purposes of developing the Co-Op Site to the date on which the City notifies Buyer, its

successors or assigns, of its intent to exercise its option to repurchase. Any conveyance of the Co-Op Site to the City will (i) be subject to any and all rights of the Rental Housing Entity (defined below) or pursuant to any condominium documents that affect or burden the Co-Op Site and (ii) include any and all rights of the Co-Op Entity over the Rental Housing Site (as defined below) or pursuant to any condominium documents.

(iii) If Buyer conveys a portion of the Property (the “Rental Housing Site”), which conveyance may be by creating and conveying a land condominium unit, to a separate entity (the “the Rental Housing Entity”) for purposes of that entity developing the Rental Housing Project, and the Rental Housing Entity fails to commence construction of the Rental Housing Project within 32 months of the date of this agreement or fails to complete construction of the Rental Housing Project within fifty (50) months of the date of this agreement, the City shall have the right, but not the obligation, to purchase the Rental Housing Site and all improvements thereon for a price equal to \$375,000 (the “Rental Housing Repurchase Price”) plus Approved Expenses incurred by Buyer, or successors, for purposes of developing the Rental Housing Site to that the date on which the Property is conveyed to the City. Any conveyance of the Rental Housing Site to the City will (i) be subject to any and all rights of the Co-Op Housing Entity (defined below) or pursuant to any condominium documents that affect or burden the Rental Housing Site and (ii) include any and all rights of the Rental Housing Entity over the Co-Op Site (as defined below) or pursuant to any condominium documents.

(iv) Any conveyance to the City pursuant to the City’s option to purchase shall be subject to all mortgages of record placed by Buyer, its successors and assigns, but only if such mortgages secure financing of the development of the Premises (the “Permitted Mortgages”). In the event that there are any Permitted Mortgages on the Property, or portion thereof, at the time City exercises its right to repurchase, the parties agree that the City shall have the option to pay the applicable Repurchase Price and Approved Expenses to the first priority mortgagee. City and its successors and assigns agrees to enter into such agreements on reasonable commercial terms as may be requested by the lenders and/or investors of Buyer, its successors and assigns, to provide such lenders or investors notice and cure rights. In furtherance, but not in limitation of the foregoing, as long as MaineHousing holds a Permitted Mortgage on the Premises, no notice given by the City to the Buyer, its successors and assigns under the City’s deed shall be valid unless and until a copy of the notice is given to MaineHousing at Maine Housing at Maine State Housing Authority, 26 Edison Drive, Augusta, Maine 04330, Attn: Legal Department. MaineHousing shall have the right, but not the obligation, to cure any default or perform any obligation under the City’s deed for thirty (30) days beyond any period during which Buyer, its successors and assigns may cure any default or perform any obligation under the City’s deed. If the City exercises any of the above right to purchase, Buyer or its successor

shall convey the Property to the City, free and clear of all encumbrances other than the Permitted Mortgages and any utility easements granted by Buyers its successors and assigns, and assign to the City all contracts, plans, and other documents related to the design, construction, and regulatory approvals for the Project. The City agrees to make reasonable modifications to the provisions regarding the City's repurchase rights to facilitate mortgage and development financing for the Project. The rights to purchase shall be assignable by the City.

(v) Buyer anticipates that the Co-Op entity will grant a mortgage on the Co-Op Site to a lender or investor to finance the purchase of the Co-Op Site and preconstruction development costs including the Co-Op's \$100,000 portion of the acquisition price, Approved Expenses and related customary and commercially reasonable financing costs (such financing is referred to as the "Pre-Development Mortgage Loan"). Buyer, for itself, its successors, and assigns, including the Co-Op Entity, agrees that it will not encumber the Co-Op Site with mortgages other than the mortgage securing Pre-Development Mortgage Loan and that such mortgage shall not exceed in the aggregate the Co-Op Pre-Development Appraised Value (as defined below) at any time prior to the closing of the full construction financing for the Cooperative Housing Project (the "Co-Op Construction Loan Closing"). Prior to the Co-Op Construction Loan Closing, notwithstanding any other provision of this Agreement, the total amount that the City is required to pay to repurchase the Co-Op Site upon exercise of its option as provided above, including Approved Expenses, shall be limited to the then-outstanding balance of the mortgage securing the Pre-Development Mortgage Loan.

The term "Co-Op Pre-Development Appraised Value" means the appraised value of the Co-Op Site as determined by an appraisal, made in accordance with all applicable professional standards, obtained by the lender making the pre-development mortgage loan to the Co-Op entity. The Co-Op entity agrees to provide a copy of that appraisal to the City prior to entering into such mortgage loan.

The provisions of this Section 11(c)(v) shall cease to apply as of the Co-Op Construction Loan Closing.

- d. For all purposes of this Section 11, construction will be deemed completed for a portion of the Project upon the issuance of a Certificate of Occupancy by the City for that portion. Upon termination of the City's option with respect to a portion of the Project, the City will, at the request of the Buyer, its successors and assigns execute and record an affidavit indicating that the City's option has terminated with respect to all or a portion of the Project. Notwithstanding anything else to the contrary in this Section 11, in the event that the City fails to give the notice exercising the City's option on or before the date that is 31 months after the Closing Date, then the City's

option shall terminate automatically without the need for further writing or recording.

- e. Notwithstanding the above provisions, if after closing, Buyer, or its successors, assigns, or transferees determines that it is not feasible to develop the Property as a rental housing project using Maine State Housing Authority financing or as a cooperative leasing/ownership structure, Buyer may develop the Property using a different financing or leasing/ownership structure so long as the unit mix and affordability criteria provided in this Agreement are satisfied. If the Buyer or its successors does so within the time periods specified, the City shall not have the right to repurchase the Property.
- f. The provisions of this Section 11 will survive closing and will be included in greater detail in the City's deed to Buyer or in a declaration of covenants, conditions and restrictions executed before or at the time of Closing, which shall be recorded in the Cumberland County Registry of Deeds.

- 12. **ENTIRE AGREEMENT.** This Agreement represents the entire and complete Agreement and understanding between the parties and supersedes any prior agreement or understanding, written or oral, between the parties with respect to the acquisition or exchange of the Property hereunder. This Agreement cannot be amended except by written instrument executed by City and Buyer.
- 13. **NON-WAIVER.** No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.
- 14. **HEADINGS AND CAPTIONS.** The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.
- 15. **BINDING EFFECT.** This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, administrators, successors and assigns.
- 16. **TIME.** The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.
- 17. **GOVERNING LAW.** This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

**18. NOTICE.** All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after the notice is delivered to an overnight delivery service with delivery confirmation, addressed to the recipients at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

**FOR THE CITY:** City of Portland  
ATTN: City Manager  
389 Congress Street  
Portland, ME 04101

With a copy to: The Office of the Corporation Counsel at the same address.

**FOR BUYER:** Douglass Commons LLC  
c/o The Szanton Company  
482 Congress, Suite 203  
Portland, ME 04101

And to:

Maine Cooperative Development Partners, LLC  
c/o Brian Eng  
6 City Center, Fl. 3  
Portland, ME 04101

With a copy to: John S. Kaminski  
Drummond Woodsum  
84 Marginal Way, Suite 600  
Portland, ME 04101

**19. SIGNATURES; MULTIPLE COUNTERPARTS.** This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

**20. BROKERS.** The City and Buyer each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. Buyer agrees to indemnify and hold harmless City from any claims made by any broker should Buyer's representation in this paragraph be false. Subject to the limitations of liability set forth in the Maine Tort Claims Act, City agrees to indemnify and hold harmless Buyer from any claims made by any broker should City's representation in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive closing.

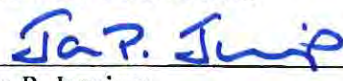


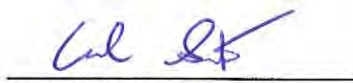
21. RECITALS INCORPORATED BY REFERENCE. The recitals set forth above are incorporated herein by reference and made a part of this Agreement.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed on their behalf by their duly authorized offices or representatives, on the day and year first written above.

  
WITNESS

CITY OF PORTLAND

  
Jon P. Jennings  
Its City Manager

  
WITNESS

DOUGLASS COMMONS, LLC

By:   
Printed Name: Nathan S. Szanton  
Its Manager

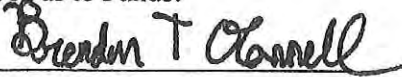
Approved as to Form:

  
City Corporation Counsel's Office

and

By:   
Printed Name: Brian Eng  
Its Manager

Approved as to Funds:

  
City Finance Department

## **6. Photos of the Existing Site**





*Figure 1. Facing approx. north from access driveway.*



*Figure 2. Facing approx. northeast on site.*







*Figure 3. Facing approx. southeast on the site.*



*Figure 4. Facing south on the site.*





**Figure 5.** *Until equipment at access driveway entrance, looking east.*



**Figure 6.** *Facing west towards access driveway in existing parking lot.*

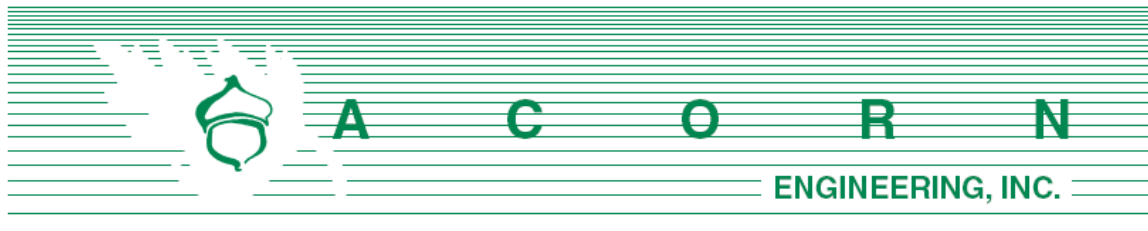




## **7. Basic Standards Submissions**

Please see the attached document, Erosion and Sedimentation Control Plan, developed in accordance with the Basic Standards submission requirements.





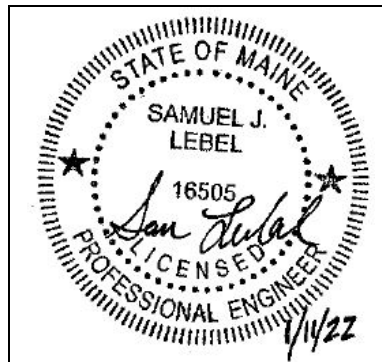
# **K. EROSION & SEDIMENTATION** **CONTROL REPORT**

**Prepared For:**

**Douglass Commons, LLC.  
43 & 91 Douglass Street  
Portland, Maine 04101**

**Prepared By:**

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



**January 2022**

## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by Douglass Commons, LLC. to provide civil engineering services for the proposed redevelopment of 57 Douglass Street located within the R-5a Zoning District in Portland, Maine. The 3.34-acre parcel was previously the site of a school building and is now vacant. The built-out site will consist of eight stand-alone buildings of 120 residential dwelling units.

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

### **1.0 EXISTING CONDITIONS**

The proposed project site is located off an access road from Douglass Street adjacent to Douglass Park and Interstate 295. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc., dated March 1, 2021.

The property is in the R-5A Residential Zone. Abutting Uses include:

- North                      Douglass Park
- West                        Residential
- South/East                Route 295

The site is currently vacant and was once occupied by the West School. The site in its existing condition is split a ridge middle of the property that drains water in roughly two directions, to the north and south. A small portion of the site drains to the playing fields to the east. The adjacent I-295 corridor basin contributes run-off to the site through an existing culvert. The grades on-site are mostly gentle in the 1 to 5% range with some steeper slopes of 10-15% on the edges of the property in the east and south .

#### **1.1 Existing Soils**

Onsite soil information includes the following:

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

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



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

| Table 1 - “K” Value       |            |            |
|---------------------------|------------|------------|
| Soils Type                | Subsurface | Substratum |
| Au Gres Loamy Sand        | .15        | .15        |
| Deerfield Loamy Fine Sand | .20        | .20        |

The soil “K” value for the soil, listed above, shows a low susceptibility to erosion, as derived from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although the soil “K” value shows a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be important to limit erosion during large storm events.

#### 1.2 Existing Erosion Problems

There are no signs of erosion.

#### 1.3 Critical Areas

There are no critical areas that require special attention during construction.

#### 1.4 Protected Natural Resource

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

#### 1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years. The West School was demolished on-site within the last few years.

#### 1.6 Timber Harvesting

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



## 2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

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

### 2.1 Temporary Erosion Control Measures

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

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

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

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

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

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American





Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

- 2.1.5 Douglass Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.
- 2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.
- 2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be “toed” into the ground.
- 2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached  $\frac{1}{2}$  the design height.
- 2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.
- 2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.
- 2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.
- 2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.
- 2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.



## 2.2 Permanent Erosion Control Measures

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

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

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

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

## 3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Construction Management & Erosion Control Plan is included within the plan set.

## 4.0 DETAILS AND SPECIFICATIONS

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

## 5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

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

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

The following measures shall be implemented during winter construction periods:

### 5.1 Sediment Barriers

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



## 5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1<sup>st</sup>, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

## 5.3 Soil Stockpiling

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

## 5.4 Seeding

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

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



## 5.5 Over winter stabilization of disturbed soils

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

- Stabilize the soil with temporary vegetation – By October 1<sup>st</sup>, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1<sup>st</sup>, then mulch the area for over-winter protection.
- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1<sup>st</sup>. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.
- Stabilize the soil with mulch – By November 15<sup>th</sup>, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

## 5.6 Over winter stabilization of disturbed slopes

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

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1<sup>st</sup> the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1<sup>st</sup>, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.
- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1<sup>st</sup>. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.



- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15<sup>th</sup>. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15<sup>th</sup>. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

## 6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a “storm event”. A “storm event” shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

### 6.1 Sediment Barriers

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

### 6.2 Stabilized Stone Construction Entrances

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

### 6.3 Mulched Areas





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

#### 6.4 Dust Control

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

#### 6.5 Stormwater Appurtenances

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

#### 6.6 Erosion and Sedimentation Control Inspections:

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

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

Qualifications:

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

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



## 7.0 IMPLEMENTATION SCHEDULE

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

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

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

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

## 8.0 CONCLUSION

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



## 9.0 ATTACHMENTS

- Temporary Seeding Plan



## TEMPORARY SEEDING PLAN

### Site Preparation

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

### Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O) or equivalent.

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

### Seeding

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

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

### Mulching

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

### Conclusion

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



## **8. General Standards Submissions**

The following Stormwater Management Report and corresponding attachments have been developed in accordance with the General Standards submission requirements.





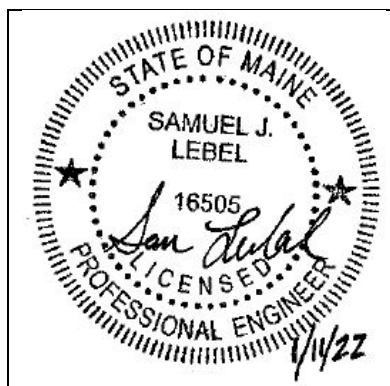
# **STORMWATER MANAGEMENT** **REPORT**

**Prepared For:**

**Douglass Commons, LLC.  
57 Douglass Street  
Portland, Maine 04101**

**Prepared By:**

**Acorn Engineering, Inc.  
PO Box 3372  
Portland, Maine 04104**



**January 2022**



## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by Douglass Commons, LLC. to provide civil engineering services for the proposed redevelopment of 57 Douglass Street located within the R-5A Zoning District in Portland, Maine. The 3.34-acre parcel was previously the site of a school building and is now vacant. The built-out site will consist of eight stand-alone buildings comprising 120 residential units, the majority of which will be deed-restricted for affordability.

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

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

The property consists of approximately 3.34 acres of land in Portland's Libbytown neighborhood. The site is currently composed of approximately 2.16 acres impervious area. The proposed project will decrease the impervious area by approximately 0.36 acres to 1.90 acres. The project will result in redevelopment of non-roof impervious area greater than 5,000 SF and therefore will be required to provide treatment for a portion of the site.

## **EXISTING CONDITIONS**

The proposed project site is located at 57 Douglass Street. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc., dated March 1, 2021.

The existing property is covered by approximately 65% impervious surfaces, whereupon a school and its associated infrastructure was formerly located. The existing site is vacant and has moderate slopes within the center of the site that form a plateau, grading down to perimeter. The site is split into three subcatchments, two larger and one smaller. Subcatchment 1 drains the gently sloping northerly portion of the site and a small section of the existing access driveway to the MS4 within Douglass Street. Subcatchment 2 drains the southerly portion of the site to a basin shared with the off-site drainage of residences and the western flanks of I-295, which were also modeled. Subcatchment 3 is a small section of the eastern part of the site that drains to the playing fields east and north of the site.

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



## **PROPOSED DEVELOPMENT**

The project features the development of a planned residential unit development (PRUD) and generally follows the principles of cluster subdivision planning where infrastructure is denser and more efficient and as a result, greater uninterrupted open space opportunities are available. The site will consist of eight separate residential buildings with a total of 120 dwelling units. Each building will be served with associated parking and utilities. Pedestrian access to the site will be provided along the access drive from Douglass Street and through paved foot paths from Dougherty Park. The development will be served by Portland Water District, Department of Public Works (sewer/storm), Unitil (natural gas), CMP (electric), Charter (cable), and Fairpoint (telephone).

The site has been graded to slope with the existing topography while providing for appropriate slopes in the parking lot. The slopes on the outside of the parking areas that are not part of a stormwater system will be appropriately stabilized per the specifications in the plans and are anticipated to be heavily landscaped for further slope protection and buffering. The majority of the site's runoff, including 100% of the new impervious area, will be collected via a storm drain system and directed to the Douglass Street Municipal Separated Storm Sewer System (MS4).

The proposed project will decrease the site's impervious area by approximately 0.36 acres, but will include redevelopment of non-roof impervious area greater than 5,000 square feet, triggering the City's water quality treatment requirement. Water quality treatment will be provided by collecting the runoff on over 75% of the parking lot area and allowing it to flow to a vegetated underdrained soil filter (VUSF) system and proprietary high-flow rain gardens for treatment prior to discharging into the MS4 within Douglass Street. The project has been designed to meet and exceed the Chapter 500 General Standards.

## **BASIC STANDARDS – EROSION & SEDIMENTATION CONTROL**

The development shall provide erosion and sedimentation control, inspection and maintenance, and housekeeping standards as specified in the attached Exhibit K: Erosion and Sedimentation Control Report. Grading and construction activity will not impede or otherwise alter drainageways to have an unreasonable adverse impact on an adjacent downgradient parcels.

## **GENERAL STANDARDS - WATER QUALITY**

When analyzing the Maine DEP Redevelopment Standards and the associated ranked impacts, the project results in a negative number and therefore treatment is not required per State law. However, the development will provide water quality treatment for no less than 50% of the non-roof redeveloped impervious area, consistent with the City of Portland's technical manual. Water quality treatment will be provided using an under-drained soil filter system and proprietary high-flow media rain gardens, which are approved systems per Appendix B of the Maine Stormwater BMP Manual. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff. The rain gardens are based off a Focal Point system manufactured by ACF Environmental, but may be substituted at the time of construction for an approved



equal such as a Filterra manufactured by Contech. The footprint of the filter media is 20 square feet and has an infiltration rate of 100 inches per hour. Above the media, the garden will allow for 6 inches of ponding before overflowing into an overflow beehive grate which bypasses the filter media. Given the site is reducing the net peak flow leaving the site and is discharging to a 60" MS4 that freely flows to a major river segment, storage tanks are not being proposed below the rain gardens. From a stormwater perspective, the focus is on providing water quality treatment given the watershed's discharge and conveyance system are not overburdened.

The treatment of the impervious areas are as follows:

| <b>Table 1 – Impervious Area Treatment Table</b> |                                     |                                           |                                                       |                                   |
|--------------------------------------------------|-------------------------------------|-------------------------------------------|-------------------------------------------------------|-----------------------------------|
| Existing Impervious Area (SF)                    | Total Proposed Impervious Area (SF) | Non-Roof Redeveloped Impervious Area (SF) | Proposed Non-Roof Impervious Area with Treatment (SF) | Treated Non-Roof Redeveloped Area |
| 94,185                                           | 78,656                              | 43,757                                    | 23,370                                                | 53%                               |

As shown above, the project anticipates meeting the required treatment for new impervious and developed surfaces with the soil filter BMPs.

#### *Filter Area Sizing*

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

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

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

| <b>Table 2 – Total Filter Surface Area</b> |                           |                         |
|--------------------------------------------|---------------------------|-------------------------|
|                                            | Required Filter Area (SF) | Actual Filter Area (SF) |
| VUSF 1                                     | 465                       | 465                     |

As shown above, the project anticipates meeting and exceeding the required treatment for 50% of the redeveloped impervious surfaces.

#### *Water Quality Volume*

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

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

| <b>Table 3 – Water Quality Volume</b> |                                      |                                    |                                          |                                           |
|---------------------------------------|--------------------------------------|------------------------------------|------------------------------------------|-------------------------------------------|
|                                       | Tributary<br>Impervious<br>Area (SF) | Tributary<br>Pervious Area<br>(SF) | Water Quality<br>Volume Required<br>(CF) | System Storage<br>Volume Provided<br>(CF) |
| VUSF 1                                | 8,274                                | 2,578                              | 775                                      | 1,052                                     |

As seen above, the provide water quality volume above the soil filter and below the overflow grate exceeds the requirement. Values from the HydroCAD calculations are attached to this report to demonstrate compliance with this standard.

As shown above, the project anticipates meeting and exceeding the required treatment for new impervious surfaces using the VUSF and proprietary high-flow media rain gardens.

### **FLOODING STANDARD – WATER QUANTITY**

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

#### *Time of Concentration (Tc)*

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slopes. HydroCAD then calculated the Tc's and incorporated the total Tc for each subcatchment into the model. When the calculated Tc was less than six minutes (0.1 hours), a direct entry of six minutes was used as advised by the TR-55 model. Consistent with previous submissions and best practices, the sheet flow length for any Tc path was capped at 100 feet.

#### *Curve Number (CN)*

Within the pre-development model, the vegetated areas were considered grass cover in fair or good condition, depending on the area. as demonstrated by aerial images and site visits. The post development landscaped areas were given a good rating all within the A hydrologic soil group. This is assumption is reinforced given the aggressive landscape plan which will feature more porous conditions that are appropriately mulched along with future extensive root systems and canopy cover that will exist once the landscaping has matured.





### *HydroCAD Adjustments*

A simulation water quality outlet (vertical orifice) is modeled to mimic the minimum 24-hour release time through the soil filter media. This is completed by adjusting the rainfall amount in HydroCAD until the inflow volume is equal to or greater than the calculated water quality volume. The storm events are modeled as type III, 24-hour storm events in HydroCAD.

### *Pre-development Calculations*

The site consists of gravel and grassed areas in the predevelopment condition. For the purposes of this analysis, the land has been divided into three sub-catchments. Sub-catchment 1 drains the gently sloping northerly portion of the site and a small section of the existing access driveway, terminating in the storm drains and MS4 within Douglass Street (POI #1). Subcatchment 2 drains the southerly portion of the site to a basin shared with the off-site drainage of residences and the western flanks of I-295, which were also modeled. The slopes are in the 5-10% range. There is an existing culvert under the State's paved pathway that divides I-295 land with the proposed site, that facilitates flow from the grassed basin to the Site under the pathway. This low point was modeled as POI #2. Subcatchment 3 is a small section of the eastern part of the site with 2-5% slopes that drains to the playing fields east and north of the site which was modeled as POI #3.

Peak flow rates for the pre-development storm events are as follows:

| <b>Table 5 – Pre-Development Peak Stormwater Flows</b> |                                 |                                  |                                  |
|--------------------------------------------------------|---------------------------------|----------------------------------|----------------------------------|
| <b>Drainage Area</b>                                   | <b>2-Year Storm Event (cfs)</b> | <b>10-Year Storm Event (cfs)</b> | <b>25-Year Storm Event (cfs)</b> |
| POI #1                                                 | 3.2                             | 5.4                              | 7.3                              |
| POI #2                                                 | 0.4                             | 1.8                              | 3.5                              |
| POI #3                                                 | 0.7                             | 1.5                              | 2.1                              |

### *Post-development Calculations*

In the post development condition, over 95% of runoff from the site will be collected in stormwater infrastructure and piped to the MS4 within Douglass Street. The proposed project will decrease the site's impervious area by approximately 0.36 acres. Water quality treatment will be provided by collecting the runoff on over 75% of the parking lot area and allowing it to flow to an under-drained soil filter system and proprietary high-flow media rain gardens for treatment prior to discharging into the combined sewer within Douglass Street.

The post-development calculations include changes to the land use, and the compensation provided by the VUSF, rain gardens, and associated engineered orifices. The following table represents comparison of pre- development and post-development condition peak runoff rates for the proposed development and tributary areas.



| <b>Table 6 – Post-Development Peak Stormwater Flows</b> |                                 |                                  |                                  |
|---------------------------------------------------------|---------------------------------|----------------------------------|----------------------------------|
| <b>Drainage Area</b>                                    | <b>2-Year Storm Event (cfs)</b> | <b>10-Year Storm Event (cfs)</b> | <b>25-Year Storm Event (cfs)</b> |
| POI #1                                                  | 3.8                             | 7.7                              | 11.0                             |
| POI #2                                                  | 0                               | 0.1                              | 0.3                              |
| POI #3                                                  | 0                               | 0                                | 0                                |

| <b>Table 7 – Comparison of Peak Flows</b> |                                 |             |                                  |             |                                  |             |
|-------------------------------------------|---------------------------------|-------------|----------------------------------|-------------|----------------------------------|-------------|
| <b>Drainage Area</b>                      | <b>2-Year Storm Event (cfs)</b> |             | <b>10-Year Storm Event (cfs)</b> |             | <b>25-Year Storm Event (cfs)</b> |             |
|                                           | <i>Pre</i>                      | <i>Post</i> | <i>Pre</i>                       | <i>Post</i> | <i>Pre</i>                       | <i>Post</i> |
| POI #1                                    | 3.2                             | 3.8         | 5.4                              | 7.7         | 7.3                              | 11.0        |
| POI #2                                    | 0.4                             | 0           | 1.8                              | 0.1         | 3.5                              | 0.3         |
| POI #3                                    | 0.7                             | 0           | 1.5                              | 0           | 2.1                              | 0           |
| POI #4 (Total Peak Discharge)             | <b>4.3</b>                      | <b>3.8</b>  | <b>8.7</b>                       | <b>7.8</b>  | <b>12.9</b>                      | <b>11.3</b> |

As shown in Tables 6 and 7, the net impact of the post development peak flows will remain below the predevelopment levels. A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

## **SOILS**

Onsite soil information is sourced from the *Soil Conservation Service Medium Intensity Soil Survey for Cumberland County consistent with the USDA Soil Survey*.

The area within and surrounding the project includes soils types listed in the table below.

| <b>Table 8 – Hydrologic Soil Group</b> |            |
|----------------------------------------|------------|
| <b>Soils Type</b>                      | <b>HSG</b> |
| Deerfield Loamy Fine Sand, 3-8% slopes | A          |

The HSG for the soils, listed above, show soils having a high infiltration rate (low runoff potential). These consist mainly of deep, well drained sands, with a high rate of water transmission.

## **Conclusion**

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way.



## **Attachments**

Attachment A: Pre-Development Watershed Map

Attachment B: Post-Development Watershed Map

Attachment C: Redevelopment Pollutant Ranking Exhibit

Attachment D: HydroCAD Calculations

Attachment E: Soil Survey



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# Attachment A

## Pre-Development Watershed Map









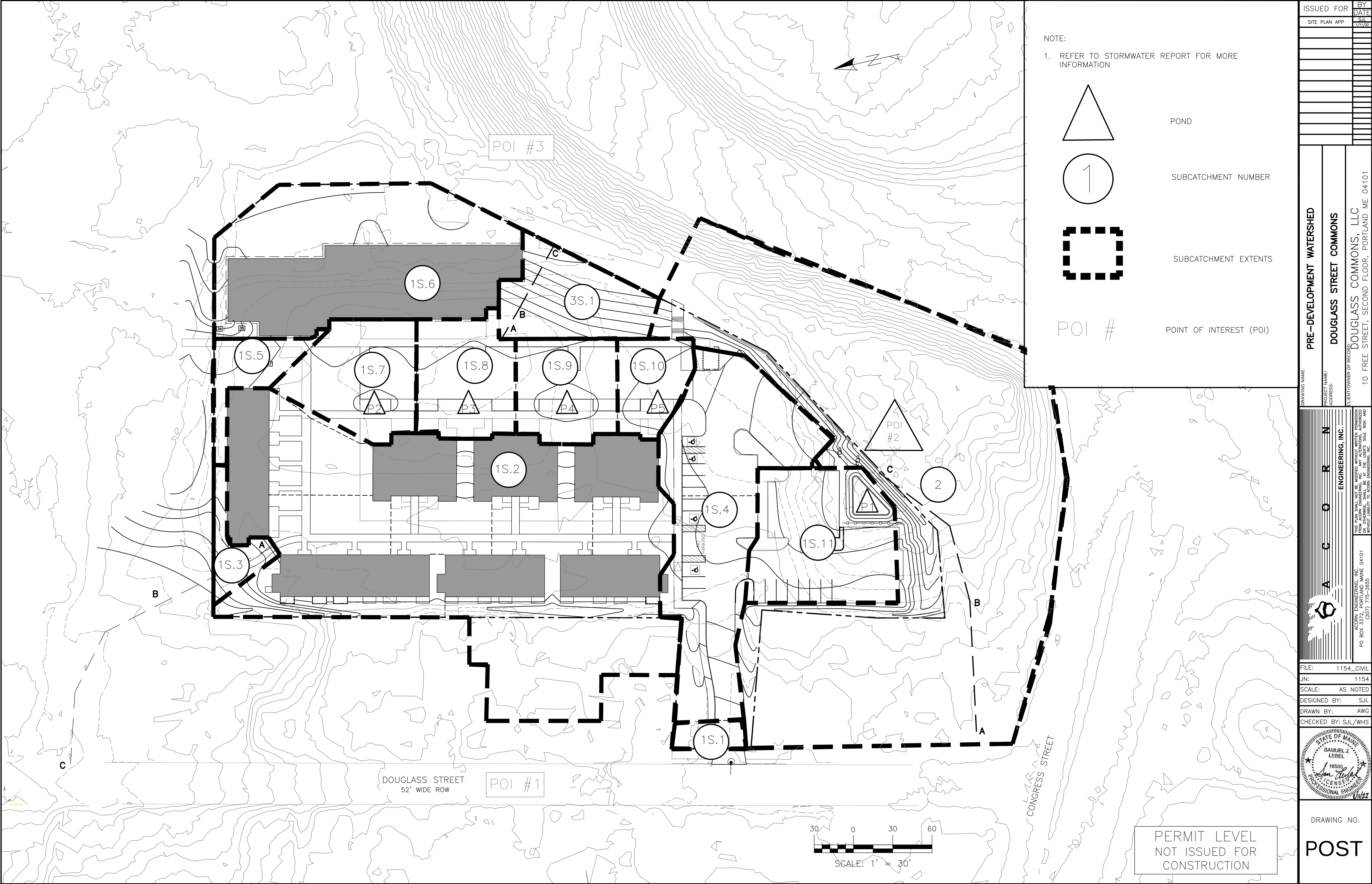
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# Attachment B

## Post-Development Watershed Map







|                                                                                                                                                                           |                   |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|
| ISSUED FOR                                                                                                                                                                |                   | BY      |
| SITE PLAN APP                                                                                                                                                             |                   | DATE    |
|                                                                                                                                                                           |                   | 1/21/22 |
| PRE-DEVELOPMENT WATERSHED                                                                                                                                                 |                   |         |
| DOUGLASS STREET COMMONS                                                                                                                                                   |                   |         |
| DOUGLASS COMMONS, LLC                                                                                                                                                     |                   |         |
| 10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101                                                                                                                           |                   |         |
| DRAWING NAME:                                                                                                                                                             |                   |         |
| PROJECT NAME/ ADDRESS:                                                                                                                                                    | ENGINEERING, INC. |         |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF THE ENGINEER. ANY CHANGES SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC. |                   |         |
| FILE:                                                                                                                                                                     | 1154_CIVIL        |         |
| JN:                                                                                                                                                                       | 1154              |         |
| SCALE:                                                                                                                                                                    | AS NOTED          |         |
| DESIGNED BY:                                                                                                                                                              | SJL               |         |
| DRAWN BY:                                                                                                                                                                 | AWG               |         |
| CHECKED BY:                                                                                                                                                               | SJL/WHs           |         |
|                                                                                                                                                                           |                   |         |
| DRAWING NO.                                                                                                                                                               |                   |         |
| POST                                                                                                                                                                      |                   |         |



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# Attachment C

## Redevelopment Pollutant Ranking Exhibit







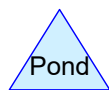
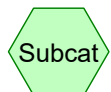
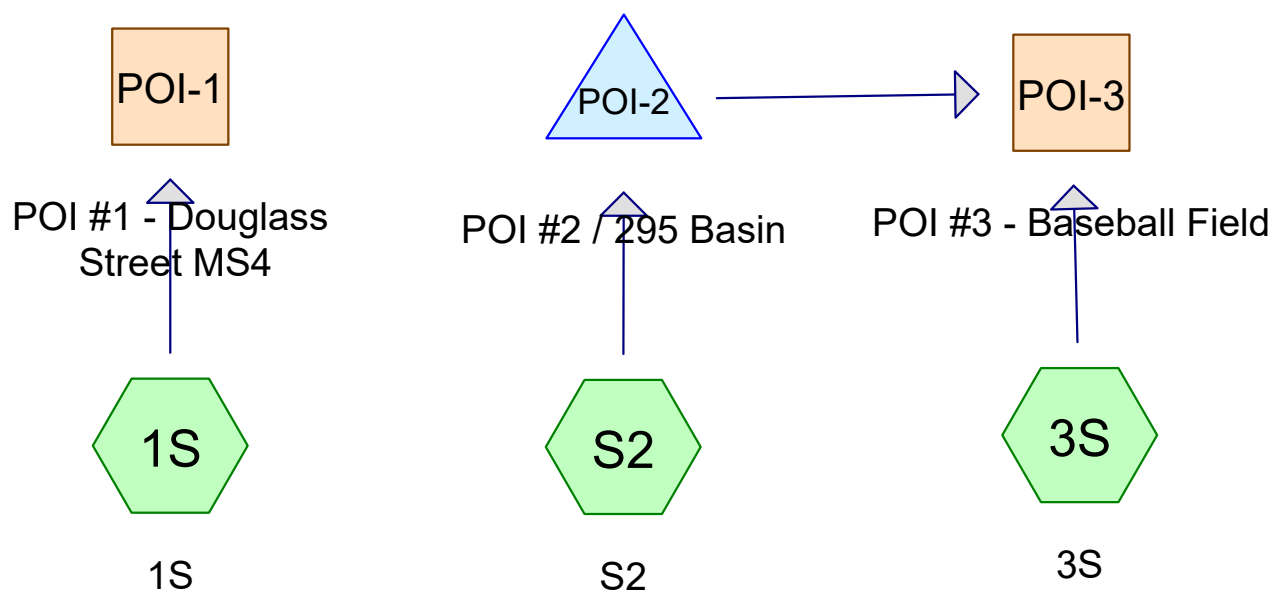


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# Attachment D

## HydroCAD Calculations





**Routing Diagram for Pre Development 1.11**  
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### Area Listing (all nodes)

| Area<br>(acres) | CN        | Description<br>(subcatchment-numbers)        |
|-----------------|-----------|----------------------------------------------|
| 0.204           | 77        | 1/8 acre lots, 65% imp, HSG A (1S)           |
| 1.085           | 49        | 50-75% Grass cover, Fair, HSG A (1S, 3S, S2) |
| 0.571           | 96        | Gravel (S2)                                  |
| 0.636           | 96        | Gravel surface (1S)                          |
| 0.353           | 96        | Gravel surface, HSG A (3S)                   |
| 0.072           | 98        | Paved walking path (S2)                      |
| 0.496           | 98        | Pavement / Roof (1S)                         |
| 0.321           | 98        | Single family roofs and driveways (S2)       |
| 1.212           | 32        | Woods/grass comb., Good, HSG A (S2)          |
| <b>4.951</b>    | <b>70</b> | <b>TOTAL AREA</b>                            |

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### Soil Listing (all nodes)

| Area<br>(acres) | Soil<br>Group | Subcatchment<br>Numbers |
|-----------------|---------------|-------------------------|
| 2.855           | HSG A         | 1S, 3S, S2              |
| 0.000           | HSG B         |                         |
| 0.000           | HSG C         |                         |
| 0.000           | HSG D         |                         |
| 2.096           | Other         | 1S, S2                  |
| <b>4.951</b>    |               | <b>TOTAL AREA</b>       |

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**Ground Covers (all nodes)**

| HSG-A<br>(acres) | HSG-B<br>(acres) | HSG-C<br>(acres) | HSG-D<br>(acres) | Other<br>(acres) | Total<br>(acres) | Ground<br>Cover                   | Subcatchment<br>Numbers              |
|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------------|--------------------------------------|
| 0.204            | 0.000            | 0.000            | 0.000            | 0.000            | 0.204            | 1/8 acre lots, 65% imp            | 1<br>S                               |
| 1.085            | 0.000            | 0.000            | 0.000            | 0.000            | 1.085            | 50-75% Grass cover, Fair          | 1<br>S,<br><br>3<br>S,<br><br>S<br>2 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.571            | 0.571            | Gravel                            | S<br>2                               |
| 0.353            | 0.000            | 0.000            | 0.000            | 0.636            | 0.990            | Gravel surface                    | 1<br>S,<br><br>3<br>S                |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.072            | 0.072            | Paved walking path                | S<br>2                               |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.496            | 0.496            | Pavement / Roof                   | 1<br>S                               |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.321            | 0.321            | Single family roofs and driveways | S<br>2                               |
| 1.212            | 0.000            | 0.000            | 0.000            | 0.000            | 1.212            | Woods/grass comb., Good           | S<br>2                               |
| <b>2.855</b>     | <b>0.000</b>     | <b>0.000</b>     | <b>0.000</b>     | <b>2.096</b>     | <b>4.951</b>     | <b>TOTAL AREA</b>                 |                                      |



**Pre Development 1.11***Type III 24-hr 2-year Rainfall=3.10"*

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Time span=1.00-36.00 hrs, dt=0.10 hrs, 351 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: 1S**

Runoff Area=68,602 sf 39.93% Impervious Runoff Depth=1.83"  
Tc=6.0 min CN=87 Runoff=3.16 cfs 0.240 af

**Subcatchment3S: 3S**

Runoff Area=24,703 sf 0.00% Impervious Runoff Depth=1.20"  
Tc=6.0 min CN=78 Runoff=0.73 cfs 0.057 af

**SubcatchmentS2: S2**

Runoff Area=122,360 sf 14.00% Impervious Runoff Depth=0.31"  
Flow Length=233' Tc=16.0 min CN=58 Runoff=0.38 cfs 0.072 af

**Reach POI-1: POI #1 - Douglass Street MS4**

Inflow=3.16 cfs 0.240 af  
Outflow=3.16 cfs 0.240 af

**Reach POI-3: POI #3 - Baseball Field**

Inflow=0.73 cfs 0.057 af  
Outflow=0.73 cfs 0.057 af

**Pond POI-2: POI #2 / 295 Basin**

Peak Elev=27.00' Storage=1,609 cf Inflow=0.38 cfs 0.072 af  
Discarded=0.05 cfs 0.061 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.061 af

**Total Runoff Area = 4.951 ac Runoff Volume = 0.368 af Average Runoff Depth = 0.89"**  
**79.36% Pervious = 3.929 ac 20.64% Impervious = 1.022 ac**

**Pre Development 1.11**

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Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Subcatchment 1S: 1S**

Runoff = 3.16 cfs @ 12.10 hrs, Volume= 0.240 af, Depth= 1.83"

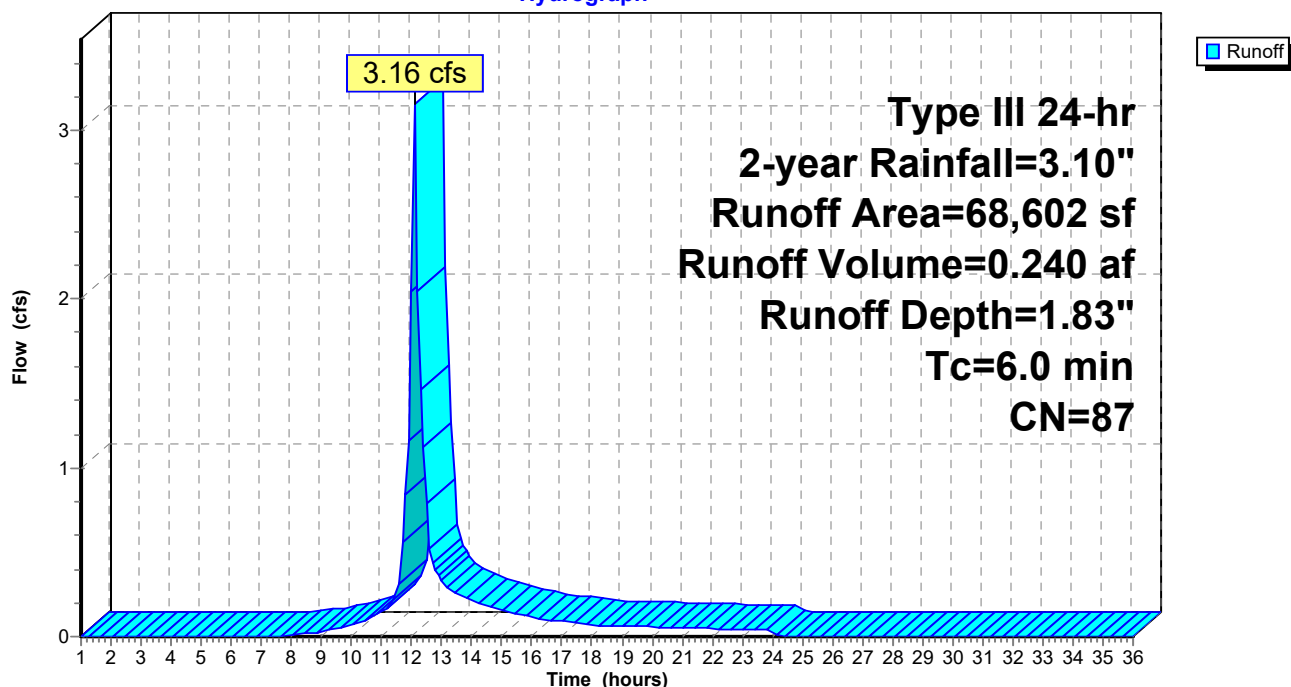
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 2-year Rainfall=3.10"

|   | Area (sf) | CN | Description                     |
|---|-----------|----|---------------------------------|
| * | 21,601    | 98 | Pavement / Roof                 |
| * | 27,720    | 96 | Gravel surface                  |
|   | 10,373    | 49 | 50-75% Grass cover, Fair, HSG A |
|   | 8,908     | 77 | 1/8 acre lots, 65% imp, HSG A   |
|   | 68,602    | 87 | Weighted Average                |
|   | 41,211    |    | 60.07% Pervious Area            |
|   | 27,391    |    | 39.93% Impervious Area          |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S: 1S**

Hydrograph



**Pre Development 1.11**

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Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Subcatchment 3S: 3S**

Runoff = 0.73 cfs @ 12.11 hrs, Volume= 0.057 af, Depth= 1.20"

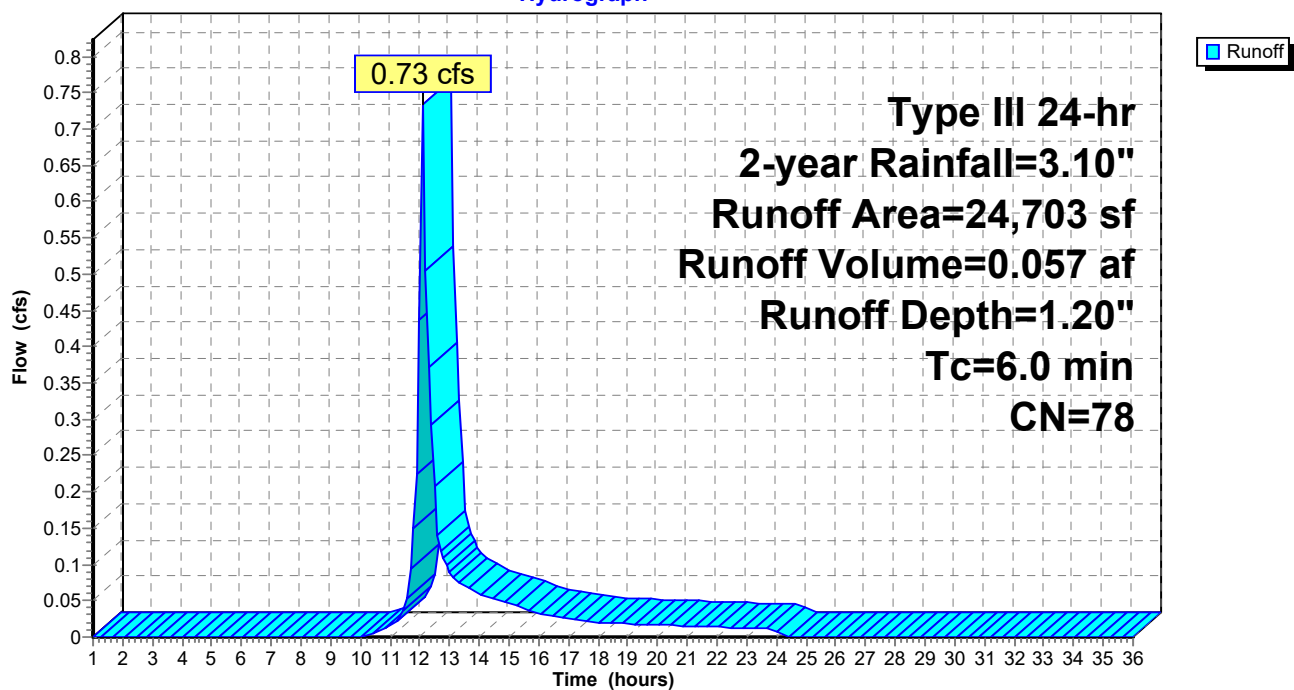
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 2-year Rainfall=3.10"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 15,393    | 96 | Gravel surface, HSG A           |
| 9,310     | 49 | 50-75% Grass cover, Fair, HSG A |
| 24,703    | 78 | Weighted Average                |
| 24,703    |    | 100.00% Pervious Area           |

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

**Subcatchment 3S: 3S**

Hydrograph



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Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Subcatchment S2: S2**

Runoff = 0.38 cfs @ 12.44 hrs, Volume= 0.072 af, Depth= 0.31"

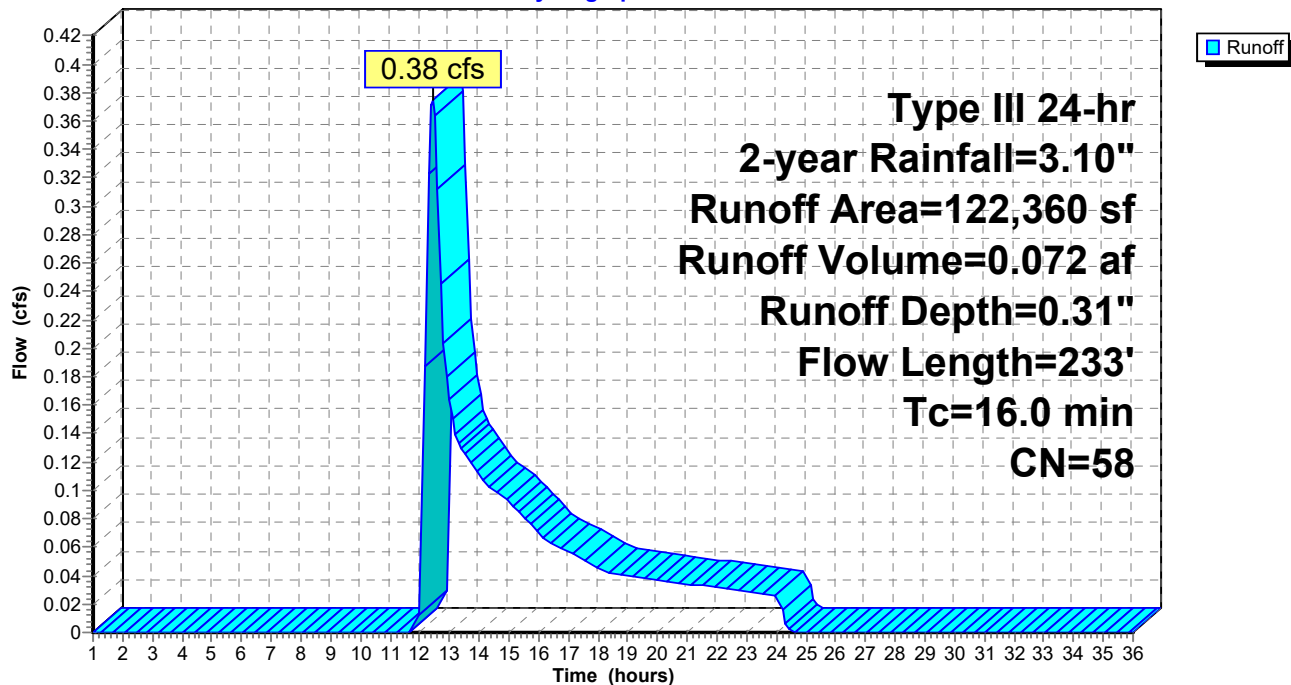
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 2-year Rainfall=3.10"

|   | Area (sf) | CN | Description                       |
|---|-----------|----|-----------------------------------|
| * | 13,972    | 98 | Single family roofs and driveways |
| * | 3,155     | 98 | Paved walking path                |
|   | 52,792    | 32 | Woods/grass comb., Good, HSG A    |
| * | 24,853    | 96 | Gravel                            |
|   | 27,588    | 49 | 50-75% Grass cover, Fair, HSG A   |
|   | 122,360   | 58 | Weighted Average                  |
|   | 105,233   |    | 86.00% Pervious Area              |
|   | 17,127    |    | 14.00% Impervious Area            |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                          |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------------------------------------|
| 14.7     | 100           | 0.0500        | 0.11              |                | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"                              |
| 1.3      | 133           | 0.0600        | 1.71              |                | <b>Shallow Concentrated Flow, B to C (capped 100' sheet flow)</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 233           | Total         |                   |                |                                                                                                      |

**Subcatchment S2: S2**

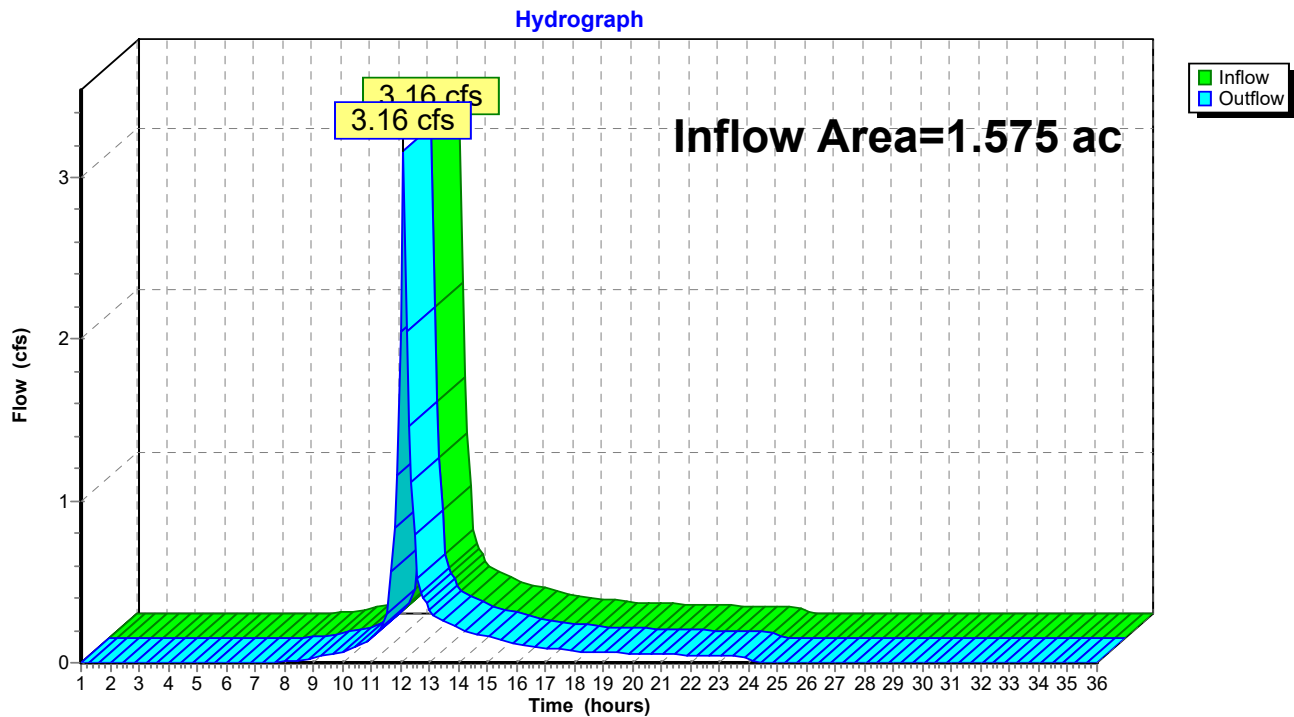
Hydrograph



**Summary for Reach POI-1: POI #1 - Douglass Street MS4**

Inflow Area = 1.575 ac, 39.93% Impervious, Inflow Depth = 1.83" for 2-year event  
Inflow = 3.16 cfs @ 12.10 hrs, Volume= 0.240 af  
Outflow = 3.16 cfs @ 12.10 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

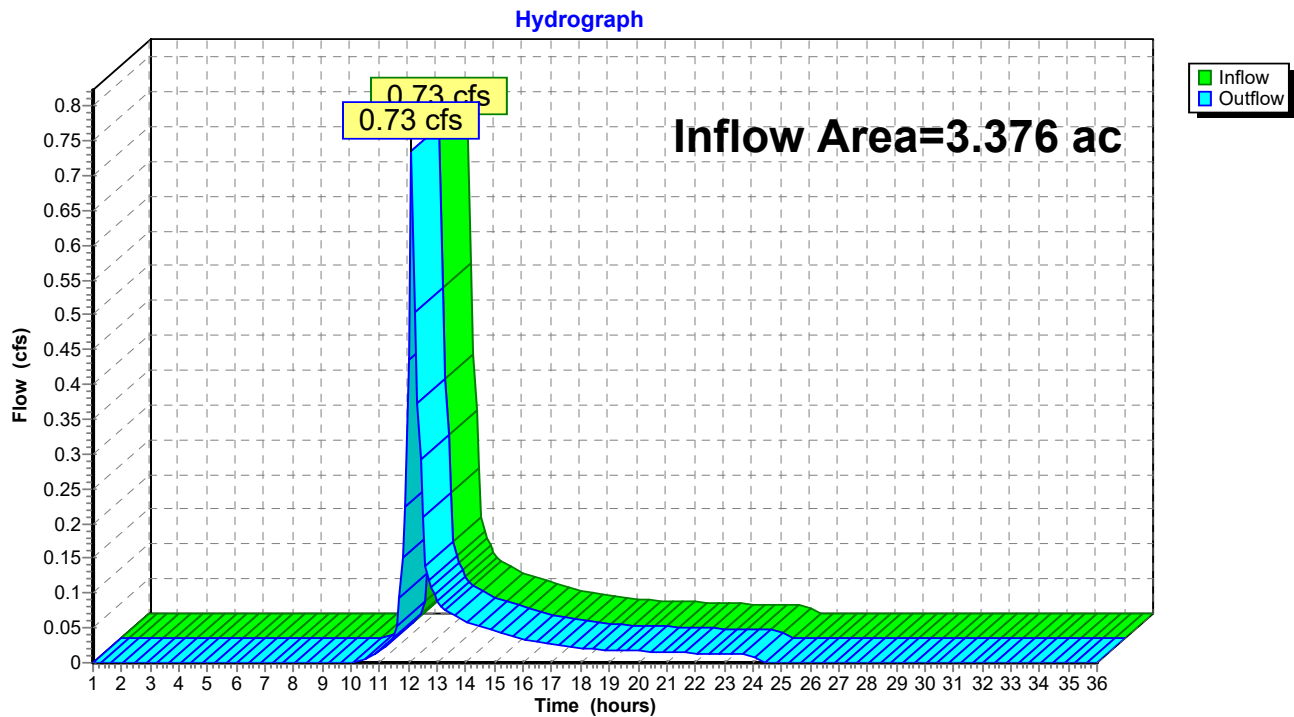
**Reach POI-1: POI #1 - Douglass Street MS4**



**Summary for Reach POI-3: POI #3 - Baseball Field**

Inflow Area = 3.376 ac, 11.65% Impervious, Inflow Depth = 0.20" for 2-year event  
Inflow = 0.73 cfs @ 12.11 hrs, Volume= 0.057 af  
Outflow = 0.73 cfs @ 12.11 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-3: POI #3 - Baseball Field**

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Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Pond POI-2: POI #2 / 295 Basin**

Inflow Area = 2.809 ac, 14.00% Impervious, Inflow Depth = 0.31" for 2-year event  
 Inflow = 0.38 cfs @ 12.44 hrs, Volume= 0.072 af  
 Outflow = 0.05 cfs @ 17.91 hrs, Volume= 0.061 af, Atten= 88%, Lag= 328.3 min  
 Discarded = 0.05 cfs @ 17.91 hrs, Volume= 0.061 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
 Peak Elev= 27.00' @ 17.91 hrs Surf.Area= 4,488 sf Storage= 1,609 cf

Plug-Flow detention time= 445.4 min calculated for 0.061 af (85% of inflow)  
 Center-of-Mass det. time= 381.4 min ( 1,328.8 - 947.4 )

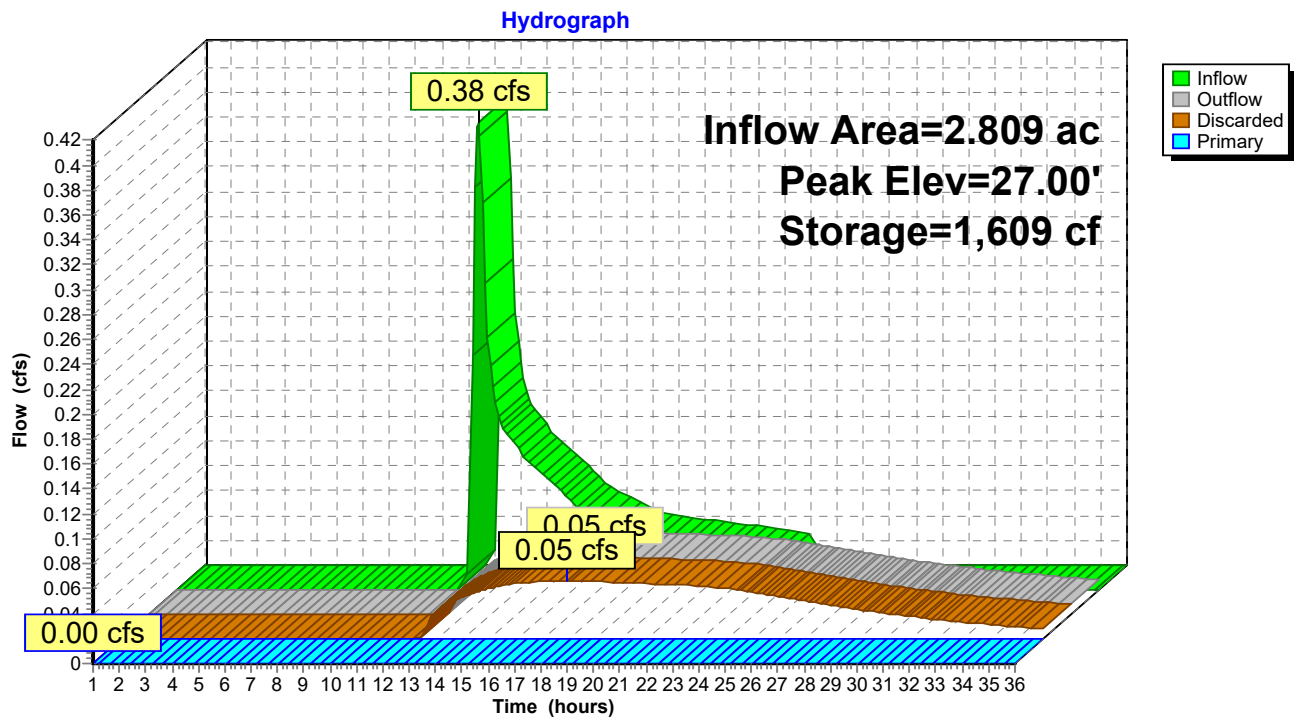
| Volume              | Invert               | Avail.Storage             | Storage Description                                        |
|---------------------|----------------------|---------------------------|------------------------------------------------------------|
| #1                  | 26.30'               | 274,731 cf                | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet)                                  |
| 26.30               | 100                  | 0                         | 0                                                          |
| 27.00               | 4,475                | 1,601                     | 1,601                                                      |
| 28.00               | 12,191               | 8,333                     | 9,934                                                      |
| 29.00               | 18,000               | 15,096                    | 25,030                                                     |
| 30.00               | 32,600               | 25,300                    | 50,330                                                     |
| 33.00               | 41,943               | 111,815                   | 162,144                                                    |
| 35.00               | 70,644               | 112,587                   | 274,731                                                    |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                     |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 32.40' | <b>20.0' long x 15.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #2     | Discarded | 26.60' | <b>0.800 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                                                 |

**Discarded OutFlow** Max=0.05 cfs @ 17.91 hrs HW=27.00' (Free Discharge)  
 ↑ **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)  
 ↑ **1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Pond POI-2: POI #2 / 295 Basin



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Time span=1.00-36.00 hrs, dt=0.10 hrs, 351 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: 1S

Runoff Area=68,602 sf 39.93% Impervious Runoff Depth=3.19"  
Tc=6.0 min CN=87 Runoff=5.43 cfs 0.419 af

### Subcatchment3S: 3S

Runoff Area=24,703 sf 0.00% Impervious Runoff Depth=2.38"  
Tc=6.0 min CN=78 Runoff=1.48 cfs 0.112 af

### SubcatchmentS2: S2

Runoff Area=122,360 sf 14.00% Impervious Runoff Depth=0.96"  
Flow Length=233' Tc=16.0 min CN=58 Runoff=1.84 cfs 0.224 af

### Reach POI-1: POI #1 - Douglass Street MS4

Inflow=5.43 cfs 0.419 af  
Outflow=5.43 cfs 0.419 af

### Reach POI-3: POI #3 - Baseball Field

Inflow=1.48 cfs 0.112 af  
Outflow=1.48 cfs 0.112 af

### Pond POI-2: POI #2 / 295 Basin

Peak Elev=27.59' Storage=5,560 cf Inflow=1.84 cfs 0.224 af  
Discarded=0.13 cfs 0.192 af Primary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.192 af

**Total Runoff Area = 4.951 ac Runoff Volume = 0.755 af Average Runoff Depth = 1.83"**  
**79.36% Pervious = 3.929 ac 20.64% Impervious = 1.022 ac**

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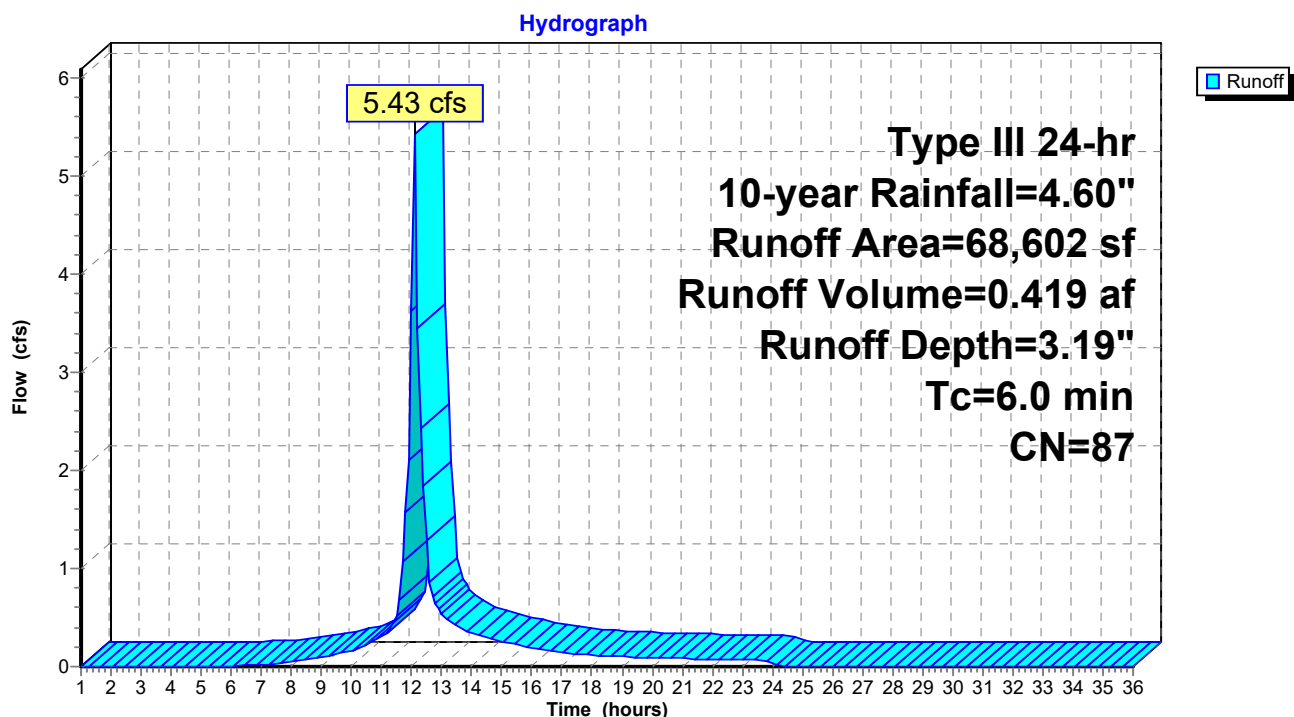
**Summary for Subcatchment 1S: 1S**

Runoff = 5.43 cfs @ 12.10 hrs, Volume= 0.419 af, Depth= 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 10-year Rainfall=4.60"

|   | Area (sf) | CN | Description                     |
|---|-----------|----|---------------------------------|
| * | 21,601    | 98 | Pavement / Roof                 |
| * | 27,720    | 96 | Gravel surface                  |
|   | 10,373    | 49 | 50-75% Grass cover, Fair, HSG A |
|   | 8,908     | 77 | 1/8 acre lots, 65% imp, HSG A   |
|   | 68,602    | 87 | Weighted Average                |
|   | 41,211    |    | 60.07% Pervious Area            |
|   | 27,391    |    | 39.93% Impervious Area          |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S: 1S**



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Type III 24-hr 10-year Rainfall=4.60"

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### Summary for Subcatchment 3S: 3S

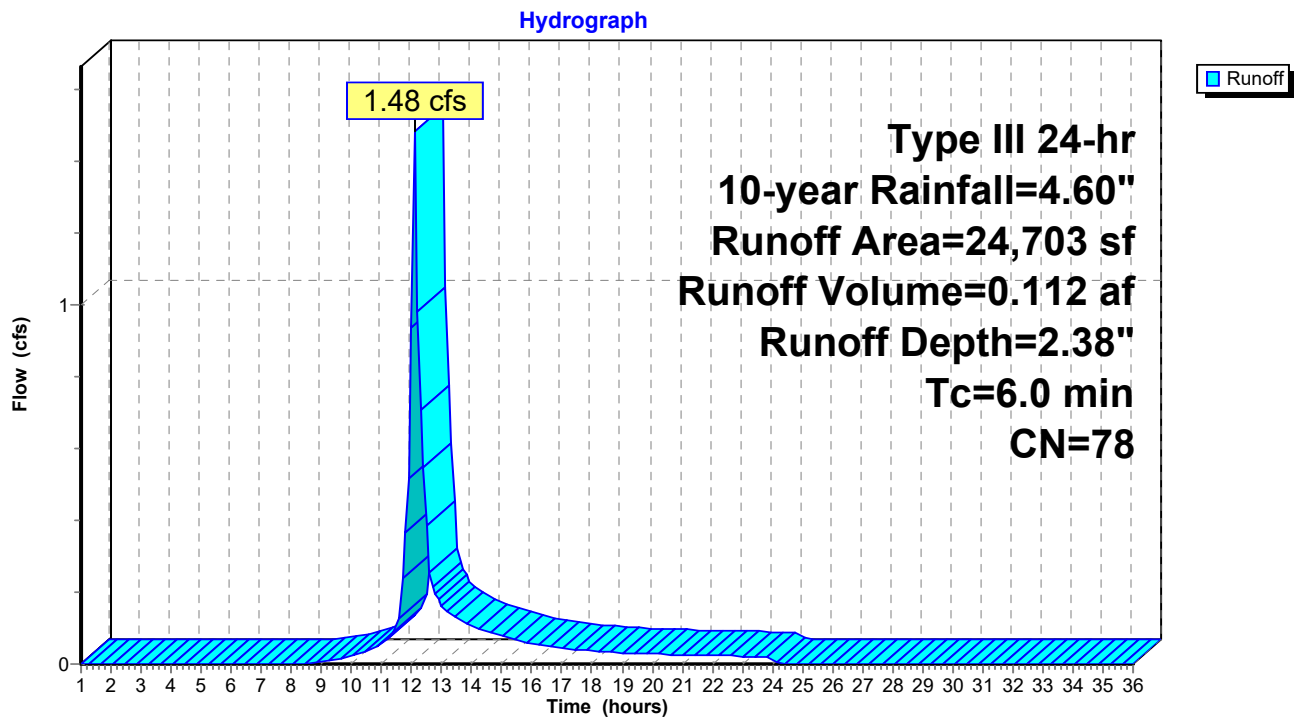
Runoff = 1.48 cfs @ 12.10 hrs, Volume= 0.112 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 10-year Rainfall=4.60"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 15,393    | 96 | Gravel surface, HSG A           |
| 9,310     | 49 | 50-75% Grass cover, Fair, HSG A |
| 24,703    | 78 | Weighted Average                |
| 24,703    |    | 100.00% Pervious Area           |

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

### Subcatchment 3S: 3S



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Subcatchment S2: S2**

Runoff = 1.84 cfs @ 12.29 hrs, Volume= 0.224 af, Depth= 0.96"

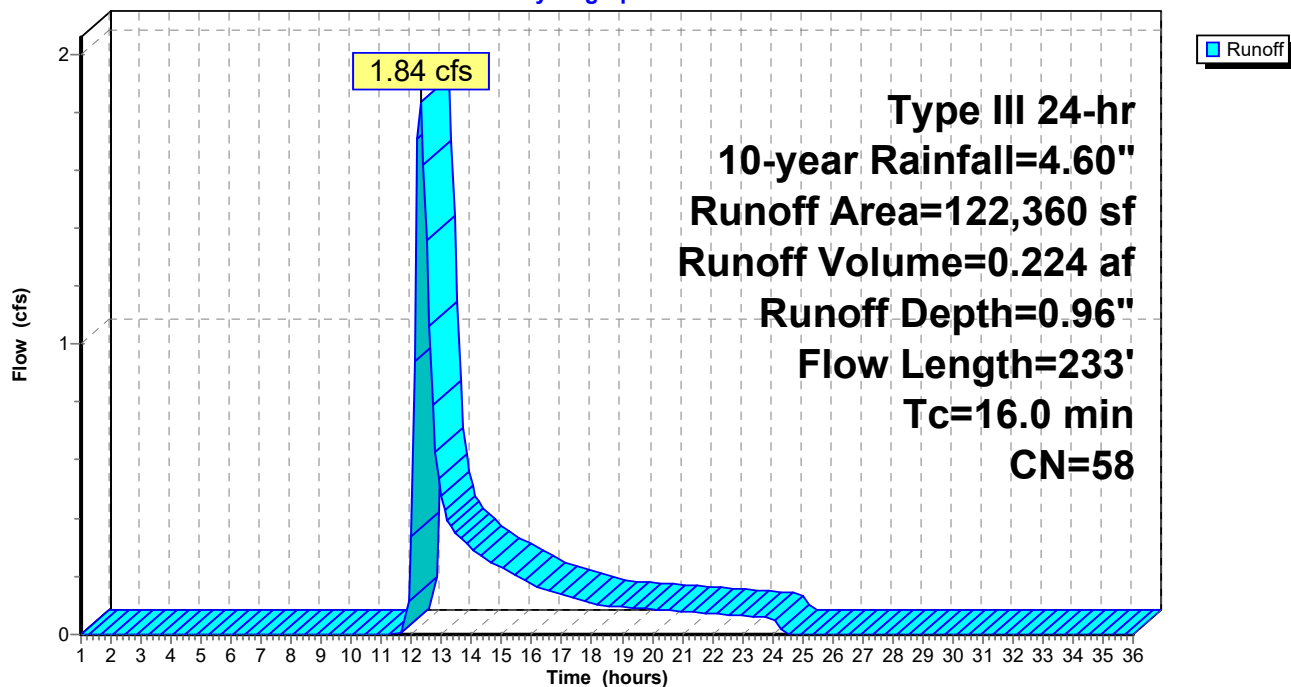
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 10-year Rainfall=4.60"

|   | Area (sf) | CN | Description                       |
|---|-----------|----|-----------------------------------|
| * | 13,972    | 98 | Single family roofs and driveways |
| * | 3,155     | 98 | Paved walking path                |
|   | 52,792    | 32 | Woods/grass comb., Good, HSG A    |
| * | 24,853    | 96 | Gravel                            |
|   | 27,588    | 49 | 50-75% Grass cover, Fair, HSG A   |
|   | 122,360   | 58 | Weighted Average                  |
|   | 105,233   |    | 86.00% Pervious Area              |
|   | 17,127    |    | 14.00% Impervious Area            |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                                                                          |
|-------------|------------------|------------------|----------------------|-------------------|------------------------------------------------------------------------------------------------------|
| 14.7        | 100              | 0.0500           | 0.11                 |                   | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"                              |
| 1.3         | 133              | 0.0600           | 1.71                 |                   | <b>Shallow Concentrated Flow, B to C (capped 100' sheet flow)</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0        | 233              | Total            |                      |                   |                                                                                                      |

**Subcatchment S2: S2**

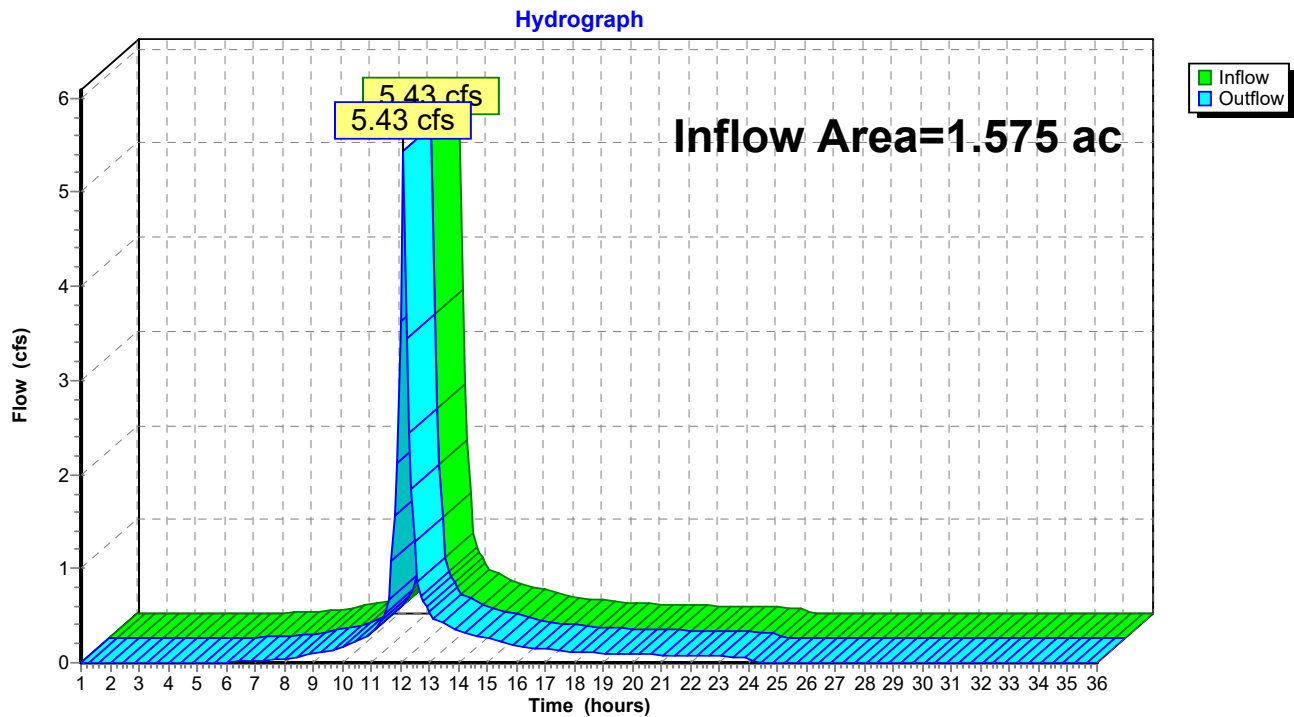
Hydrograph



**Summary for Reach POI-1: POI #1 - Douglass Street MS4**

Inflow Area = 1.575 ac, 39.93% Impervious, Inflow Depth = 3.19" for 10-year event  
Inflow = 5.43 cfs @ 12.10 hrs, Volume= 0.419 af  
Outflow = 5.43 cfs @ 12.10 hrs, Volume= 0.419 af, Atten= 0%, Lag= 0.0 min

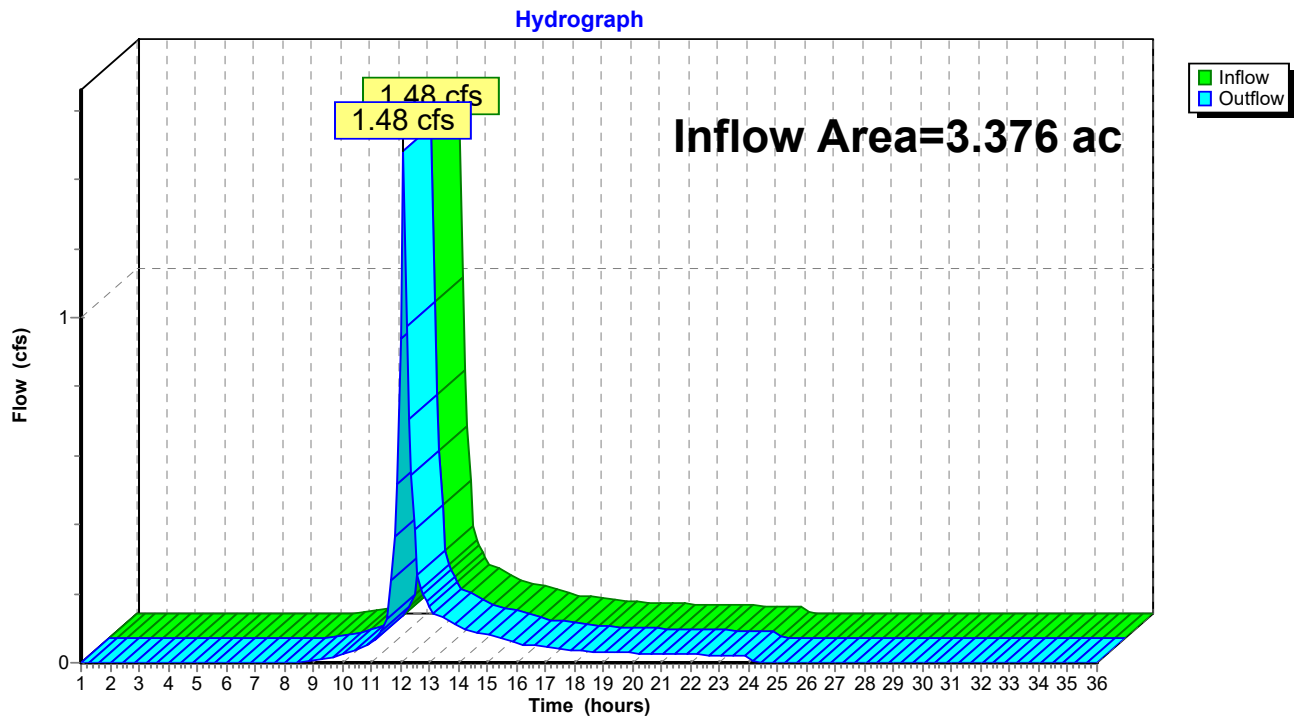
Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-1: POI #1 - Douglass Street MS4**

**Summary for Reach POI-3: POI #3 - Baseball Field**

Inflow Area = 3.376 ac, 11.65% Impervious, Inflow Depth = 0.40" for 10-year event  
Inflow = 1.48 cfs @ 12.10 hrs, Volume= 0.112 af  
Outflow = 1.48 cfs @ 12.10 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-3: POI #3 - Baseball Field**

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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond POI-2: POI #2 / 295 Basin**

Inflow Area = 2.809 ac, 14.00% Impervious, Inflow Depth = 0.96" for 10-year event  
 Inflow = 1.84 cfs @ 12.29 hrs, Volume= 0.224 af  
 Outflow = 0.13 cfs @ 17.22 hrs, Volume= 0.192 af, Atten= 93%, Lag= 296.0 min  
 Discarded = 0.13 cfs @ 17.22 hrs, Volume= 0.192 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
 Peak Elev= 27.59' @ 17.22 hrs Surf.Area= 9,006 sf Storage= 5,560 cf

Plug-Flow detention time= 513.4 min calculated for 0.192 af (86% of inflow)  
 Center-of-Mass det. time= 448.5 min ( 1,346.9 - 898.3 )

| Volume              | Invert               | Avail.Storage             | Storage Description                                        |
|---------------------|----------------------|---------------------------|------------------------------------------------------------|
| #1                  | 26.30'               | 274,731 cf                | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet)                                  |
| 26.30               | 100                  | 0                         | 0                                                          |
| 27.00               | 4,475                | 1,601                     | 1,601                                                      |
| 28.00               | 12,191               | 8,333                     | 9,934                                                      |
| 29.00               | 18,000               | 15,096                    | 25,030                                                     |
| 30.00               | 32,600               | 25,300                    | 50,330                                                     |
| 33.00               | 41,943               | 111,815                   | 162,144                                                    |
| 35.00               | 70,644               | 112,587                   | 274,731                                                    |

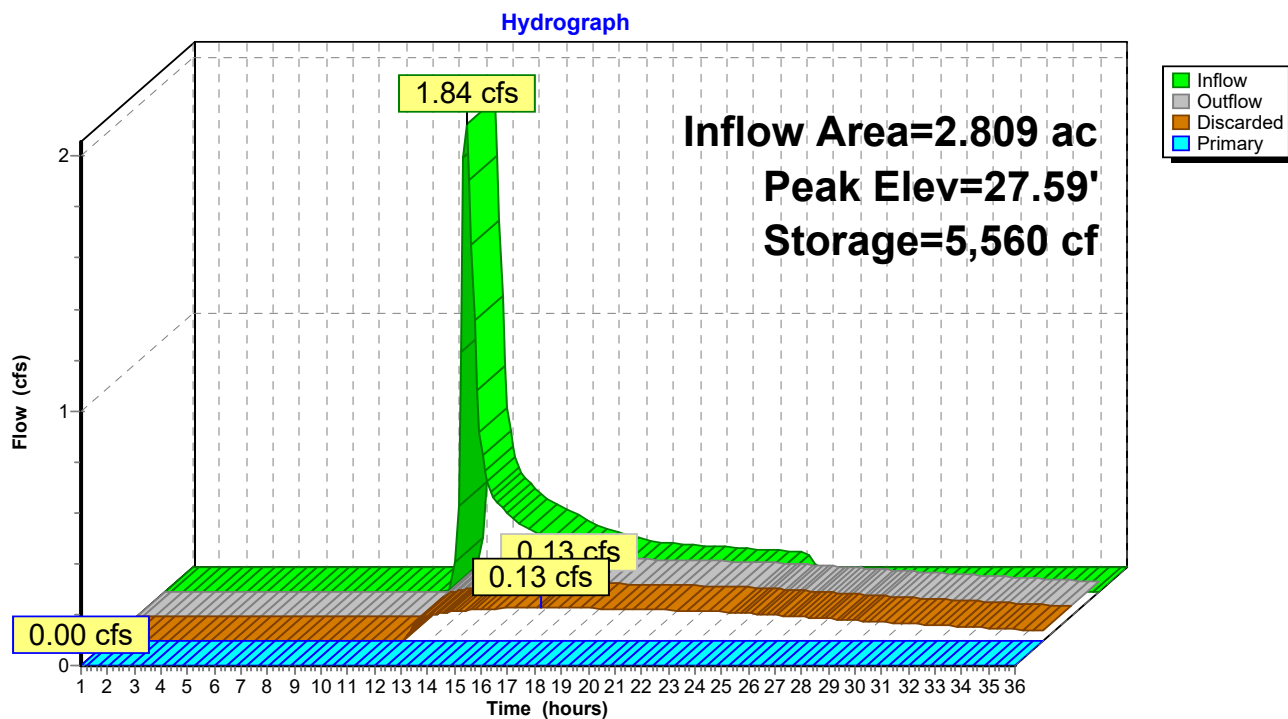
| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                     |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 32.40' | <b>20.0' long x 15.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #2     | Discarded | 26.60' | <b>0.800 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                                                 |

**Discarded OutFlow** Max=0.13 cfs @ 17.22 hrs HW=27.59' (Free Discharge)  
 ↑ **2=Exfiltration** (Exfiltration Controls 0.13 cfs)

**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)  
 ↑ **1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)



## Pond POI-2: POI #2 / 295 Basin



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Type III 24-hr 25-year Rainfall=5.80"

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Time span=1.00-36.00 hrs, dt=0.10 hrs, 351 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: 1S

Runoff Area=68,602 sf 39.93% Impervious Runoff Depth=4.33"  
Tc=6.0 min CN=87 Runoff=7.26 cfs 0.568 af

### Subcatchment3S: 3S

Runoff Area=24,703 sf 0.00% Impervious Runoff Depth=3.40"  
Tc=6.0 min CN=78 Runoff=2.12 cfs 0.161 af

### SubcatchmentS2: S2

Runoff Area=122,360 sf 14.00% Impervious Runoff Depth=1.63"  
Flow Length=233' Tc=16.0 min CN=58 Runoff=3.47 cfs 0.382 af

### Reach POI-1: POI #1 - Douglass Street MS4

Inflow=7.26 cfs 0.568 af  
Outflow=7.26 cfs 0.568 af

### Reach POI-3: POI #3 - Baseball Field

Inflow=2.12 cfs 0.161 af  
Outflow=2.12 cfs 0.161 af

### Pond POI-2: POI #2 / 295 Basin

Peak Elev=28.03' Storage=10,289 cf Inflow=3.47 cfs 0.382 af  
Discarded=0.19 cfs 0.308 af Primary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.308 af

**Total Runoff Area = 4.951 ac Runoff Volume = 1.111 af Average Runoff Depth = 2.69"**  
**79.36% Pervious = 3.929 ac 20.64% Impervious = 1.022 ac**

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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 1S: 1S**

Runoff = 7.26 cfs @ 12.10 hrs, Volume= 0.568 af, Depth= 4.33"

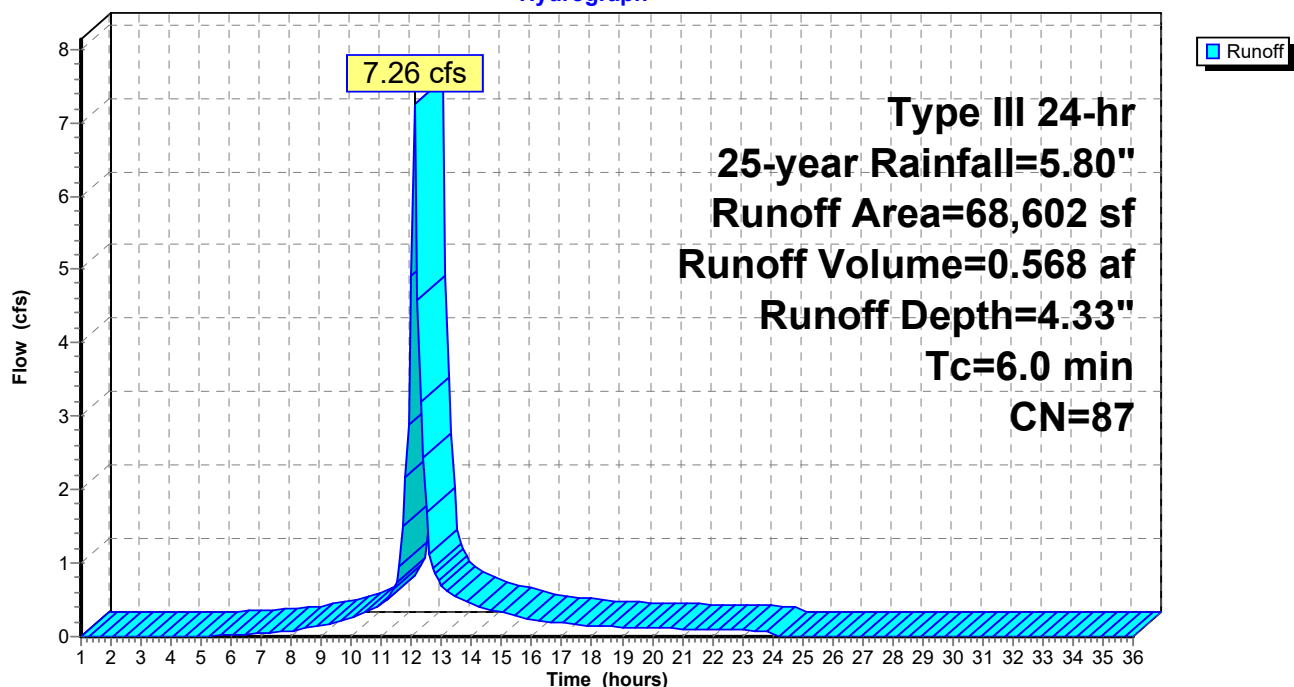
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description                     |
|---|-----------|----|---------------------------------|
| * | 21,601    | 98 | Pavement / Roof                 |
| * | 27,720    | 96 | Gravel surface                  |
|   | 10,373    | 49 | 50-75% Grass cover, Fair, HSG A |
|   | 8,908     | 77 | 1/8 acre lots, 65% imp, HSG A   |
|   | 68,602    | 87 | Weighted Average                |
|   | 41,211    |    | 60.07% Pervious Area            |
|   | 27,391    |    | 39.93% Impervious Area          |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S: 1S**

Hydrograph



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Type III 24-hr 25-year Rainfall=5.80"

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### Summary for Subcatchment 3S: 3S

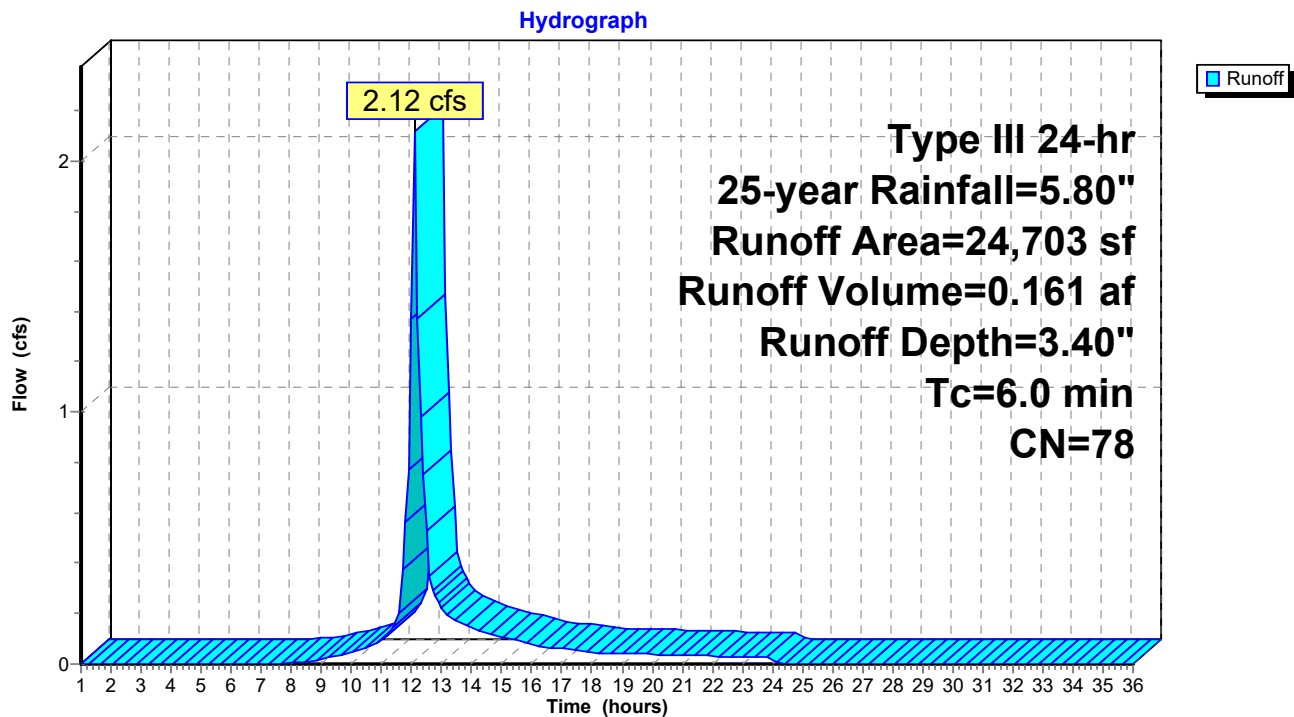
Runoff = 2.12 cfs @ 12.10 hrs, Volume= 0.161 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 25-year Rainfall=5.80"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 15,393    | 96 | Gravel surface, HSG A           |
| 9,310     | 49 | 50-75% Grass cover, Fair, HSG A |
| 24,703    | 78 | Weighted Average                |
| 24,703    |    | 100.00% Pervious Area           |

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

### Subcatchment 3S: 3S



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment S2: S2**

Runoff = 3.47 cfs @ 12.25 hrs, Volume= 0.382 af, Depth= 1.63"

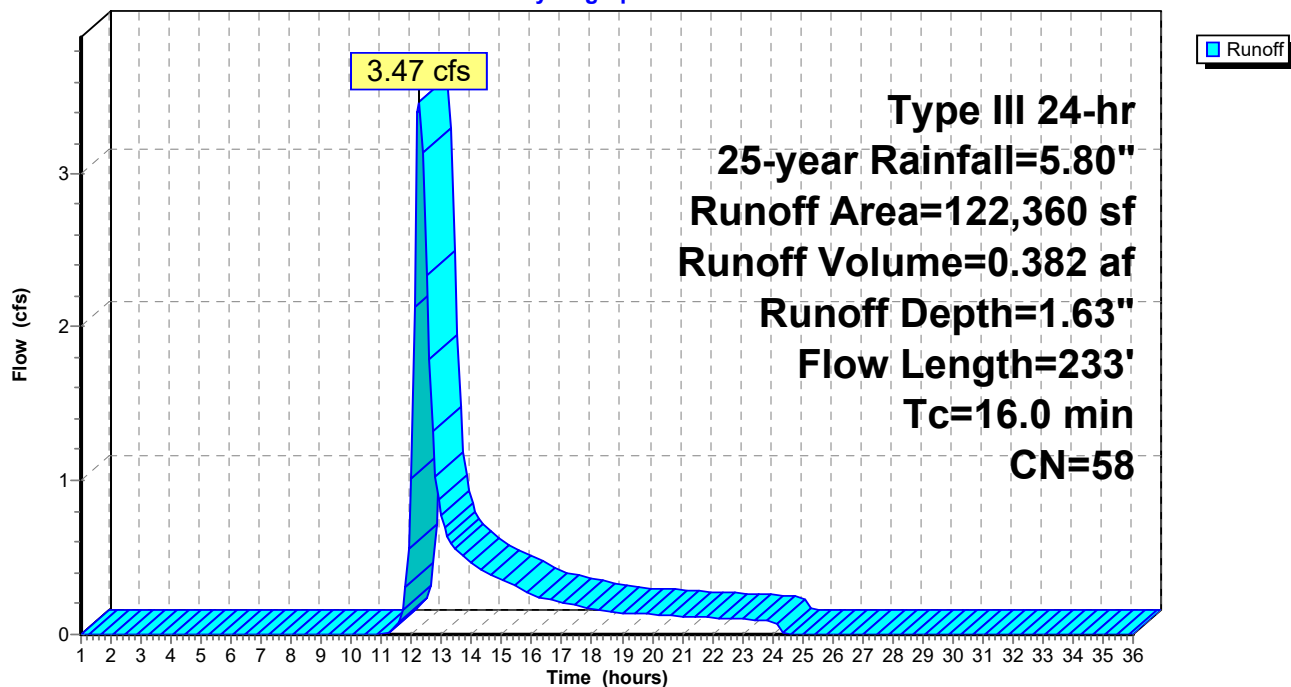
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description                       |
|---|-----------|----|-----------------------------------|
| * | 13,972    | 98 | Single family roofs and driveways |
| * | 3,155     | 98 | Paved walking path                |
|   | 52,792    | 32 | Woods/grass comb., Good, HSG A    |
| * | 24,853    | 96 | Gravel                            |
|   | 27,588    | 49 | 50-75% Grass cover, Fair, HSG A   |
|   | 122,360   | 58 | Weighted Average                  |
|   | 105,233   |    | 86.00% Pervious Area              |
|   | 17,127    |    | 14.00% Impervious Area            |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                                                                          |
|-------------|------------------|------------------|----------------------|-------------------|------------------------------------------------------------------------------------------------------|
| 14.7        | 100              | 0.0500           | 0.11                 |                   | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"                              |
| 1.3         | 133              | 0.0600           | 1.71                 |                   | <b>Shallow Concentrated Flow, B to C (capped 100' sheet flow)</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0        | 233              | Total            |                      |                   |                                                                                                      |

**Subcatchment S2: S2**

Hydrograph

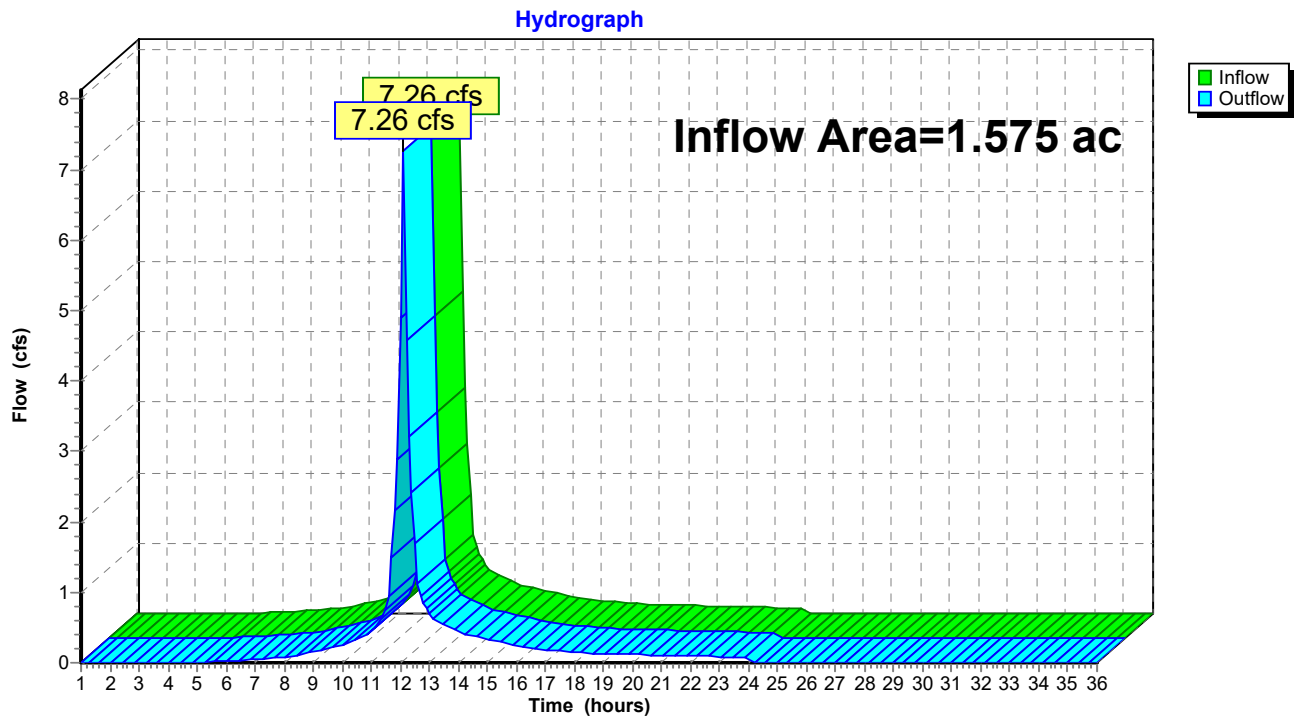




**Summary for Reach POI-1: POI #1 - Douglass Street MS4**

Inflow Area = 1.575 ac, 39.93% Impervious, Inflow Depth = 4.33" for 25-year event  
Inflow = 7.26 cfs @ 12.10 hrs, Volume= 0.568 af  
Outflow = 7.26 cfs @ 12.10 hrs, Volume= 0.568 af, Atten= 0%, Lag= 0.0 min

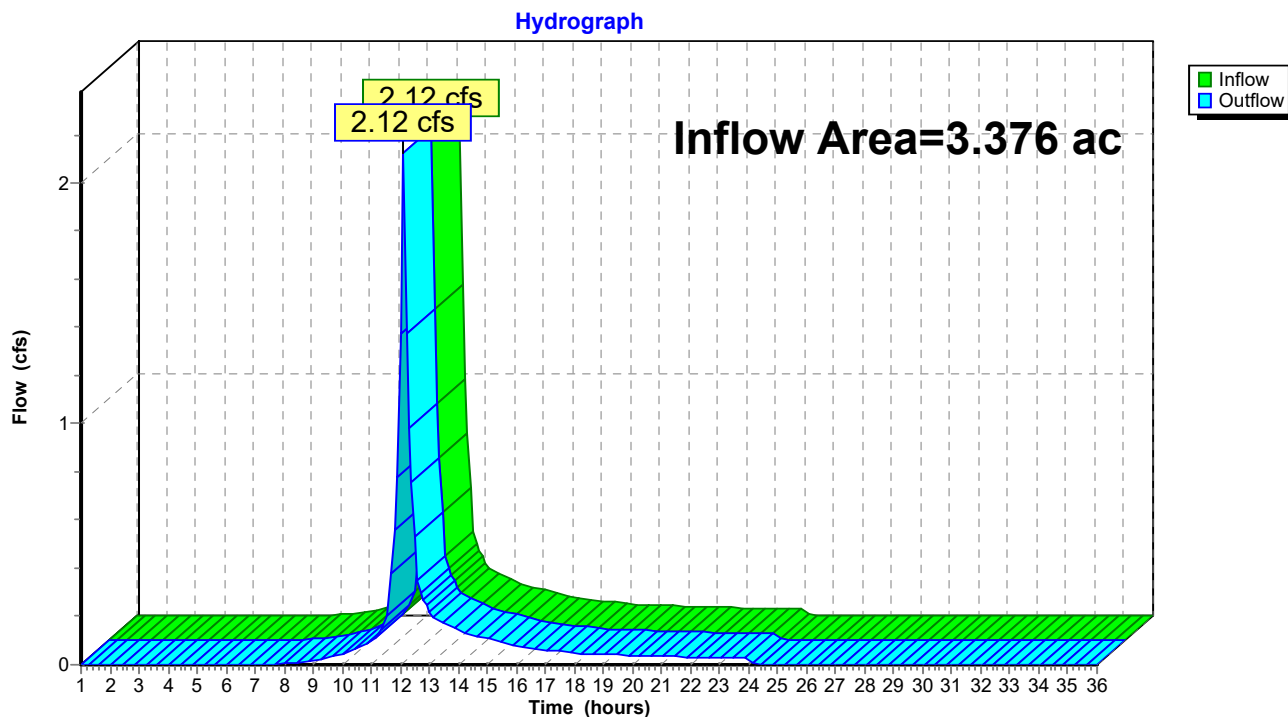
Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-1: POI #1 - Douglass Street MS4**

**Summary for Reach POI-3: POI #3 - Baseball Field**

Inflow Area = 3.376 ac, 11.65% Impervious, Inflow Depth = 0.57" for 25-year event  
Inflow = 2.12 cfs @ 12.10 hrs, Volume= 0.161 af  
Outflow = 2.12 cfs @ 12.10 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-3: POI #3 - Baseball Field**

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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Pond POI-2: POI #2 / 295 Basin**

Inflow Area = 2.809 ac, 14.00% Impervious, Inflow Depth = 1.63" for 25-year event  
 Inflow = 3.47 cfs @ 12.25 hrs, Volume= 0.382 af  
 Outflow = 0.19 cfs @ 17.36 hrs, Volume= 0.308 af, Atten= 94%, Lag= 306.6 min  
 Discarded = 0.19 cfs @ 17.36 hrs, Volume= 0.308 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
 Peak Elev= 28.03' @ 17.36 hrs Surf.Area= 12,359 sf Storage= 10,289 cf

Plug-Flow detention time= 575.0 min calculated for 0.307 af (80% of inflow)  
 Center-of-Mass det. time= 495.9 min ( 1,375.8 - 879.9 )

| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 274,731 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

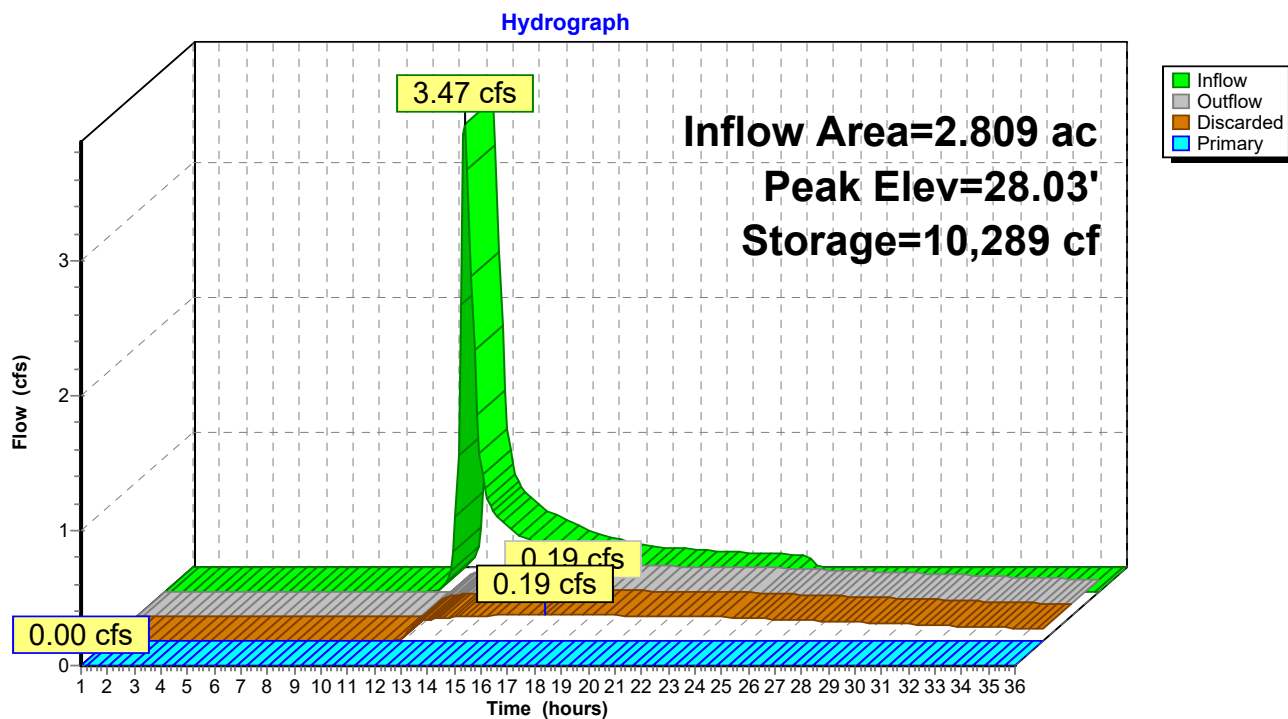
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 12,191               | 8,333                     | 9,934                     |
| 29.00               | 18,000               | 15,096                    | 25,030                    |
| 30.00               | 32,600               | 25,300                    | 50,330                    |
| 33.00               | 41,943               | 111,815                   | 162,144                   |
| 35.00               | 70,644               | 112,587                   | 274,731                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                     |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 32.40' | <b>20.0' long x 15.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #2     | Discarded | 26.60' | <b>0.800 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                                                 |

**Discarded OutFlow** Max=0.19 cfs @ 17.36 hrs HW=28.03' (Free Discharge)  
 ↑ **2=Exfiltration** (Exfiltration Controls 0.19 cfs)

**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)  
 ↑ **1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Pond POI-2: POI #2 / 295 Basin



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Type III 24-hr WQ Rainfall=1.00"

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Time span=1.00-36.00 hrs, dt=0.10 hrs, 351 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: 1S

Runoff Area=68,602 sf 39.93% Impervious Runoff Depth=0.22"  
Tc=6.0 min CN=87 Runoff=0.33 cfs 0.029 af

### Subcatchment3S: 3S

Runoff Area=24,703 sf 0.00% Impervious Runoff Depth=0.06"  
Tc=6.0 min CN=78 Runoff=0.01 cfs 0.003 af

### SubcatchmentS2: S2

Runoff Area=122,360 sf 14.00% Impervious Runoff Depth=0.00"  
Flow Length=233' Tc=16.0 min CN=58 Runoff=0.00 cfs 0.000 af

### Reach POI-1: POI #1 - Douglass Street MS4

Inflow=0.33 cfs 0.029 af  
Outflow=0.33 cfs 0.029 af

### Reach POI-3: POI #3 - Baseball Field

Inflow=0.01 cfs 0.003 af  
Outflow=0.01 cfs 0.003 af

### Pond POI-2: POI #2 / 295 Basin

Peak Elev=26.30' Storage=0 cf Inflow=0.00 cfs 0.000 af  
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

**Total Runoff Area = 4.951 ac Runoff Volume = 0.032 af Average Runoff Depth = 0.08"**  
**79.36% Pervious = 3.929 ac 20.64% Impervious = 1.022 ac**



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Type III 24-hr WQ Rainfall=1.00"

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**Summary for Subcatchment 1S: 1S**

Runoff = 0.33 cfs @ 12.12 hrs, Volume= 0.029 af, Depth= 0.22"

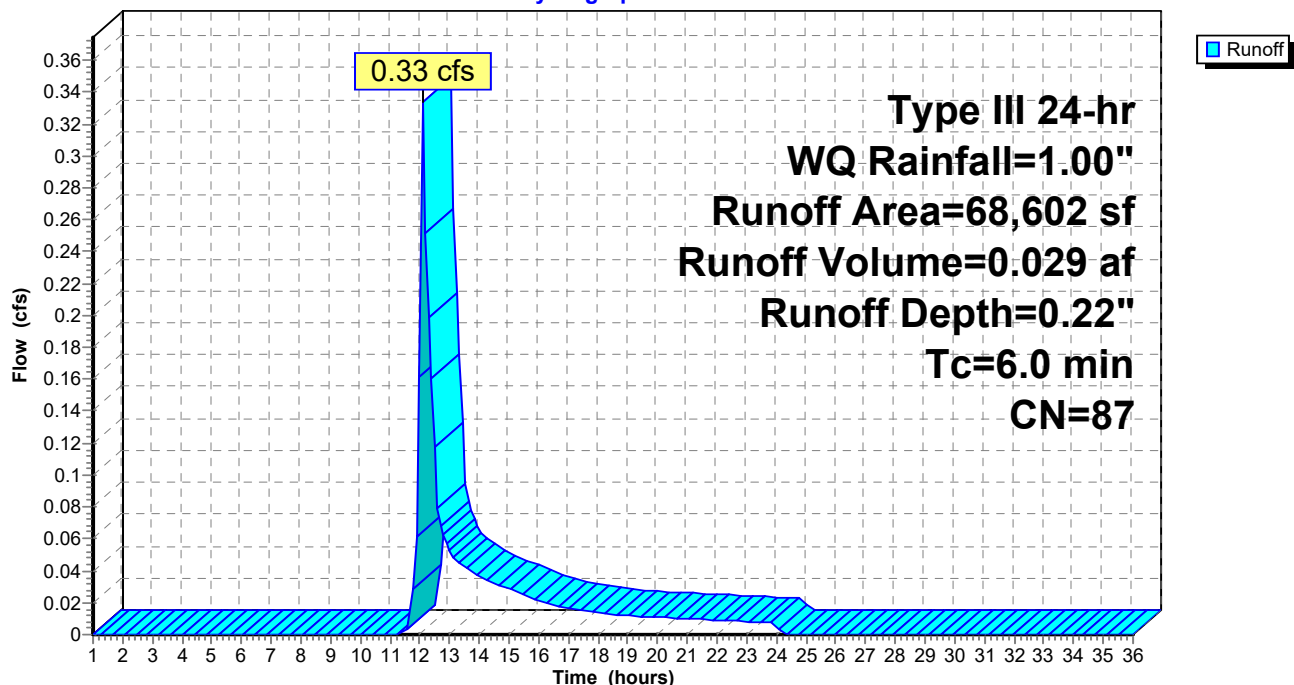
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr WQ Rainfall=1.00"

|   | Area (sf) | CN | Description                     |
|---|-----------|----|---------------------------------|
| * | 21,601    | 98 | Pavement / Roof                 |
| * | 27,720    | 96 | Gravel surface                  |
|   | 10,373    | 49 | 50-75% Grass cover, Fair, HSG A |
|   | 8,908     | 77 | 1/8 acre lots, 65% imp, HSG A   |
|   | 68,602    | 87 | Weighted Average                |
|   | 41,211    |    | 60.07% Pervious Area            |
|   | 27,391    |    | 39.93% Impervious Area          |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S: 1S**

Hydrograph



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Type III 24-hr WQ Rainfall=1.00"

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### Summary for Subcatchment 3S: 3S

Runoff = 0.01 cfs @ 12.40 hrs, Volume= 0.003 af, Depth= 0.06"

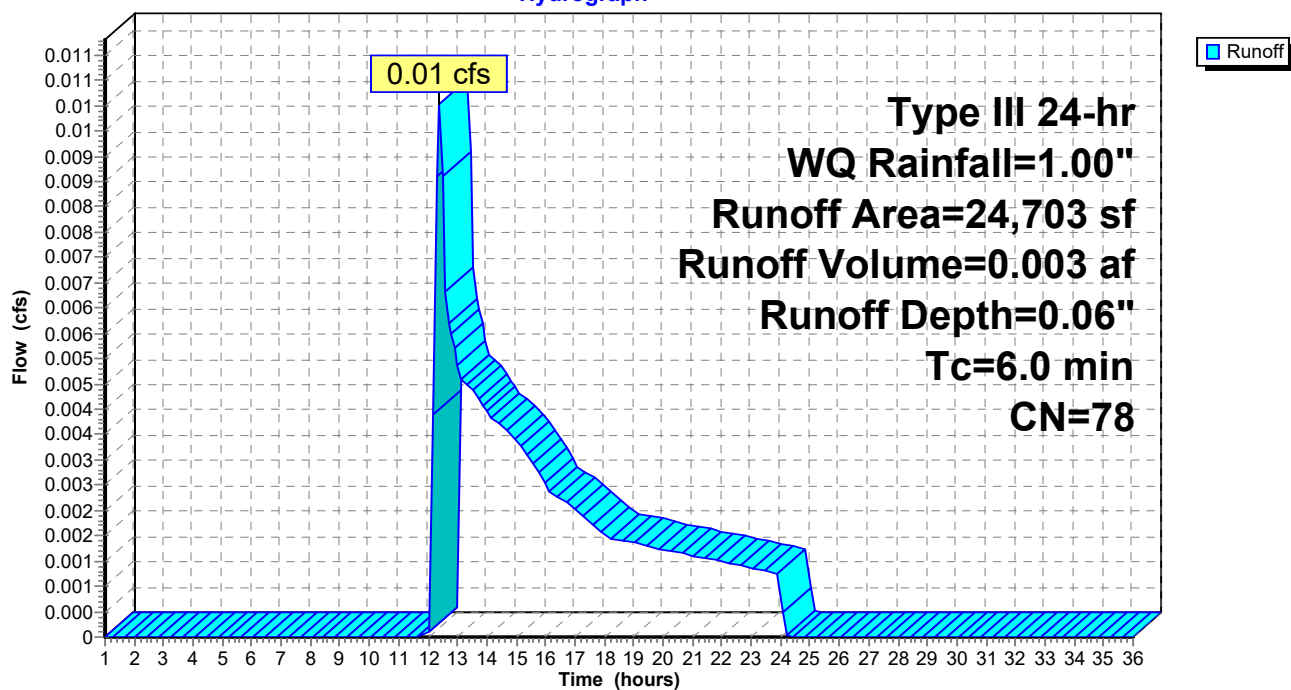
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr WQ Rainfall=1.00"

| Area (sf) | CN | Description                     |
|-----------|----|---------------------------------|
| 15,393    | 96 | Gravel surface, HSG A           |
| 9,310     | 49 | 50-75% Grass cover, Fair, HSG A |
| 24,703    | 78 | Weighted Average                |
| 24,703    |    | 100.00% Pervious Area           |

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

### Subcatchment 3S: 3S

Hydrograph



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Type III 24-hr WQ Rainfall=1.00"

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**Summary for Subcatchment S2: S2**

Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

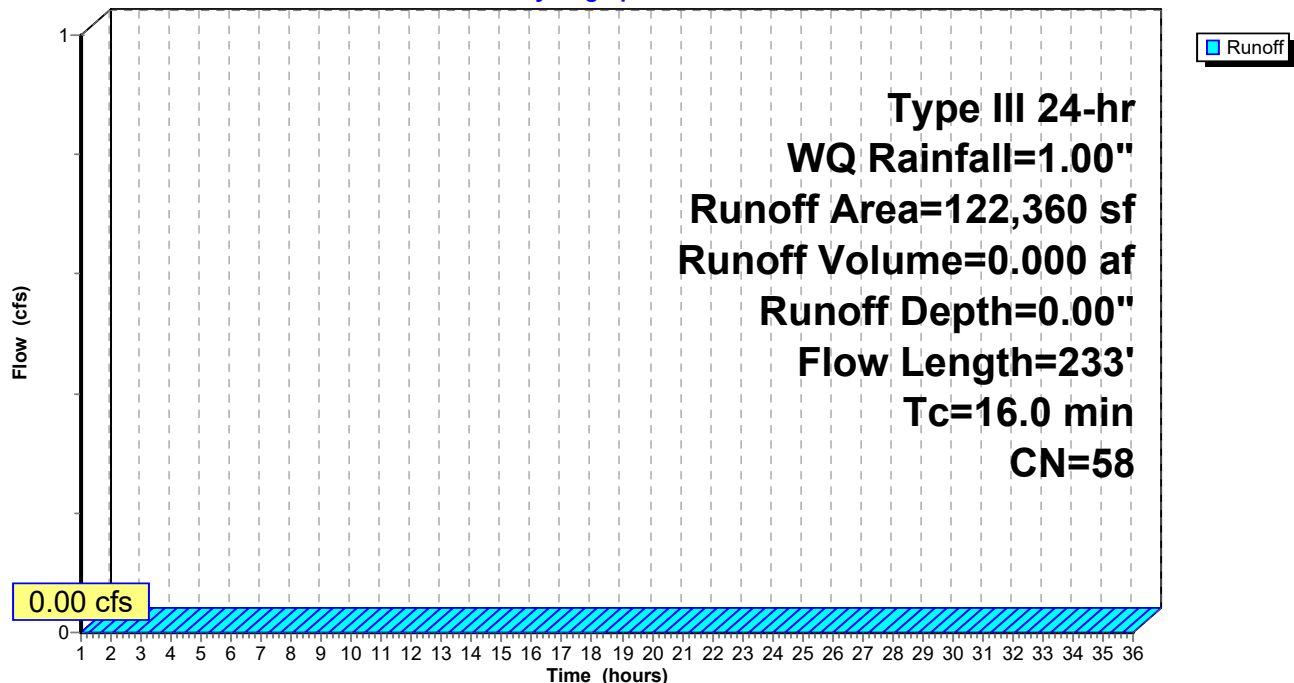
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs  
Type III 24-hr WQ Rainfall=1.00"

|   | Area (sf) | CN | Description                       |
|---|-----------|----|-----------------------------------|
| * | 13,972    | 98 | Single family roofs and driveways |
| * | 3,155     | 98 | Paved walking path                |
|   | 52,792    | 32 | Woods/grass comb., Good, HSG A    |
| * | 24,853    | 96 | Gravel                            |
|   | 27,588    | 49 | 50-75% Grass cover, Fair, HSG A   |
|   | 122,360   | 58 | Weighted Average                  |
|   | 105,233   |    | 86.00% Pervious Area              |
|   | 17,127    |    | 14.00% Impervious Area            |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                                                                          |
|-------------|------------------|------------------|----------------------|-------------------|------------------------------------------------------------------------------------------------------|
| 14.7        | 100              | 0.0500           | 0.11                 |                   | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"                              |
| 1.3         | 133              | 0.0600           | 1.71                 |                   | <b>Shallow Concentrated Flow, B to C (capped 100' sheet flow)</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0        | 233              | Total            |                      |                   |                                                                                                      |

**Subcatchment S2: S2**

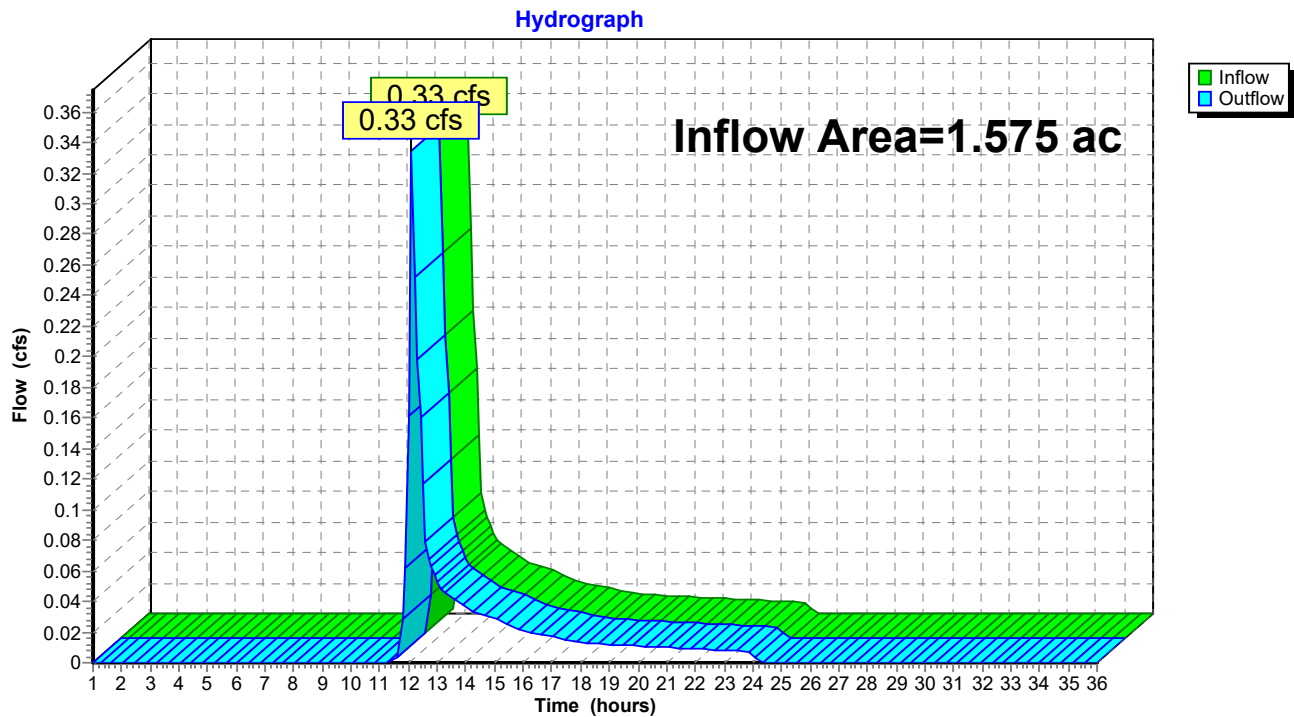
Hydrograph



**Summary for Reach POI-1: POI #1 - Douglass Street MS4**

Inflow Area = 1.575 ac, 39.93% Impervious, Inflow Depth = 0.22" for WQ event  
Inflow = 0.33 cfs @ 12.12 hrs, Volume= 0.029 af  
Outflow = 0.33 cfs @ 12.12 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

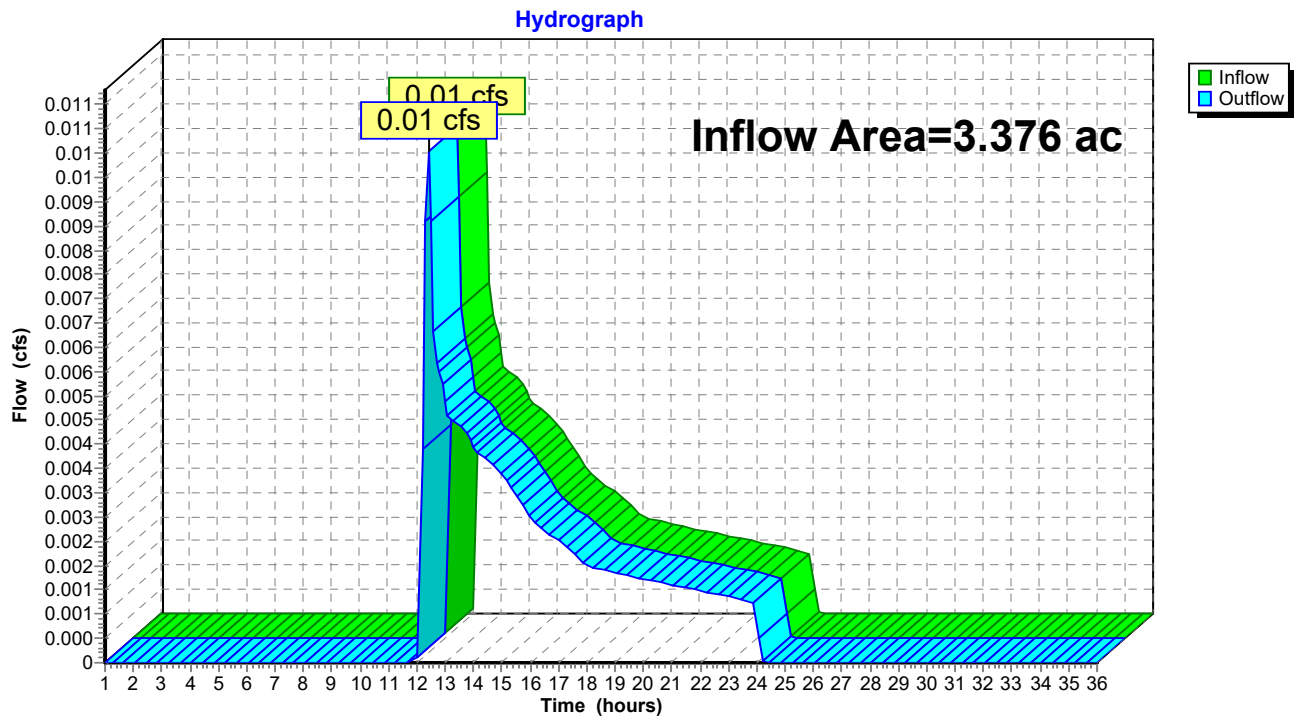
Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-1: POI #1 - Douglass Street MS4**

**Summary for Reach POI-3: POI #3 - Baseball Field**

Inflow Area = 3.376 ac, 11.65% Impervious, Inflow Depth = 0.01" for WQ event  
Inflow = 0.01 cfs @ 12.40 hrs, Volume= 0.003 af  
Outflow = 0.01 cfs @ 12.40 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

**Reach POI-3: POI #3 - Baseball Field**



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Type III 24-hr WQ Rainfall=1.00"

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**Summary for Pond POI-2: POI #2 / 295 Basin**

Inflow Area = 2.809 ac, 14.00% Impervious, Inflow Depth = 0.00" for WQ event  
 Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min  
 Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.10 hrs

Peak Elev= 26.30' @ 1.00 hrs Surf.Area= 100 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

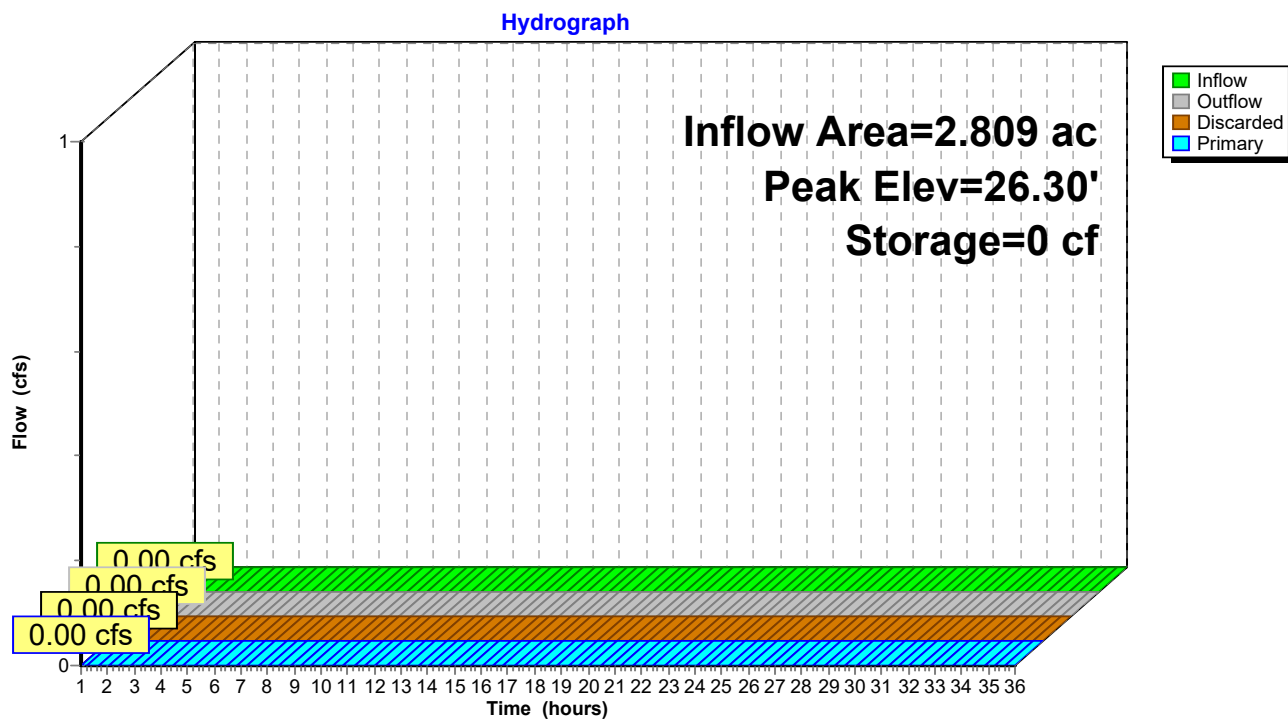
| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 274,731 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

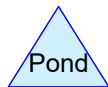
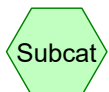
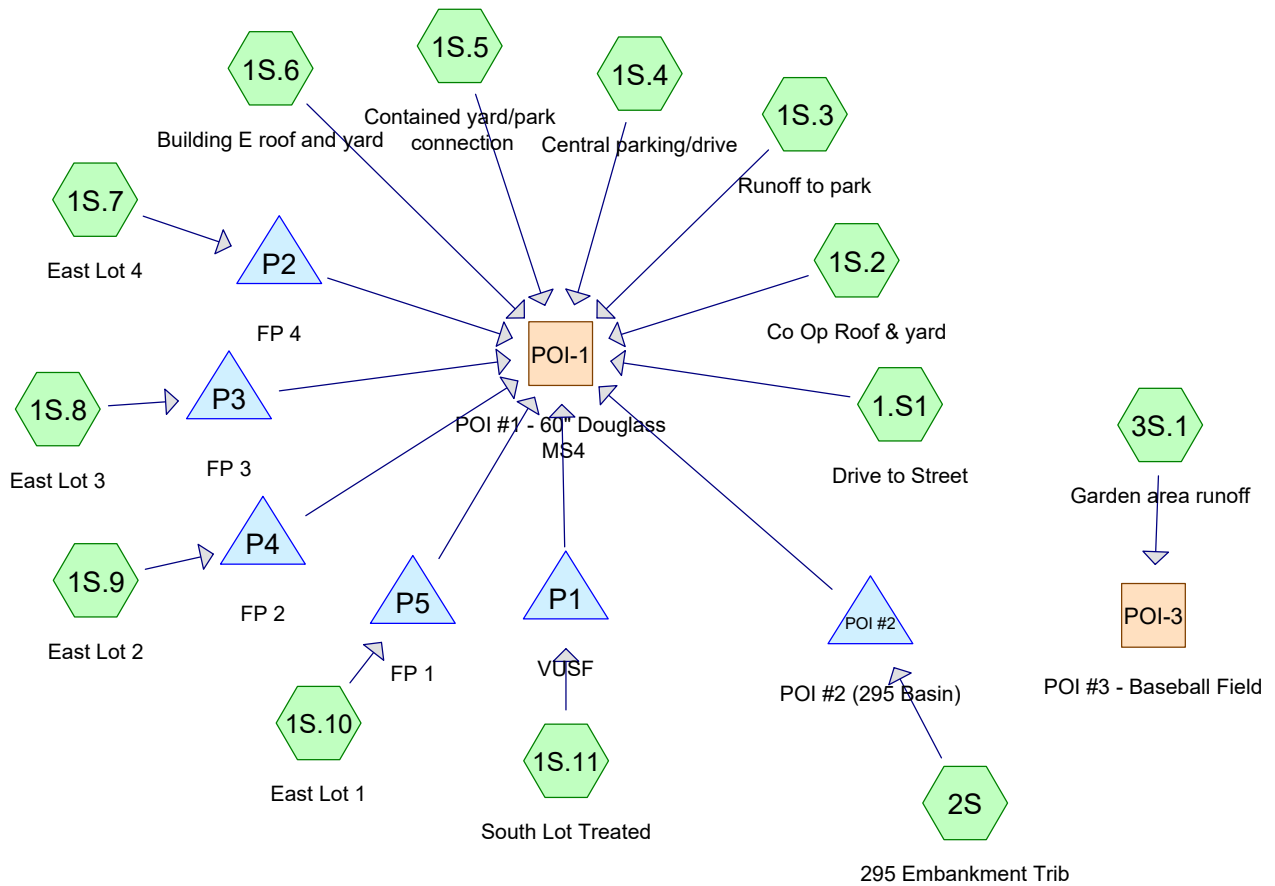
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 12,191               | 8,333                     | 9,934                     |
| 29.00               | 18,000               | 15,096                    | 25,030                    |
| 30.00               | 32,600               | 25,300                    | 50,330                    |
| 33.00               | 41,943               | 111,815                   | 162,144                   |
| 35.00               | 70,644               | 112,587                   | 274,731                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                     |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 32.40' | <b>20.0' long x 15.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #2     | Discarded | 26.60' | <b>0.800 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                                                 |

**Discarded OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**2=Exfiltration** ( Controls 0.00 cfs)**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)↑**1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Pond POI-2: POI #2 / 295 Basin





**Routing Diagram for Post Development 1.13 FINAL**  
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### Area Listing (all nodes)

| Area<br>(acres) | CN        | Description<br>(subcatchment-numbers)                                                     |
|-----------------|-----------|-------------------------------------------------------------------------------------------|
| 0.210           | 77        | 1/8 acre lots, 65% imp, HSG A (1S.2)                                                      |
| 1.112           | 39        | >75% Grass cover, Good, HSG A (1.S1, 1S.10, 1S.2, 1S.3, 1S.5, 1S.6, 1S.7, 1S.8, 1S.9, 2S) |
| 0.309           | 30        | Brush, Good, HSG A (1S.11, 1S.4, 3S.1)                                                    |
| 0.126           | 98        | Homes/driveways (2S)                                                                      |
| 0.072           | 98        | Path (2S)                                                                                 |
| 0.364           | 98        | Paved parking (1S.11, 1S.7, 1S.8)                                                         |
| 0.110           | 98        | Paved parking, patio, sidewalk (1S.9)                                                     |
| 0.428           | 98        | Pavement (1.S1, 1S.10, 1S.4)                                                              |
| 0.485           | 98        | Roofs (1S.2)                                                                              |
| 0.005           | 98        | Stairs (2S)                                                                               |
| 1.212           | 32        | Woods/grass comb., Good, HSG A (2S)                                                       |
| 0.014           | 98        | patios (1S.2)                                                                             |
| 0.120           | 98        | pavers (1S.2)                                                                             |
| 0.275           | 98        | roof (1S.6)                                                                               |
| 0.108           | 98        | sidewalks (1S.2, 1S.5)                                                                    |
| <b>4.952</b>    | <b>63</b> | <b>TOTAL AREA</b>                                                                         |

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### Soil Listing (all nodes)

| Area<br>(acres) | Soil<br>Group | Subcatchment<br>Numbers                                                      |
|-----------------|---------------|------------------------------------------------------------------------------|
| 2.842           | HSG A         | 1.S1, 1S.10, 1S.11, 1S.2, 1S.3, 1S.4, 1S.5, 1S.6, 1S.7, 1S.8, 1S.9, 2S, 3S.1 |
| 0.000           | HSG B         |                                                                              |
| 0.000           | HSG C         |                                                                              |
| 0.000           | HSG D         |                                                                              |
| 2.110           | Other         | 1.S1, 1S.10, 1S.11, 1S.2, 1S.4, 1S.5, 1S.6, 1S.7, 1S.8, 1S.9, 2S             |
| <b>4.952</b>    |               | <b>TOTAL AREA</b>                                                            |



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## Ground Covers (all nodes)

| HSG-A<br>(acres) | HSG-B<br>(acres) | HSG-C<br>(acres) | HSG-D<br>(acres) | Other<br>(acres) | Total<br>(acres) | Ground<br>Cover                | Subcatchment<br>Numbers                                                                                              |
|------------------|------------------|------------------|------------------|------------------|------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 0.210            | 0.000            | 0.000            | 0.000            | 0.000            | 0.210            | 1/8 acre lots, 65% imp         | 1S.2                                                                                                                 |
| 1.112            | 0.000            | 0.000            | 0.000            | 0.000            | 1.112            | >75% Grass cover, Good         | 1S.1,<br><br>1S.1<br>0,<br>1S.2,<br><br>1S.3,<br><br>1S.5,<br><br>1S.6,<br><br>1S.7,<br><br>1S.8,<br><br>1S.9,<br>2S |
| 0.309            | 0.000            | 0.000            | 0.000            | 0.000            | 0.309            | Brush, Good                    | 1S.1<br>1,<br>1S.4,<br>3S.1                                                                                          |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.126            | 0.126            | Homes/driveways                | 2S                                                                                                                   |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.072            | 0.072            | Path                           | 2S                                                                                                                   |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.364            | 0.364            | Paved parking                  | 1S.1<br>1,<br>1S.7,<br>1S.8                                                                                          |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.110            | 0.110            | Paved parking, patio, sidewalk | 1S.9                                                                                                                 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.428            | 0.428            | Pavement                       | 1S.1,<br><br>1S.1<br>0,<br>1S.4                                                                                      |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.485            | 0.485            | Roofs                          | 1S.2                                                                                                                 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.005            | 0.005            | Stairs                         | 2S                                                                                                                   |
| 1.212            | 0.000            | 0.000            | 0.000            | 0.000            | 1.212            | Woods/grass comb., Good        | 2S                                                                                                                   |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.014            | 0.014            | patios                         | 1S.2                                                                                                                 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.120            | 0.120            | pavers                         | 1S.2                                                                                                                 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.275            | 0.275            | roof                           | 1S.6                                                                                                                 |
| 0.000            | 0.000            | 0.000            | 0.000            | 0.108            | 0.108            | sidewalks                      | 1S.2,<br>1S.5                                                                                                        |

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**Ground Covers (all nodes) (continued)**

| HSG-A<br>(acres) | HSG-B<br>(acres) | HSG-C<br>(acres) | HSG-D<br>(acres) | Other<br>(acres) | Total<br>(acres) | Ground<br>Cover   | Subcatchment<br>Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------------|
| <b>2.842</b>     | <b>0.000</b>     | <b>0.000</b>     | <b>0.000</b>     | <b>2.110</b>     | <b>4.952</b>     | <b>TOTAL AREA</b> |                         |

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### Pipe Listing (all nodes)

| Line# | Node<br>Number | In-Invert<br>(feet) | Out-Invert<br>(feet) | Length<br>(feet) | Slope<br>(ft/ft) | n     | Diam/Width<br>(inches) | Height<br>(inches) | Inside-Fill<br>(inches) |
|-------|----------------|---------------------|----------------------|------------------|------------------|-------|------------------------|--------------------|-------------------------|
| 1     | P1             | 27.00               | 26.75                | 60.0             | 0.0042           | 0.010 | 12.0                   | 0.0                | 0.0                     |
| 2     | P2             | 32.35               | 32.00                | 70.0             | 0.0050           | 0.010 | 10.0                   | 0.0                | 0.0                     |
| 3     | P3             | 31.90               | 31.50                | 70.0             | 0.0057           | 0.010 | 10.0                   | 0.0                | 0.0                     |
| 4     | P4             | 31.40               | 31.00                | 70.0             | 0.0057           | 0.010 | 10.0                   | 0.0                | 0.0                     |
| 5     | P5             | 30.90               | 30.53                | 75.0             | 0.0049           | 0.010 | 10.0                   | 0.0                | 0.0                     |
| 6     | POI #2         | 26.60               | 26.51                | 16.0             | 0.0056           | 0.012 | 12.0                   | 0.0                | 0.0                     |

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

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

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

|                                                 |                                                                                                                                             |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment 1S.1: Drive to Street</b>       | Runoff Area=1,131 sf 55.00% Impervious Runoff Depth=0.82"<br>Tc=6.0 min CN=71 Runoff=0.02 cfs 0.002 af                                      |
| <b>Subcatchment 1S.10: East Lot 1</b>           | Runoff Area=3,754 sf 84.98% Impervious Runoff Depth=1.99"<br>Tc=6.0 min CN=89 Runoff=0.20 cfs 0.014 af                                      |
| <b>Subcatchment 1S.11: South Lot Treated</b>    | Runoff Area=10,852 sf 76.24% Impervious Runoff Depth=1.46"<br>Tc=6.0 min CN=82 Runoff=0.42 cfs 0.030 af                                     |
| <b>Subcatchment 1S.2: Co Op Roof &amp; yard</b> | Runoff Area=56,422 sf 65.80% Impervious Runoff Depth=1.20"<br>Tc=6.0 min CN=78 Runoff=1.78 cfs 0.130 af                                     |
| <b>Subcatchment 1S.3: Runoff to park</b>        | Runoff Area=2,081 sf 0.00% Impervious Runoff Depth=0.00"<br>Flow Length=264' Tc=9.0 min CN=39 Runoff=0.00 cfs 0.000 af                      |
| <b>Subcatchment 1S.4: Central parking/drive</b> | Runoff Area=19,043 sf 77.98% Impervious Runoff Depth=1.53"<br>Tc=6.0 min CN=83 Runoff=0.78 cfs 0.056 af                                     |
| <b>Subcatchment 1S.5: Contained yard/park</b>   | Runoff Area=3,023 sf 16.84% Impervious Runoff Depth=0.09"<br>Tc=6.0 min CN=49 Runoff=0.00 cfs 0.001 af                                      |
| <b>Subcatchment 1S.6: Building E roof and</b>   | Runoff Area=22,599 sf 53.10% Impervious Runoff Depth=0.77"<br>Tc=6.0 min CN=70 Runoff=0.41 cfs 0.033 af                                     |
| <b>Subcatchment 1S.7: East Lot 4</b>            | Runoff Area=7,618 sf 53.01% Impervious Runoff Depth=0.77"<br>Tc=6.0 min CN=70 Runoff=0.14 cfs 0.011 af                                      |
| <b>Subcatchment 1S.8: East Lot 3</b>            | Runoff Area=6,694 sf 52.99% Impervious Runoff Depth=0.77"<br>Tc=6.0 min CN=70 Runoff=0.12 cfs 0.010 af                                      |
| <b>Subcatchment 1S.9: East Lot 2</b>            | Runoff Area=5,956 sf 80.74% Impervious Runoff Depth=1.83"<br>Tc=6.0 min CN=87 Runoff=0.29 cfs 0.021 af                                      |
| <b>Subcatchment 2S: 295 Embankment Trib</b>     | Runoff Area=69,848 sf 12.70% Impervious Runoff Depth=0.00"<br>Flow Length=233' Tc=16.0 min CN=41 Runoff=0.00 cfs 0.000 af                   |
| <b>Subcatchment 3S.1: Garden area runoff</b>    | Runoff Area=6,670 sf 0.00% Impervious Runoff Depth=0.00"<br>Flow Length=82' Tc=6.9 min CN=30 Runoff=0.00 cfs 0.000 af                       |
| <b>Reach POI-1: POI #1 - 60" Douglass MS4</b>   | Inflow=3.76 cfs 0.286 af<br>Outflow=3.76 cfs 0.286 af                                                                                       |
| <b>Reach POI-3: POI #3 - Baseball Field</b>     | Inflow=0.00 cfs 0.000 af<br>Outflow=0.00 cfs 0.000 af                                                                                       |
| <b>Pond P1: VUSF</b>                            | Peak Elev=30.91' Storage=530 cf Inflow=0.42 cfs 0.030 af<br>Discarded=0.04 cfs 0.022 af Primary=0.01 cfs 0.009 af Outflow=0.06 cfs 0.030 af |

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**Pond P2: FP 4**

Peak Elev=35.95' Storage=0 cf Inflow=0.14 cfs 0.011 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0050 '/' Outflow=0.14 cfs 0.011 af

**Pond P3: FP 3**

Peak Elev=36.10' Storage=0 cf Inflow=0.12 cfs 0.010 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.12 cfs 0.010 af

**Pond P4: FP 2**

Peak Elev=35.90' Storage=0 cf Inflow=0.29 cfs 0.021 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.29 cfs 0.021 af

**Pond P5: FP 1**

Peak Elev=35.70' Storage=0 cf Inflow=0.20 cfs 0.014 af  
10.0" Round Culvert n=0.010 L=75.0' S=0.0049 '/' Outflow=0.20 cfs 0.014 af

**Pond POI #2: POI #2 (295 Basin)**

Peak Elev=26.36' Storage=20 cf Inflow=0.00 cfs 0.000 af  
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

**Total Runoff Area = 4.952 ac Runoff Volume = 0.308 af Average Runoff Depth = 0.75"**  
**54.64% Pervious = 2.706 ac 45.36% Impervious = 2.246 ac**



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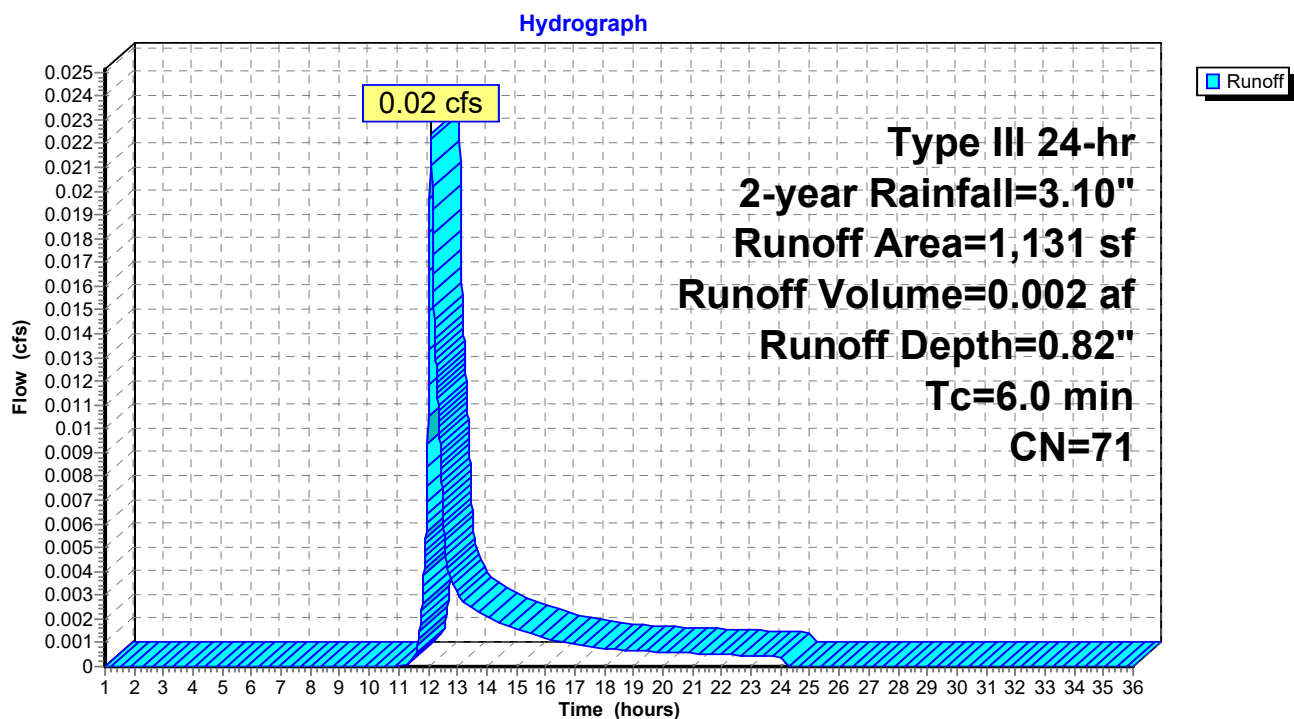
**Summary for Subcatchment 1.S1: Drive to Street**

Runoff = 0.02 cfs @ 12.10 hrs, Volume= 0.002 af, Depth= 0.82"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 622       | 98 | Pavement                      |
|   | 509       | 39 | >75% Grass cover, Good, HSG A |
|   | 1,131     | 71 | Weighted Average              |
|   | 509       |    | 45.00% Pervious Area          |
|   | 622       |    | 55.00% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1.S1: Drive to Street**

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**Summary for Subcatchment 1S.10: East Lot 1**

Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 1.99"

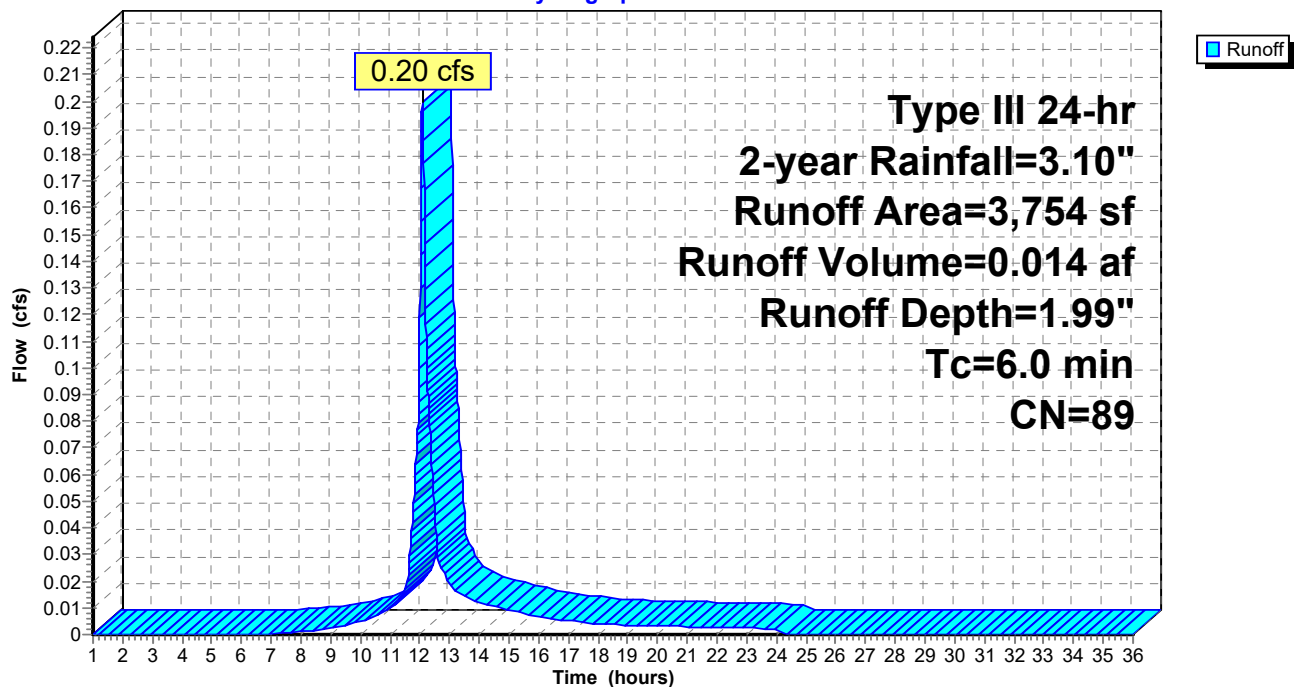
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-year Rainfall=3.10"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,190     | 98 | Pavement                      |
|   | 564       | 39 | >75% Grass cover, Good, HSG A |
|   | 3,754     | 89 | Weighted Average              |
|   | 564       |    | 15.02% Pervious Area          |
|   | 3,190     |    | 84.98% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.10: East Lot 1**

Hydrograph



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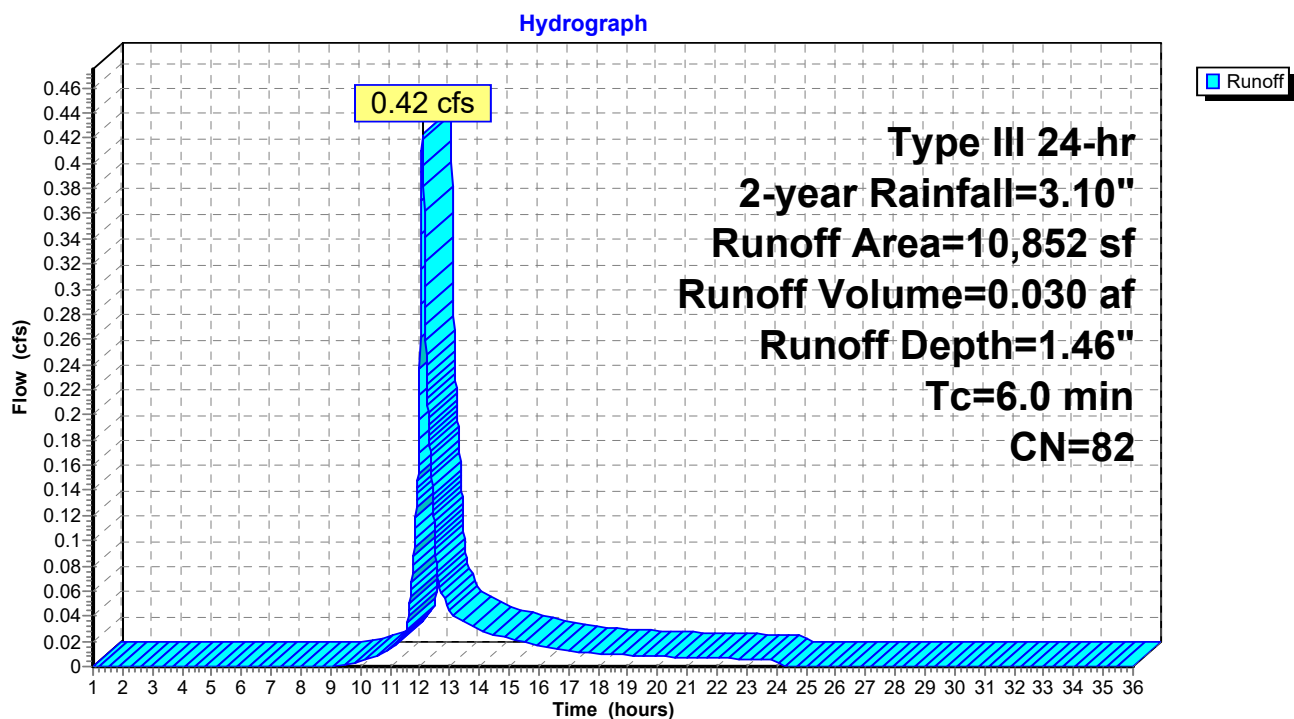
**Summary for Subcatchment 1S.11: South Lot Treated**

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Depth= 1.46"

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

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 8,274     | 98 | Paved parking          |
|   | 2,578     | 30 | Brush, Good, HSG A     |
|   | 10,852    | 82 | Weighted Average       |
|   | 2,578     |    | 23.76% Pervious Area   |
|   | 8,274     |    | 76.24% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.11: South Lot Treated**

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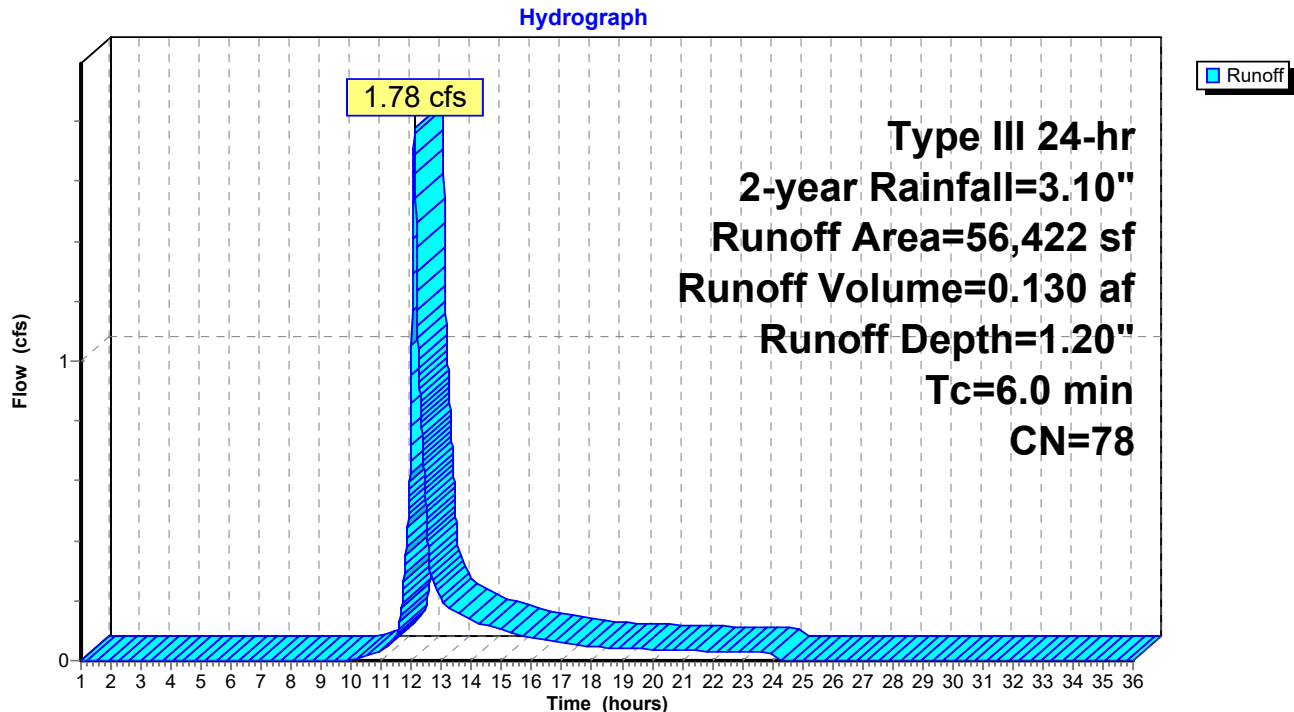
**Summary for Subcatchment 1S.2: Co Op Roof & yard**

Runoff = 1.78 cfs @ 12.09 hrs, Volume= 0.130 af, Depth= 1.20"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 5,239     | 98 | pavers                        |
|   | 16,100    | 39 | >75% Grass cover, Good, HSG A |
| * | 21,137    | 98 | Roofs                         |
| * | 4,191     | 98 | sidewalks                     |
| * | 618       | 98 | patios                        |
|   | 9,137     | 77 | 1/8 acre lots, 65% imp, HSG A |
|   | 56,422    | 78 | Weighted Average              |
|   | 19,298    |    | 34.20% Pervious Area          |
|   | 37,124    |    | 65.80% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.2: Co Op Roof & yard**

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**Summary for Subcatchment 1S.3: Runoff to park**

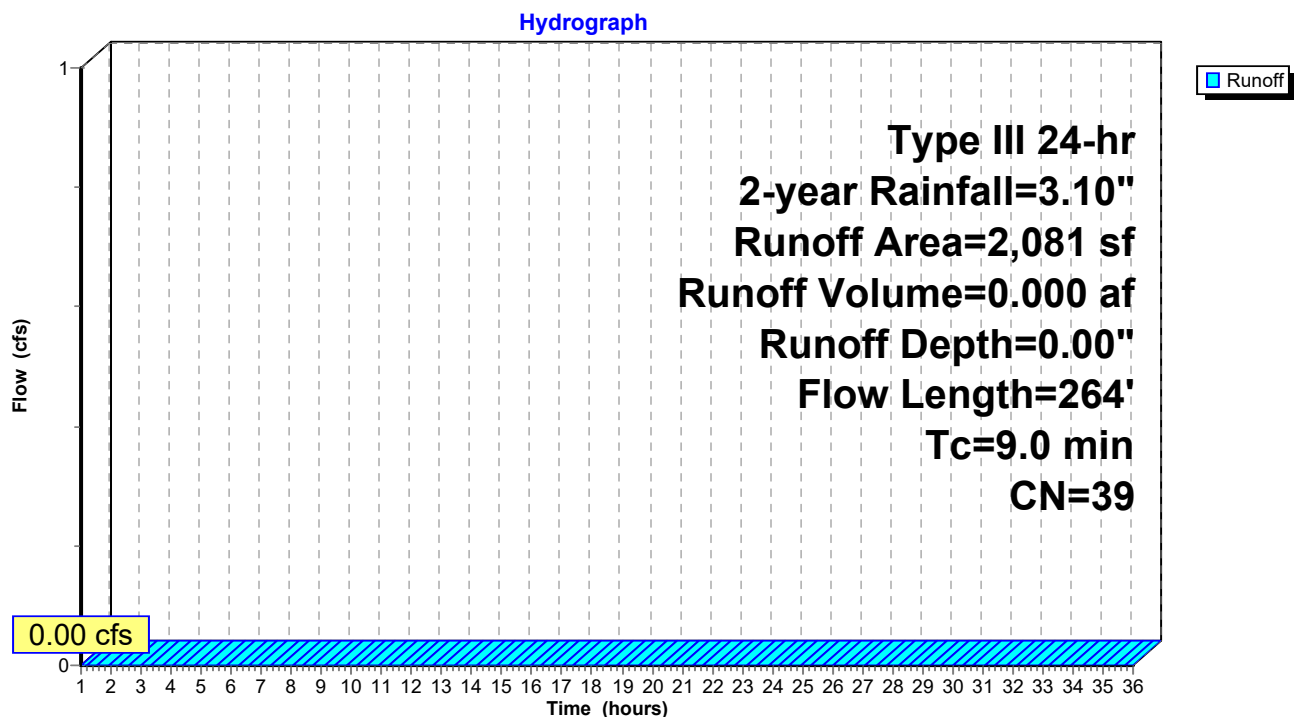
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,081     | 39 | >75% Grass cover, Good, HSG A |
| 2,081     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 6.2      | 100           | 0.0600        | 0.27              |                | <b>Sheet Flow, A to B</b><br>Grass: Short n= 0.150 P2= 3.27"                |
| 2.8      | 164           | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.0      | 264           | Total         |                   |                |                                                                             |

**Subcatchment 1S.3: Runoff to park**



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Type III 24-hr 2-year Rainfall=3.10"

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## Summary for Subcatchment 1S.4: Central parking/drive

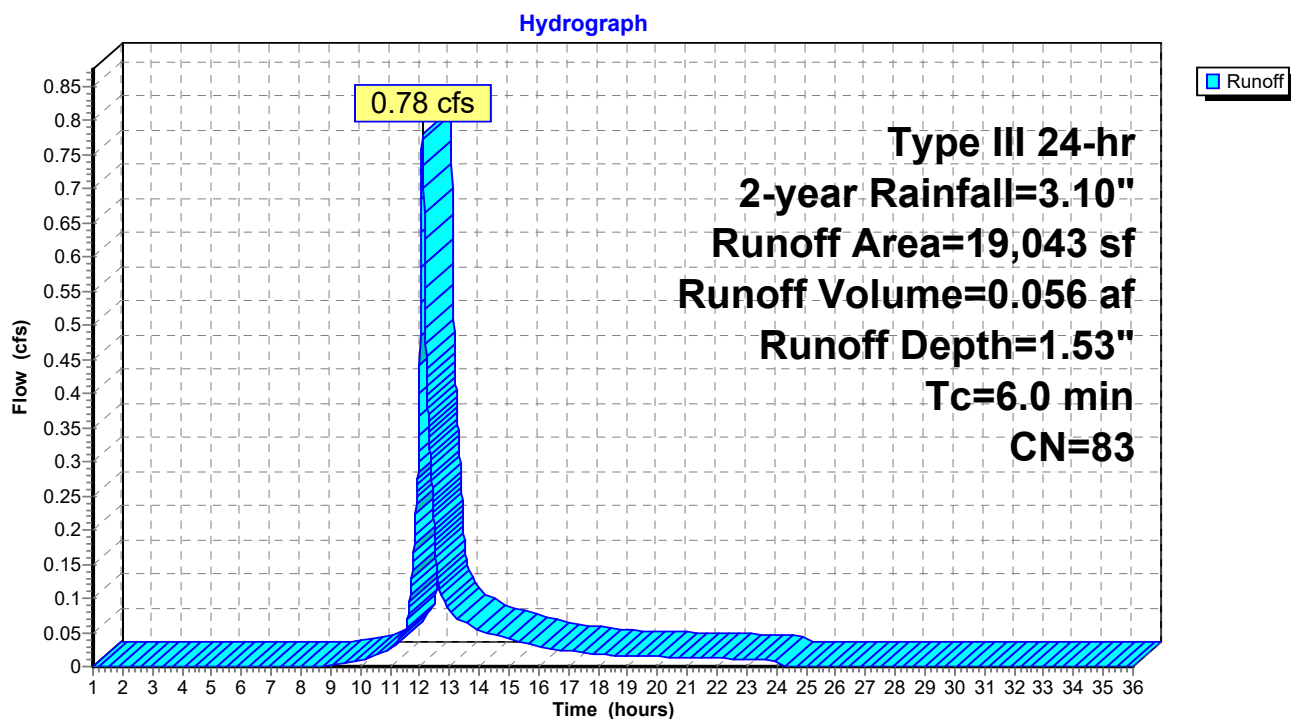
Runoff = 0.78 cfs @ 12.09 hrs, Volume= 0.056 af, Depth= 1.53"

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

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 14,850    | 98 | Pavement               |
|   | 4,193     | 30 | Brush, Good, HSG A     |
|   | 19,043    | 83 | Weighted Average       |
|   | 4,193     |    | 22.02% Pervious Area   |
|   | 14,850    |    | 77.98% Impervious Area |

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

## Subcatchment 1S.4: Central parking/drive



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## Summary for Subcatchment 1S.5: Contained yard/park connection

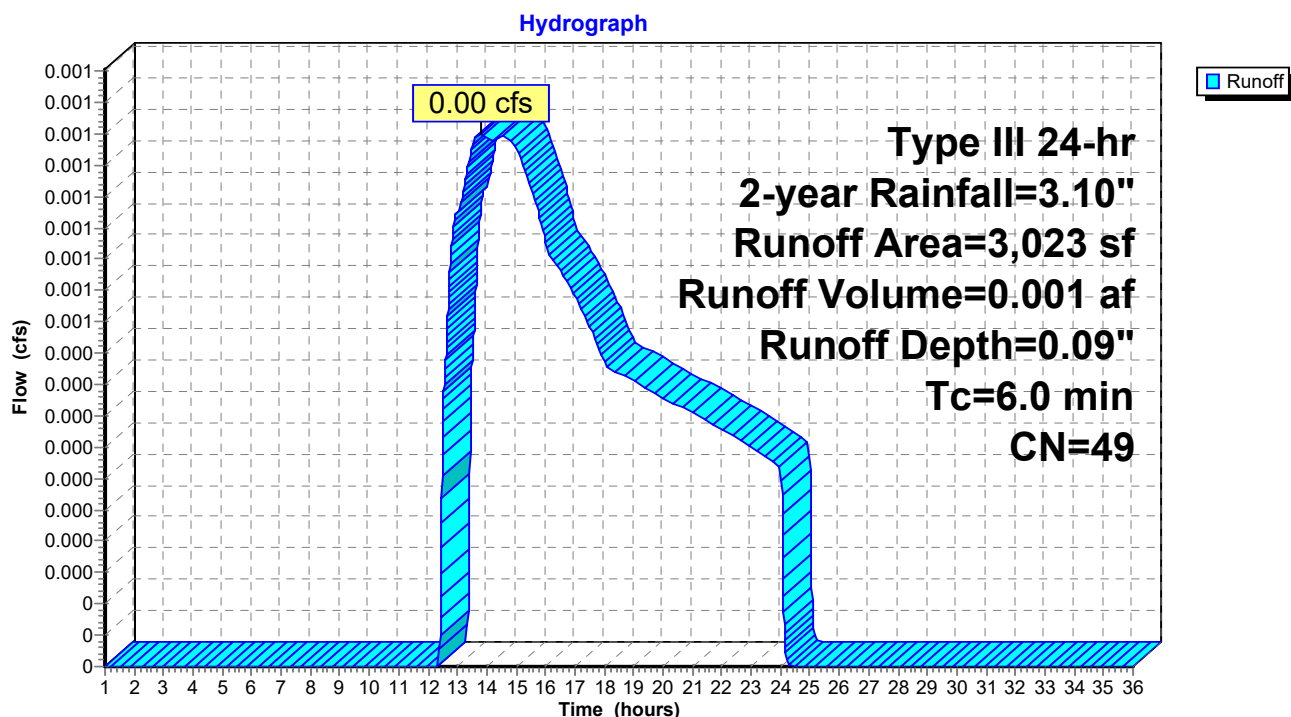
Runoff = 0.00 cfs @ 13.78 hrs, Volume= 0.001 af, Depth= 0.09"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,514     | 39 | >75% Grass cover, Good, HSG A |
| * 509     | 98 | sidewalks                     |
| 3,023     | 49 | Weighted Average              |
| 2,514     |    | 83.16% Pervious Area          |
| 509       |    | 16.84% Impervious Area        |

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

## Subcatchment 1S.5: Contained yard/park connection



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**Summary for Subcatchment 1S.6: Building E roof and yard**

Runoff = 0.41 cfs @ 12.10 hrs, Volume= 0.033 af, Depth= 0.77"

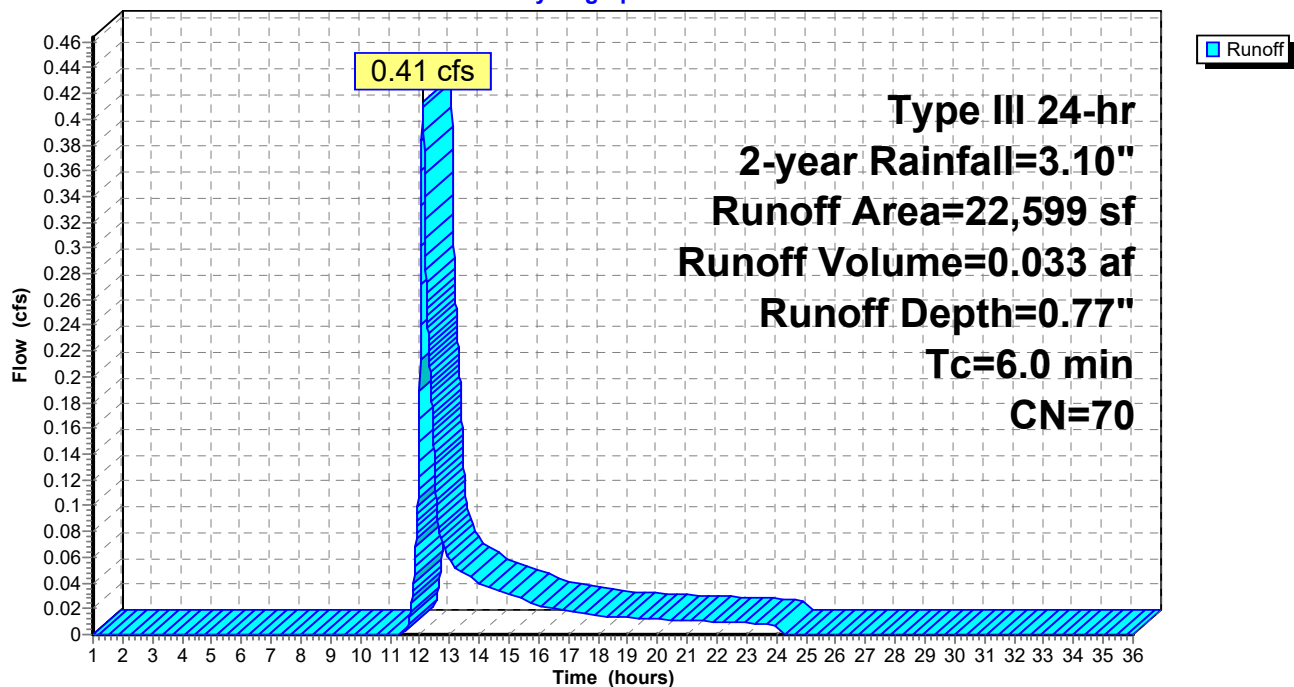
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-year Rainfall=3.10"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
|   | 10,599    | 39 | >75% Grass cover, Good, HSG A |
| * | 12,000    | 98 | roof                          |
|   | 22,599    | 70 | Weighted Average              |
|   | 10,599    |    | 46.90% Pervious Area          |
|   | 12,000    |    | 53.10% Impervious Area        |

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

**Subcatchment 1S.6: Building E roof and yard**

Hydrograph



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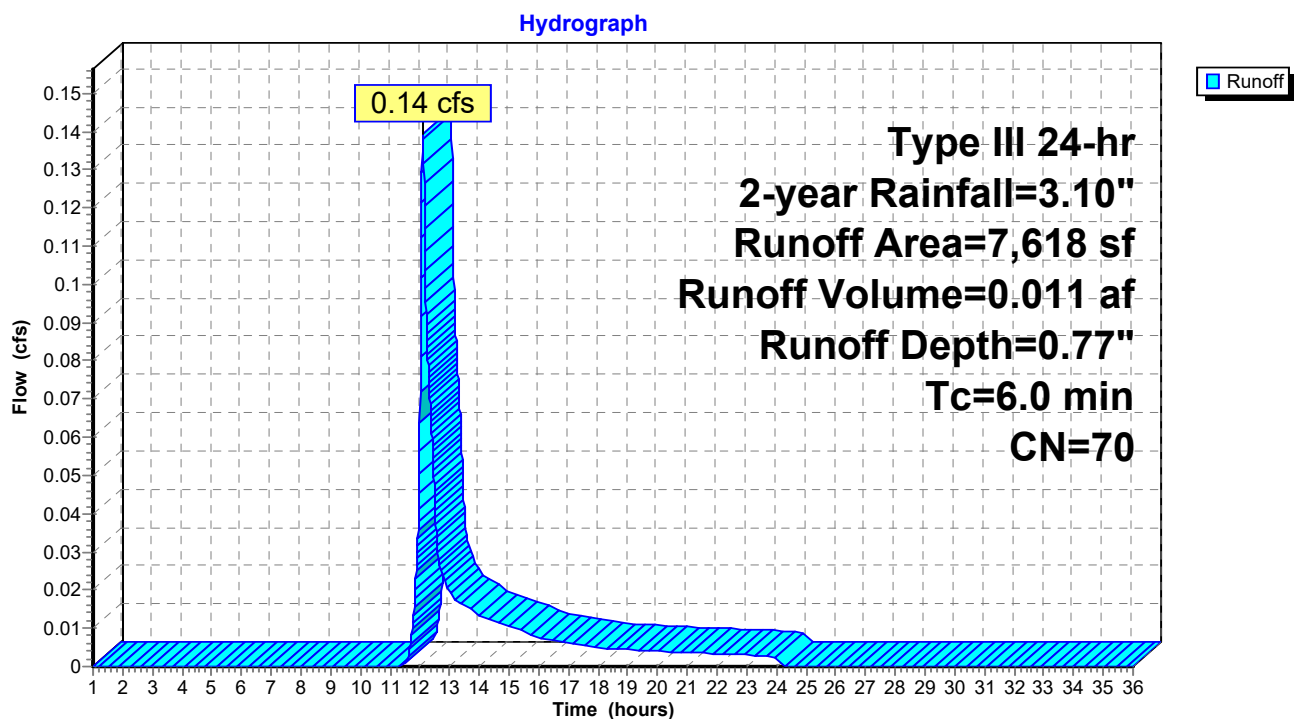
**Summary for Subcatchment 1S.7: East Lot 4**

Runoff = 0.14 cfs @ 12.10 hrs, Volume= 0.011 af, Depth= 0.77"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 4,038     | 98 | Paved parking                 |
|   | 3,580     | 39 | >75% Grass cover, Good, HSG A |
|   | 7,618     | 70 | Weighted Average              |
|   | 3,580     |    | 46.99% Pervious Area          |
|   | 4,038     |    | 53.01% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.7: East Lot 4**

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Type III 24-hr 2-year Rainfall=3.10"

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## Summary for Subcatchment 1S.8: East Lot 3

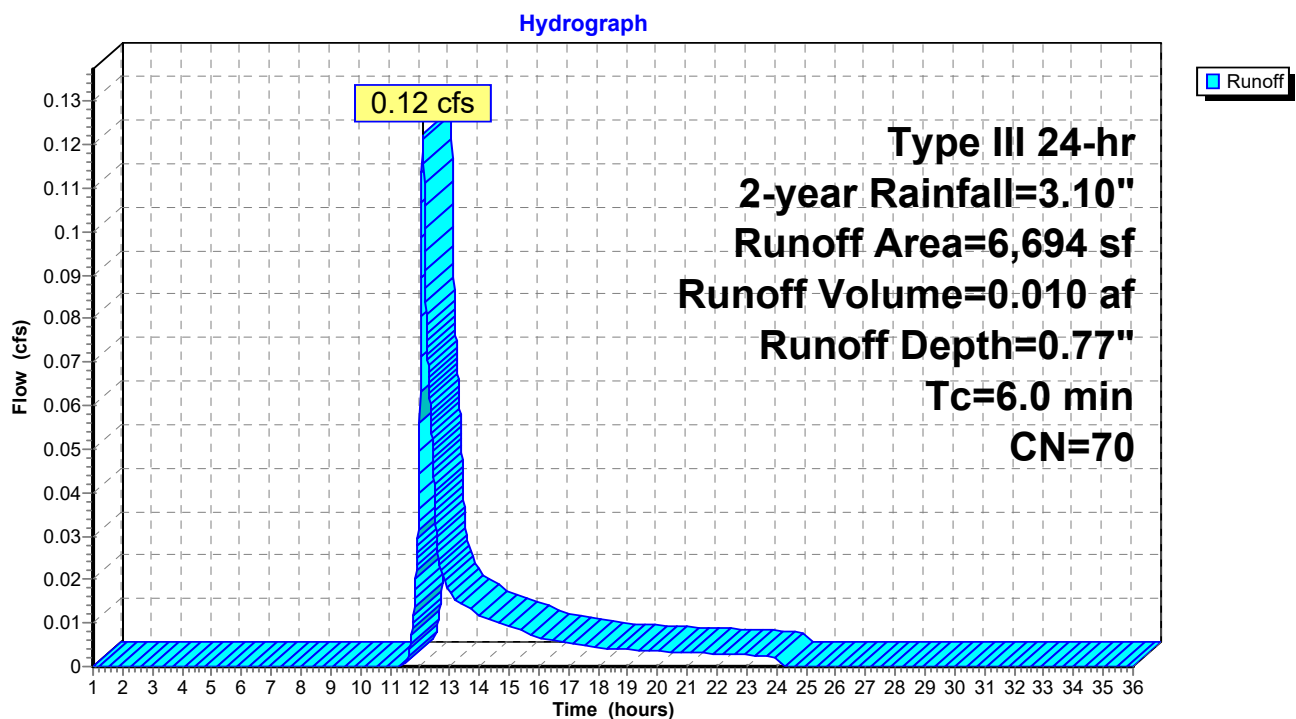
Runoff = 0.12 cfs @ 12.10 hrs, Volume= 0.010 af, Depth= 0.77"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,547     | 98 | Paved parking                 |
|   | 3,147     | 39 | >75% Grass cover, Good, HSG A |
|   | 6,694     | 70 | Weighted Average              |
|   | 3,147     |    | 47.01% Pervious Area          |
|   | 3,547     |    | 52.99% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

## Subcatchment 1S.8: East Lot 3





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## Summary for Subcatchment 1S.9: East Lot 2

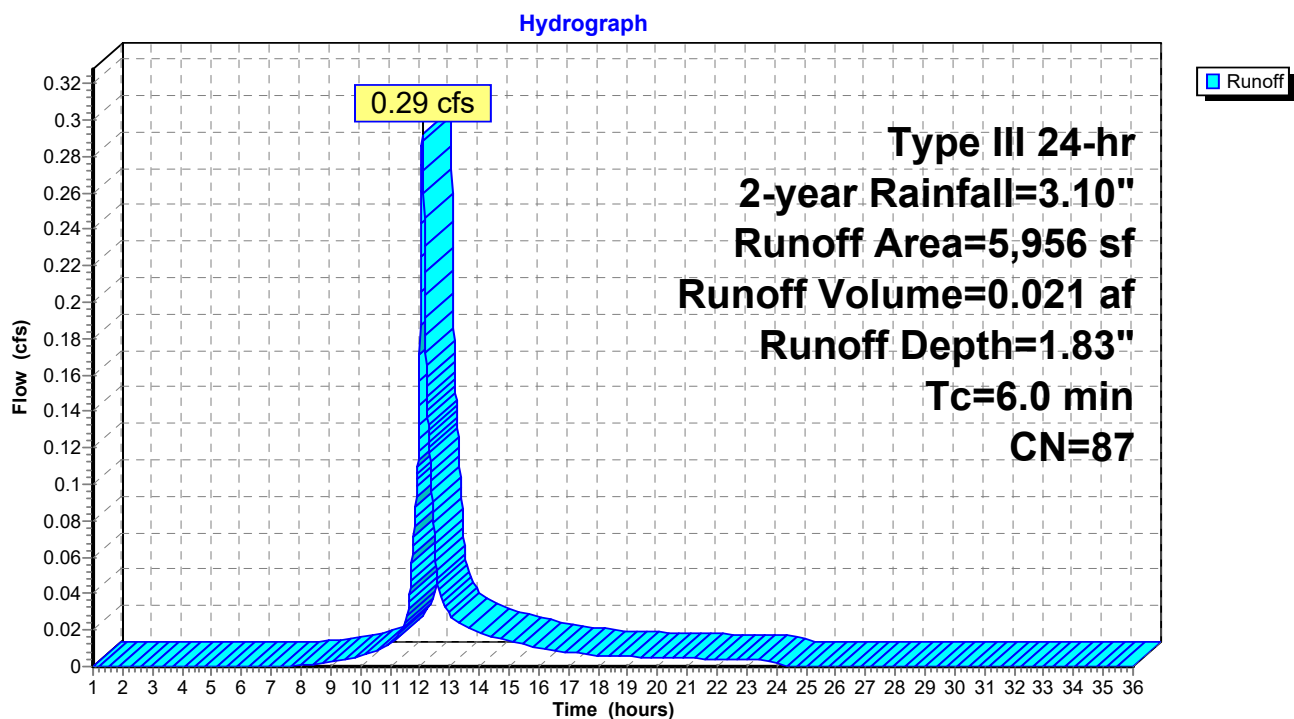
Runoff = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 1.83"

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

|   | Area (sf) | CN | Description                    |
|---|-----------|----|--------------------------------|
| * | 4,809     | 98 | Paved parking, patio, sidewalk |
|   | 1,147     | 39 | >75% Grass cover, Good, HSG A  |
|   | 5,956     | 87 | Weighted Average               |
|   | 1,147     |    | 19.26% Pervious Area           |
|   | 4,809     |    | 80.74% Impervious Area         |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

## Subcatchment 1S.9: East Lot 2



## Summary for Subcatchment 2S: 295 Embankment Trib

Runoff = 0.00 cfs @ 23.91 hrs, Volume= 0.000 af, Depth= 0.00"

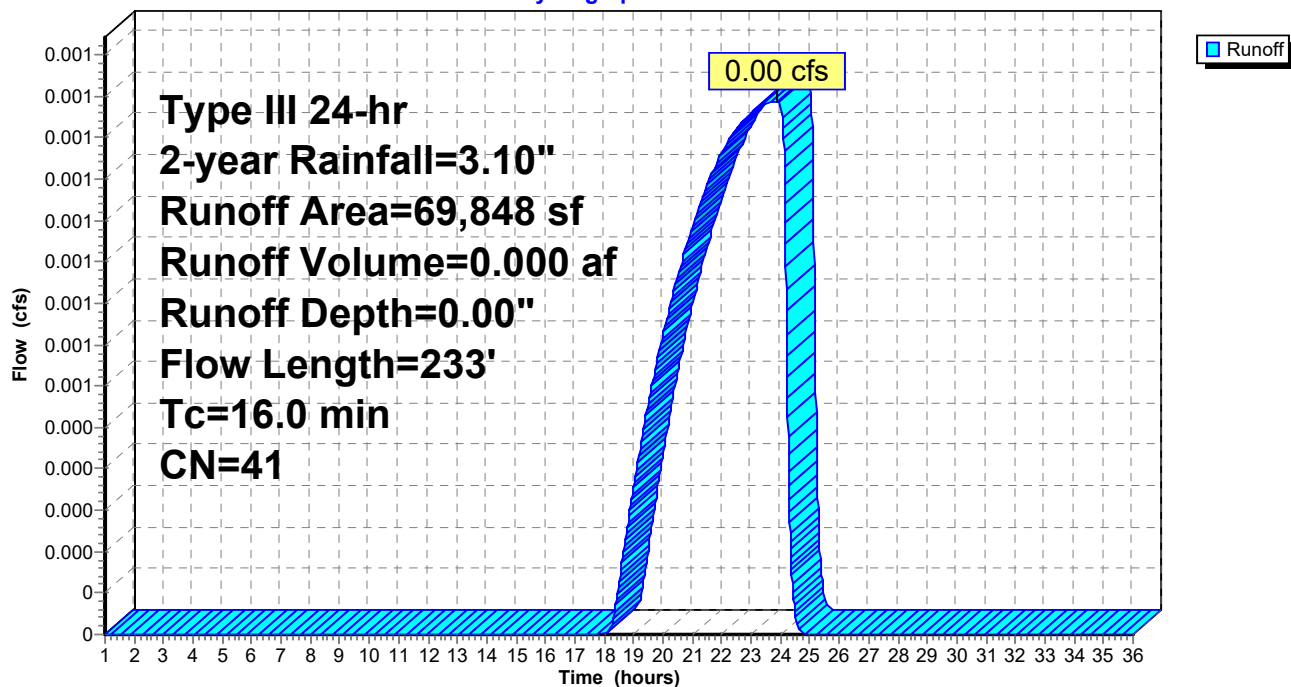
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-year Rainfall=3.10"

|   | Area (sf) | CN | Description                    |
|---|-----------|----|--------------------------------|
|   | 8,183     | 39 | >75% Grass cover, Good, HSG A  |
| * | 230       | 98 | Stairs                         |
| * | 3,155     | 98 | Path                           |
| * | 5,488     | 98 | Homes/driveways                |
|   | 52,792    | 32 | Woods/grass comb., Good, HSG A |
|   | 69,848    | 41 | Weighted Average               |
|   | 60,975    |    | 87.30% Pervious Area           |
|   | 8,873     |    | 12.70% Impervious Area         |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                                                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------------------------------------------------------|
| 14.7        | 100              | 0.0500           | 0.11                 |                   | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"     |
| 1.3         | 133              | 0.0600           | 1.71                 |                   | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0        | 233              | Total            |                      |                   |                                                                             |

## Subcatchment 2S: 295 Embankment Trib

## Hydrograph



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**Summary for Subcatchment 3S.1: Garden area runoff**

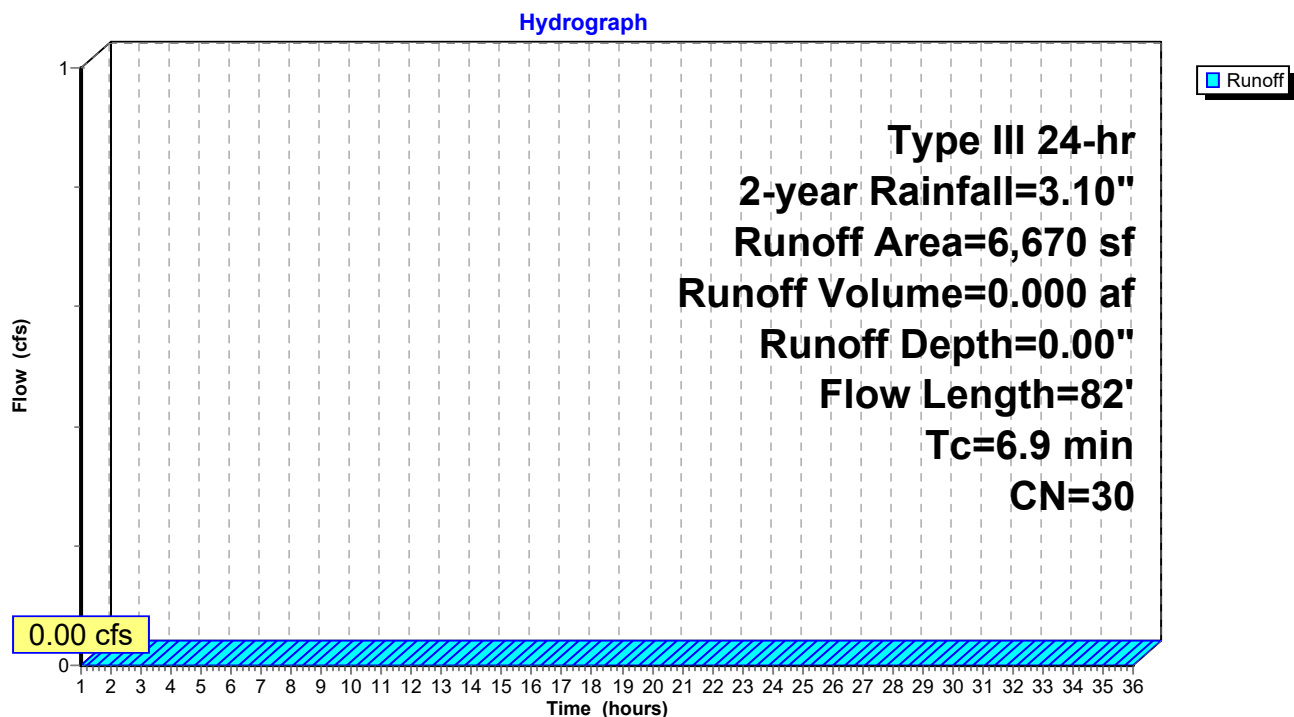
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description           |
|-----------|----|-----------------------|
| 6,670     | 30 | Brush, Good, HSG A    |
| 6,670     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 1.7      | 28            | 0.3330        | 0.28              |                | <b>Sheet Flow, A to B</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 5.2      | 54            | 0.0700        | 0.17              |                | <b>Sheet Flow, B to C</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 6.9      | 82            | Total         |                   |                |                                 |

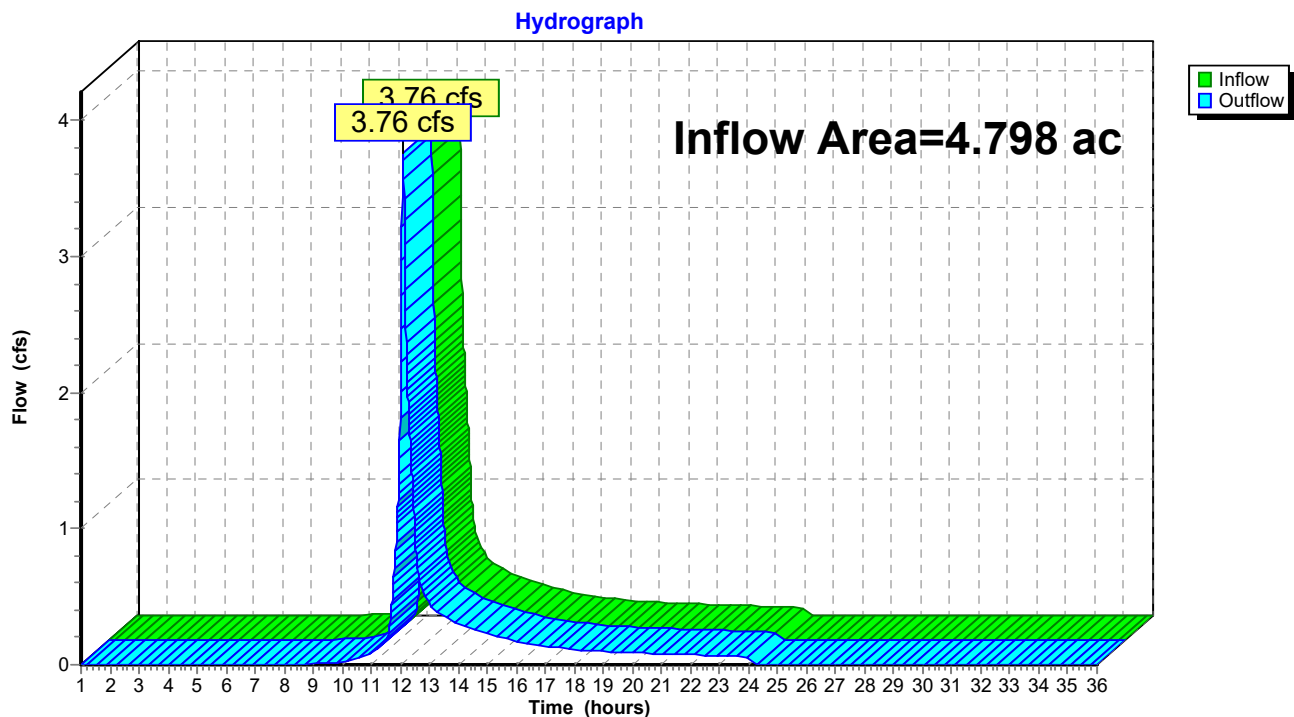
**Subcatchment 3S.1: Garden area runoff**

### Summary for Reach POI-1: POI #1 - 60" Douglass MS4

Inflow Area = 4.798 ac, 46.81% Impervious, Inflow Depth = 0.71" for 2-year event  
 Inflow = 3.76 cfs @ 12.09 hrs, Volume= 0.286 af  
 Outflow = 3.76 cfs @ 12.09 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-1: POI #1 - 60" Douglass MS4

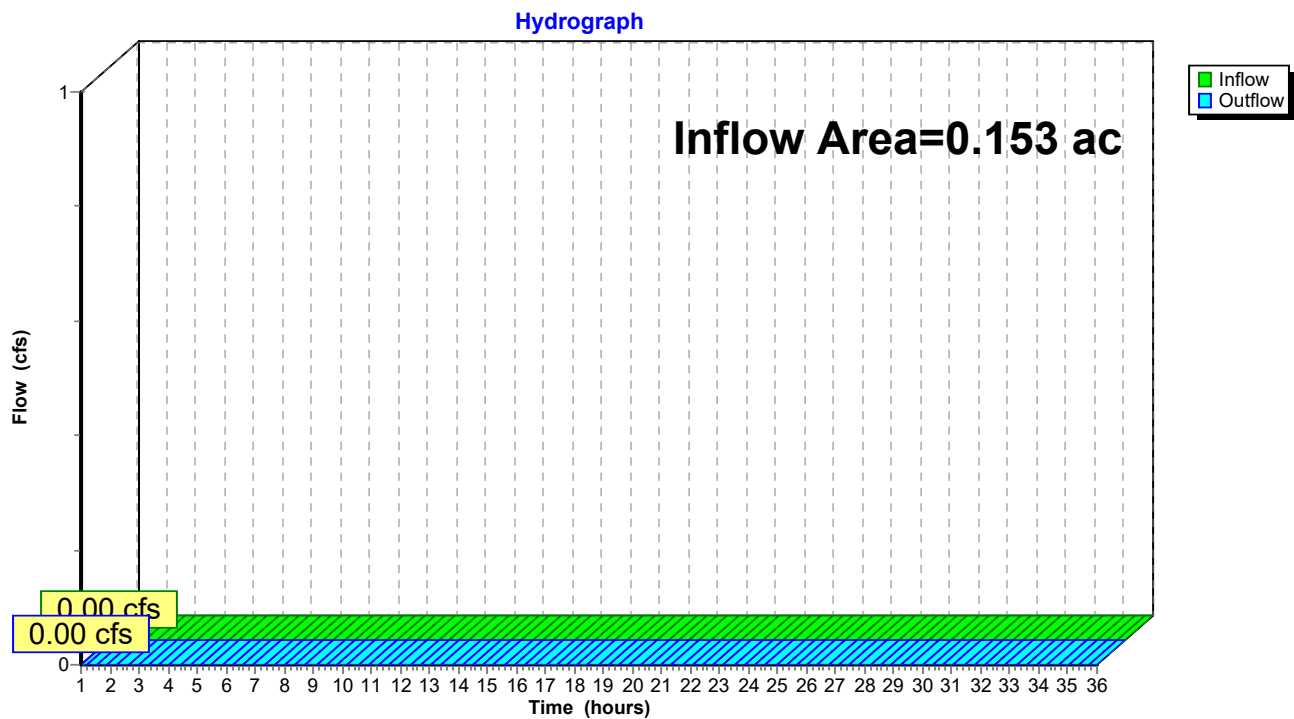


### Summary for Reach POI-3: POI #3 - Baseball Field

Inflow Area = 0.153 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-year event  
 Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-3: POI #3 - Baseball Field





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**Summary for Pond P1: VUSF**

Inflow Area = 0.249 ac, 76.24% Impervious, Inflow Depth = 1.46" for 2-year event  
 Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af  
 Outflow = 0.06 cfs @ 12.76 hrs, Volume= 0.030 af, Atten= 87%, Lag= 39.9 min  
 Discarded = 0.04 cfs @ 12.76 hrs, Volume= 0.022 af  
 Primary = 0.01 cfs @ 12.76 hrs, Volume= 0.009 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 30.91' @ 12.76 hrs Surf.Area= 1,889 sf Storage= 530 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 171.8 min ( 1,009.6 - 837.8 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                |
|--------|--------|---------------|--------------------------------------------------------------------------------------------------------------------|
| #1     | 30.75' | 1,899 cf      | <b>Ponding (Prismatic)</b> Listed below (Recalc)                                                                   |
| #2     | 29.25' | 69 cf         | <b>Filter Media/Loam (Prismatic)</b> Listed below (Recalc)<br>687 cf Overall x 10.0% Voids                         |
| #3     | 28.92' | 30 cf         | <b>Transition Gravel (Prismatic)</b> Listed below (Recalc)<br>151 cf Overall x 20.0% Voids                         |
| #4     | 27.00' | 349 cf        | <b>Crushed Stone (Prismatic)</b> Listed below (Recalc)<br>879 cf Overall - 6 cf Embedded = 873 cf x 40.0% Voids    |
| #5     | 27.10' | 5 cf          | <b>4.0" Round Pipe Storage</b> x 2 Inside #4<br>L= 30.0' S= 0.0005 '/<br>6 cf Overall - 0.2" Wall Thickness = 5 cf |
|        |        | 2,353 cf      | Total Available Storage                                                                                            |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 30.75               | 465                  | 0                         | 0                         |
| 32.25               | 945                  | 1,058                     | 1,058                     |
| 33.00               | 1,300                | 842                       | 1,899                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 29.25               | 458                  | 0                         | 0                         |
| 30.75               | 458                  | 687                       | 687                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 28.92               | 458                  | 0                         | 0                         |
| 29.25               | 458                  | 151                       | 151                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 27.00               | 458                  | 0                         | 0                         |
| 28.92               | 458                  | 879                       | 879                       |

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| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                          |
|--------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 27.00' | <b>12.0" Round Culvert</b><br>L= 60.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 27.00' / 26.75' S= 0.0042 ' / ' Cc= 0.600<br>n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1  | 27.10' | <b>0.5" Vert. Soil Filter Media Drawdown Effect</b> C= 0.600                                                                                                                                            |
| #3     | Device 1  | 32.35' | <b>24.0" Horiz. Beehive Outlet</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                        |
| #4     | Discarded | 27.00' | <b>1.000 in/hr Exfiltration over Surface area</b>                                                                                                                                                       |

**Discarded OutFlow** Max=0.04 cfs @ 12.76 hrs HW=30.91' (Free Discharge)

↳ **4=Exfiltration** (Exfiltration Controls 0.04 cfs)

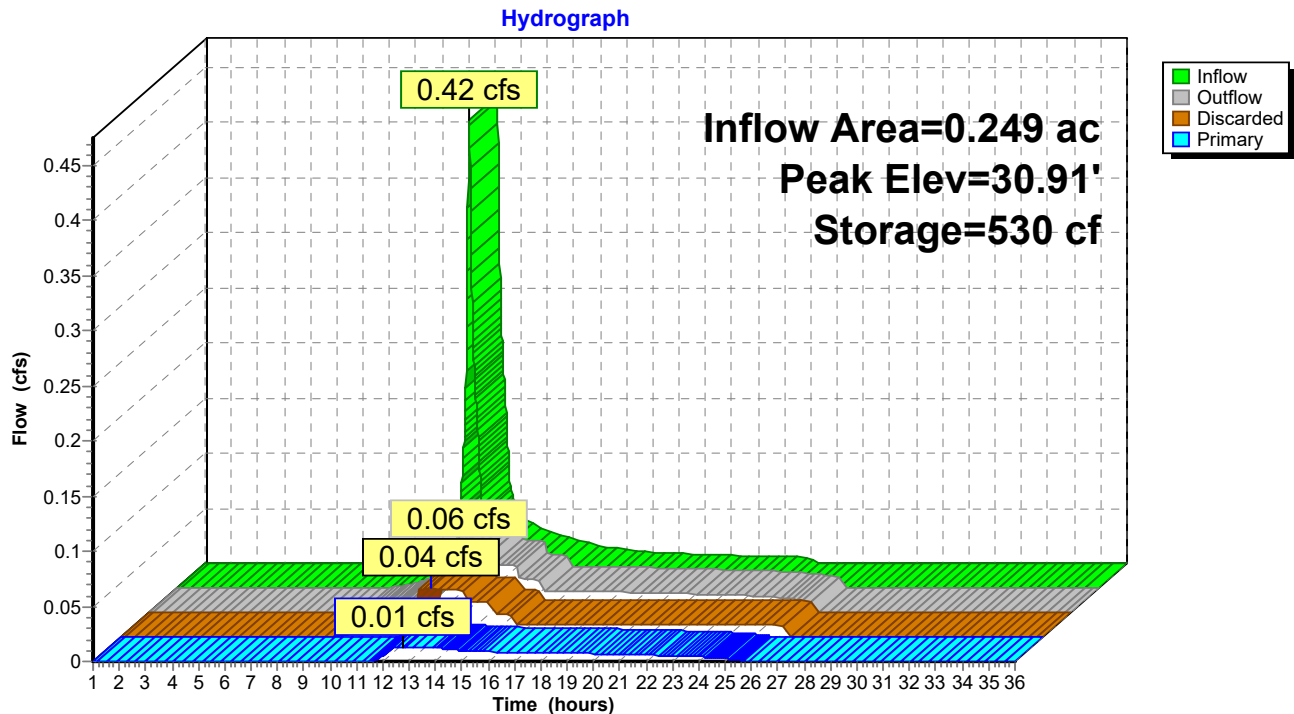
**Primary OutFlow** Max=0.01 cfs @ 12.76 hrs HW=30.91' TW=0.00' (Dynamic Tailwater)

↳ **1=Culvert** (Passes 0.01 cfs of 3.67 cfs potential flow)

↳ **2=Soil Filter Media Drawdown Effect** (Orifice Controls 0.01 cfs @ 9.37 fps)

↳ **3=Beehive Outlet** ( Controls 0.00 cfs)

## Pond P1: VUSF



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**Summary for Pond P2: FP 4**

Inflow Area = 0.175 ac, 53.01% Impervious, Inflow Depth = 0.77" for 2-year event  
 Inflow = 0.14 cfs @ 12.10 hrs, Volume= 0.011 af  
 Outflow = 0.14 cfs @ 12.10 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.14 cfs @ 12.10 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.95' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 878.2 - 878.2 )

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.95' | 14 cf         | <b>4.00'W x 5.00'L x 3.60'H Media/Stone</b><br>72 cf Overall x 20.0% Voids |
| #2     | 35.95' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 52 cf         | Total Available Storage                                                    |

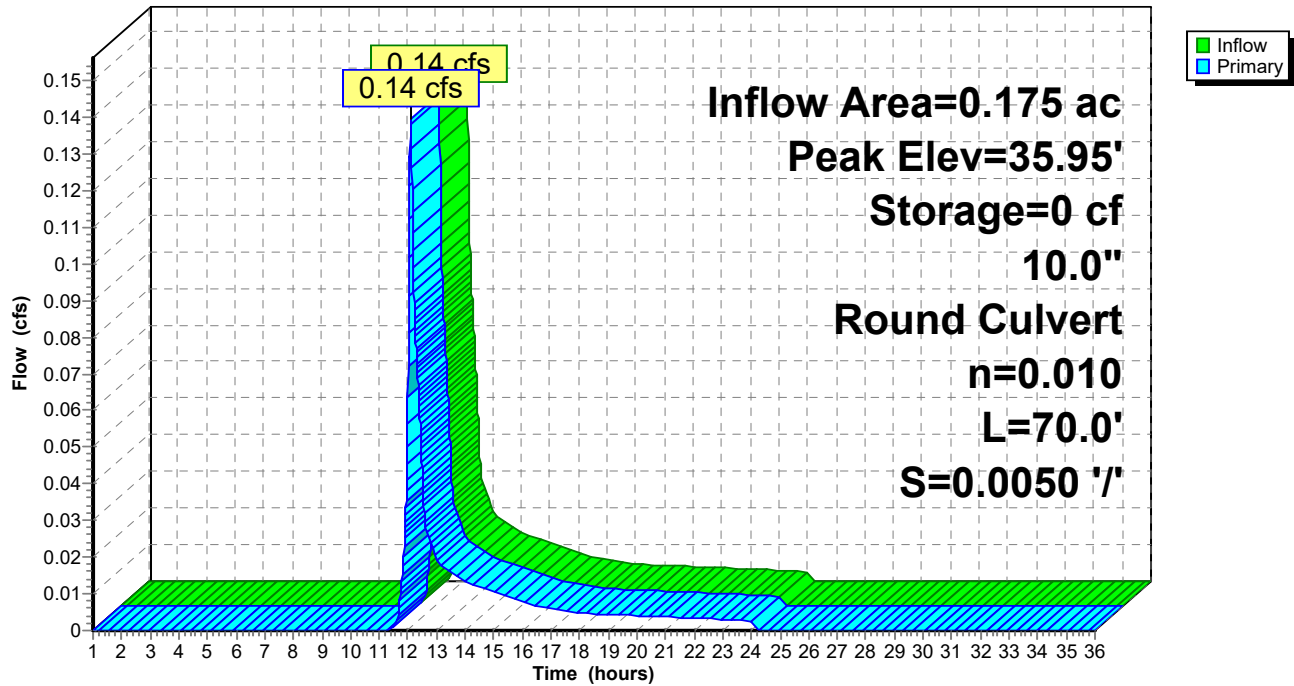
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.95               | 20                   | 0                         | 0                         |
| 36.95               | 56                   | 38                        | 38                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 32.35' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 32.35' / 32.00' S= 0.0050 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.10 hrs HW=35.95' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.51 cfs potential flow)

Pond P2: FP 4

Hydrograph



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**Summary for Pond P3: FP 3**

Inflow Area = 0.154 ac, 52.99% Impervious, Inflow Depth = 0.77" for 2-year event  
 Inflow = 0.12 cfs @ 12.10 hrs, Volume= 0.010 af  
 Outflow = 0.12 cfs @ 12.10 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.12 cfs @ 12.10 hrs, Volume= 0.010 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 36.10' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 878.2 - 878.2 )

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 36.10' | 21 cf         | <b>5.00'W x 5.00'L x 4.20'H Media/Stone</b><br>105 cf Overall x 20.0% Voids |
| #2     | 36.10' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 66 cf         | Total Available Storage                                                     |

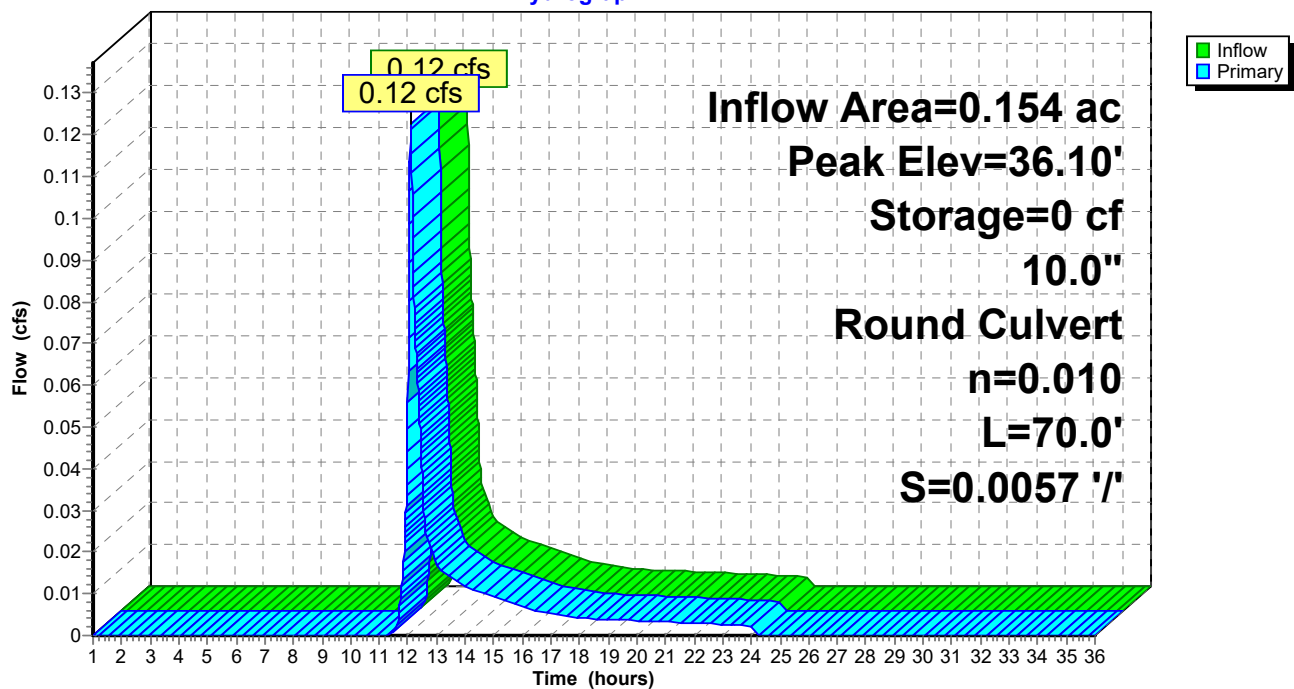
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 36.10               | 25                   | 0                         | 0                         |
| 37.10               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.90' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.90' / 31.50' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.10 hrs HW=36.10' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.83 cfs potential flow)

Pond P3: FP 3

Hydrograph





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**Summary for Pond P4: FP 2**

Inflow Area = 0.137 ac, 80.74% Impervious, Inflow Depth = 1.83" for 2-year event  
 Inflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af  
 Outflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.90' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

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

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 35.90' | 23 cf         | <b>5.00'W x 5.00'L x 4.50'H Media/Stone</b><br>113 cf Overall x 20.0% Voids |
| #2     | 35.90' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 67 cf         | Total Available Storage                                                     |

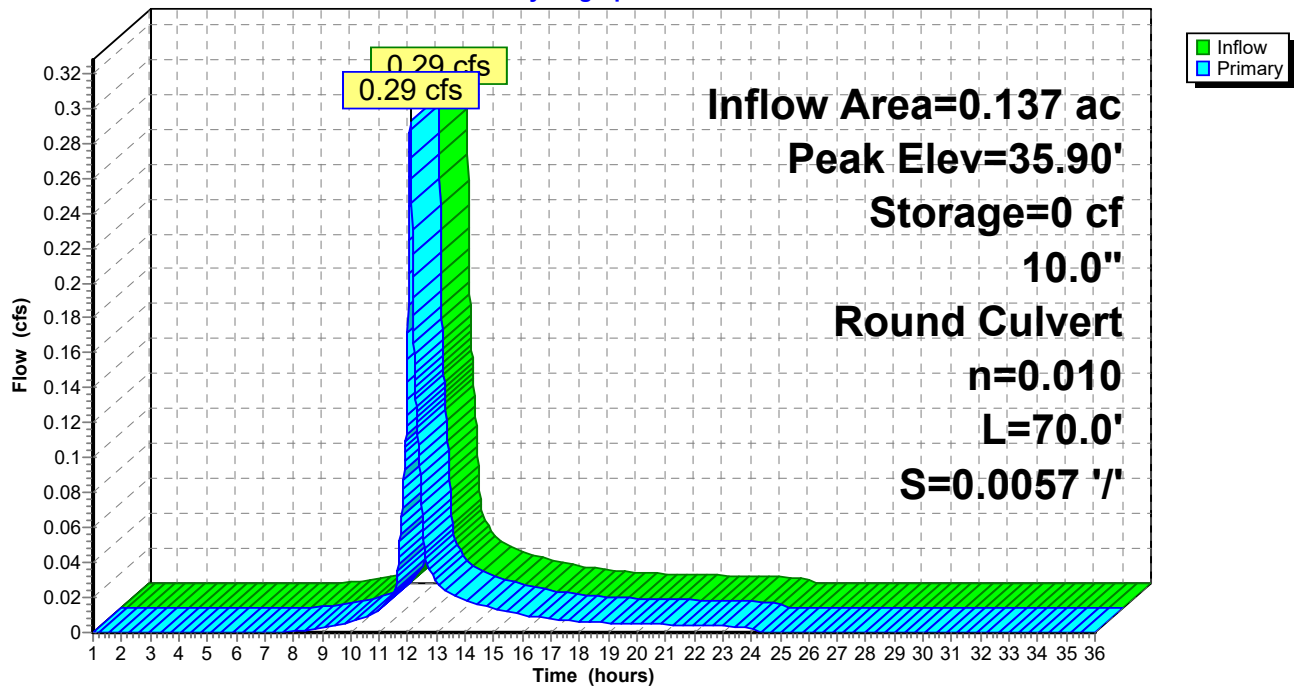
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.90               | 25                   | 0                         | 0                         |
| 36.90               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.40' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.40' / 31.00' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.90' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.98 cfs potential flow)

Pond P4: FP 2

Hydrograph



**Post Development 1.13 FINAL**

Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Pond P5: FP 1**

Inflow Area = 0.086 ac, 84.98% Impervious, Inflow Depth = 1.99" for 2-year event  
 Inflow = 0.20 cfs @ 12.09 hrs, Volume= 0.014 af  
 Outflow = 0.20 cfs @ 12.09 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.20 cfs @ 12.09 hrs, Volume= 0.014 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.70' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

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

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.70' | 19 cf         | <b>4.00'W x 5.00'L x 4.80'H Media/Stone</b><br>96 cf Overall x 20.0% Voids |
| #2     | 35.70' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 57 cf         | Total Available Storage                                                    |

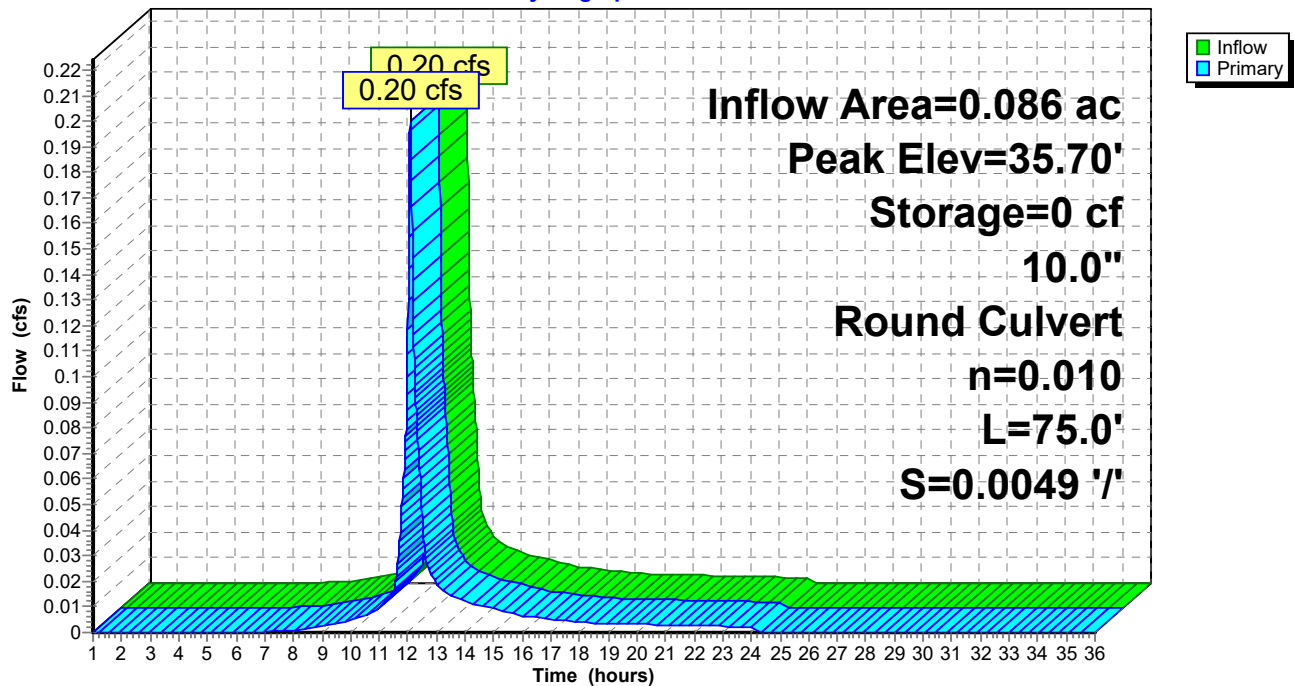
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.70               | 20                   | 0                         | 0                         |
| 36.70               | 56                   | 38                        | 38                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 30.90' | <b>10.0" Round Culvert</b> L= 75.0' Ke= 1.000<br>Inlet / Outlet Invert= 30.90' / 30.53' S= 0.0049 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.70' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 4.12 cfs potential flow)

Pond P5: FP 1

Hydrograph



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Type III 24-hr 2-year Rainfall=3.10"

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**Summary for Pond POI #2: POI #2 (295 Basin)**

Inflow Area = 1.603 ac, 12.70% Impervious, Inflow Depth = 0.00" for 2-year event  
 Inflow = 0.00 cfs @ 23.91 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min  
 Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

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

Peak Elev= 26.36' @ 24.90 hrs Surf.Area= 505 sf Storage= 20 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 105,037 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

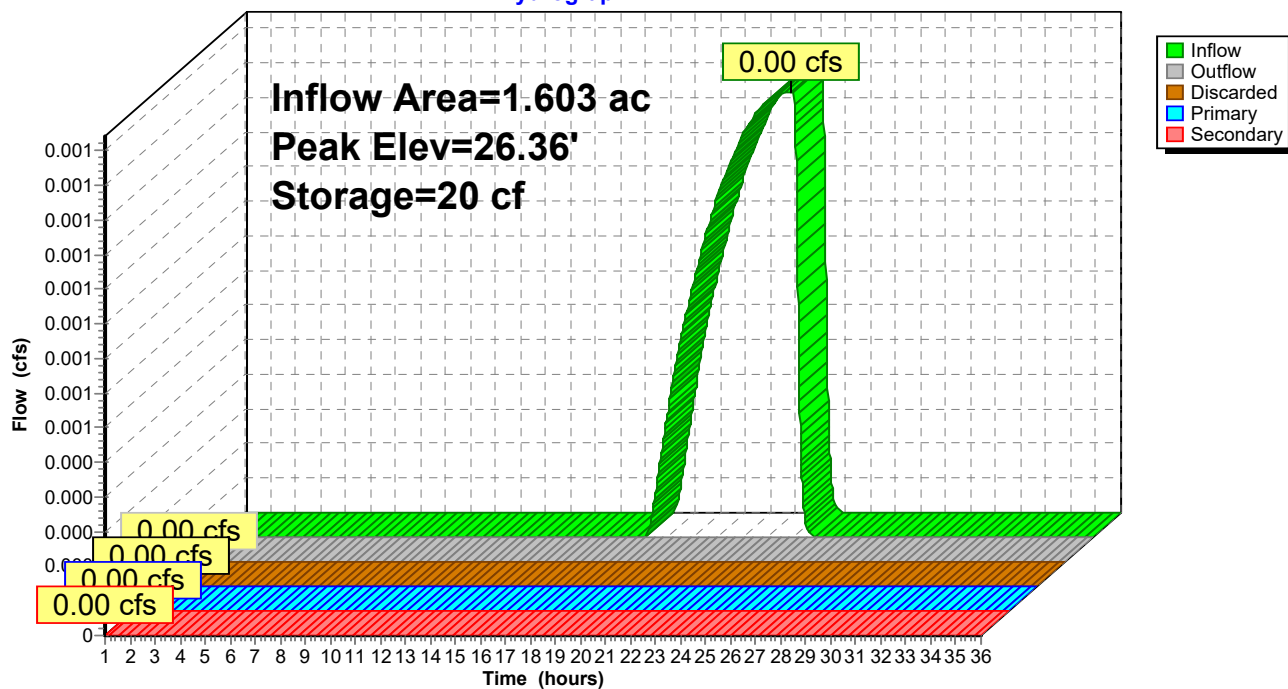
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 10,120               | 7,298                     | 8,899                     |
| 29.00               | 14,131               | 12,126                    | 21,024                    |
| 30.00               | 17,326               | 15,729                    | 36,753                    |
| 32.00               | 24,023               | 41,349                    | 78,102                    |
| 33.00               | 29,847               | 26,935                    | 105,037                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                               |
|--------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 26.60' | <b>12.0" Round Culvert</b> L= 16.0' Ke= 0.600<br>Inlet / Outlet Invert= 26.60' / 26.51' S= 0.0056 ' S= 0.0056 ' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf    |
| #2     | Secondary | 32.40' | <b>20.0' long x 15.0' breadth Overflow</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #3     | Discarded | 26.60' | <b>1.000 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                           |

**Discarded OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**3=Exfiltration** ( Controls 0.00 cfs)**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** ( Controls 0.00 cfs)**Secondary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**2=Overflow** ( Controls 0.00 cfs)

Pond POI #2: POI #2 (295 Basin)

Hydrograph





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Type III 24-hr 10-year Rainfall=4.60"

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Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                                 |                                                                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment 1S.1: Drive to Street</b>       | Runoff Area=1,131 sf 55.00% Impervious Runoff Depth=1.82"<br>Tc=6.0 min CN=71 Runoff=0.05 cfs 0.004 af                                        |
| <b>Subcatchment 1S.10: East Lot 1</b>           | Runoff Area=3,754 sf 84.98% Impervious Runoff Depth=3.39"<br>Tc=6.0 min CN=89 Runoff=0.33 cfs 0.024 af                                        |
| <b>Subcatchment 1S.11: South Lot Treated</b>    | Runoff Area=10,852 sf 76.24% Impervious Runoff Depth=2.72"<br>Tc=6.0 min CN=82 Runoff=0.80 cfs 0.057 af                                       |
| <b>Subcatchment 1S.2: Co Op Roof &amp; yard</b> | Runoff Area=56,422 sf 65.80% Impervious Runoff Depth=2.38"<br>Tc=6.0 min CN=78 Runoff=3.61 cfs 0.256 af                                       |
| <b>Subcatchment 1S.3: Runoff to park</b>        | Runoff Area=2,081 sf 0.00% Impervious Runoff Depth=0.13"<br>Flow Length=264' Tc=9.0 min CN=39 Runoff=0.00 cfs 0.001 af                        |
| <b>Subcatchment 1S.4: Central parking/drive</b> | Runoff Area=19,043 sf 77.98% Impervious Runoff Depth=2.81"<br>Tc=6.0 min CN=83 Runoff=1.44 cfs 0.103 af                                       |
| <b>Subcatchment 1S.5: Contained yard/park</b>   | Runoff Area=3,023 sf 16.84% Impervious Runoff Depth=0.49"<br>Tc=6.0 min CN=49 Runoff=0.02 cfs 0.003 af                                        |
| <b>Subcatchment 1S.6: Building E roof and</b>   | Runoff Area=22,599 sf 53.10% Impervious Runoff Depth=1.74"<br>Tc=6.0 min CN=70 Runoff=1.03 cfs 0.075 af                                       |
| <b>Subcatchment 1S.7: East Lot 4</b>            | Runoff Area=7,618 sf 53.01% Impervious Runoff Depth=1.74"<br>Tc=6.0 min CN=70 Runoff=0.35 cfs 0.025 af                                        |
| <b>Subcatchment 1S.8: East Lot 3</b>            | Runoff Area=6,694 sf 52.99% Impervious Runoff Depth=1.74"<br>Tc=6.0 min CN=70 Runoff=0.31 cfs 0.022 af                                        |
| <b>Subcatchment 1S.9: East Lot 2</b>            | Runoff Area=5,956 sf 80.74% Impervious Runoff Depth=3.19"<br>Tc=6.0 min CN=87 Runoff=0.50 cfs 0.036 af                                        |
| <b>Subcatchment 2S: 295 Embankment Trib</b>     | Runoff Area=69,848 sf 12.70% Impervious Runoff Depth=0.18"<br>Flow Length=233' Tc=16.0 min CN=41 Runoff=0.05 cfs 0.025 af                     |
| <b>Subcatchment 3S.1: Garden area runoff</b>    | Runoff Area=6,670 sf 0.00% Impervious Runoff Depth=0.00"<br>Flow Length=82' Tc=6.9 min CN=30 Runoff=0.00 cfs 0.000 af                         |
| <b>Reach POI-1: POI #1 - 60" Douglass MS4</b>   | Inflow=7.65 cfs 0.573 af<br>Outflow=7.65 cfs 0.573 af                                                                                         |
| <b>Reach POI-3: POI #3 - Baseball Field</b>     | Inflow=0.00 cfs 0.000 af<br>Outflow=0.00 cfs 0.000 af                                                                                         |
| <b>Pond P1: VUSF</b>                            | Peak Elev=31.87' Storage=1,177 cf Inflow=0.80 cfs 0.057 af<br>Discarded=0.05 cfs 0.043 af Primary=0.01 cfs 0.014 af Outflow=0.07 cfs 0.057 af |

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Type III 24-hr 10-year Rainfall=4.60"

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**Pond P2: FP 4**

Peak Elev=35.95' Storage=0 cf Inflow=0.35 cfs 0.025 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0050 '/' Outflow=0.35 cfs 0.025 af

**Pond P3: FP 3**

Peak Elev=36.10' Storage=0 cf Inflow=0.31 cfs 0.022 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.31 cfs 0.022 af

**Pond P4: FP 2**

Peak Elev=35.90' Storage=0 cf Inflow=0.50 cfs 0.036 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.50 cfs 0.036 af

**Pond P5: FP 1**

Peak Elev=35.70' Storage=0 cf Inflow=0.33 cfs 0.024 af  
10.0" Round Culvert n=0.010 L=75.0' S=0.0049 '/' Outflow=0.33 cfs 0.024 af

**Pond POI #2: POI #2 (295 Basin)**

Peak Elev=26.67' Storage=464 cf Inflow=0.05 cfs 0.025 af  
Discarded=0.01 cfs 0.008 af Primary=0.01 cfs 0.009 af Secondary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.017 af

**Total Runoff Area = 4.952 ac Runoff Volume = 0.631 af Average Runoff Depth = 1.53"**  
**54.64% Pervious = 2.706 ac 45.36% Impervious = 2.246 ac**

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Type III 24-hr 10-year Rainfall=4.60"

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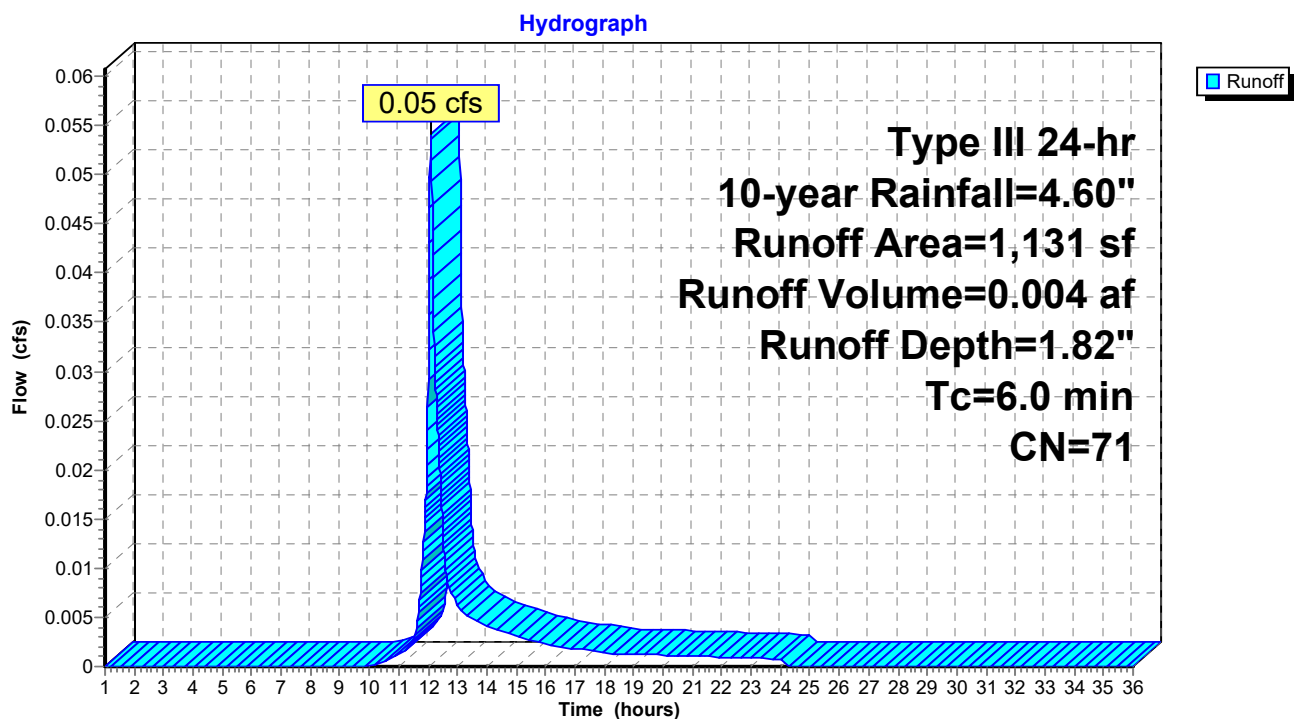
**Summary for Subcatchment 1.S1: Drive to Street**

Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth= 1.82"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 622       | 98 | Pavement                      |
|   | 509       | 39 | >75% Grass cover, Good, HSG A |
|   | 1,131     | 71 | Weighted Average              |
|   | 509       |    | 45.00% Pervious Area          |
|   | 622       |    | 55.00% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1.S1: Drive to Street**

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Type III 24-hr 10-year Rainfall=4.60"

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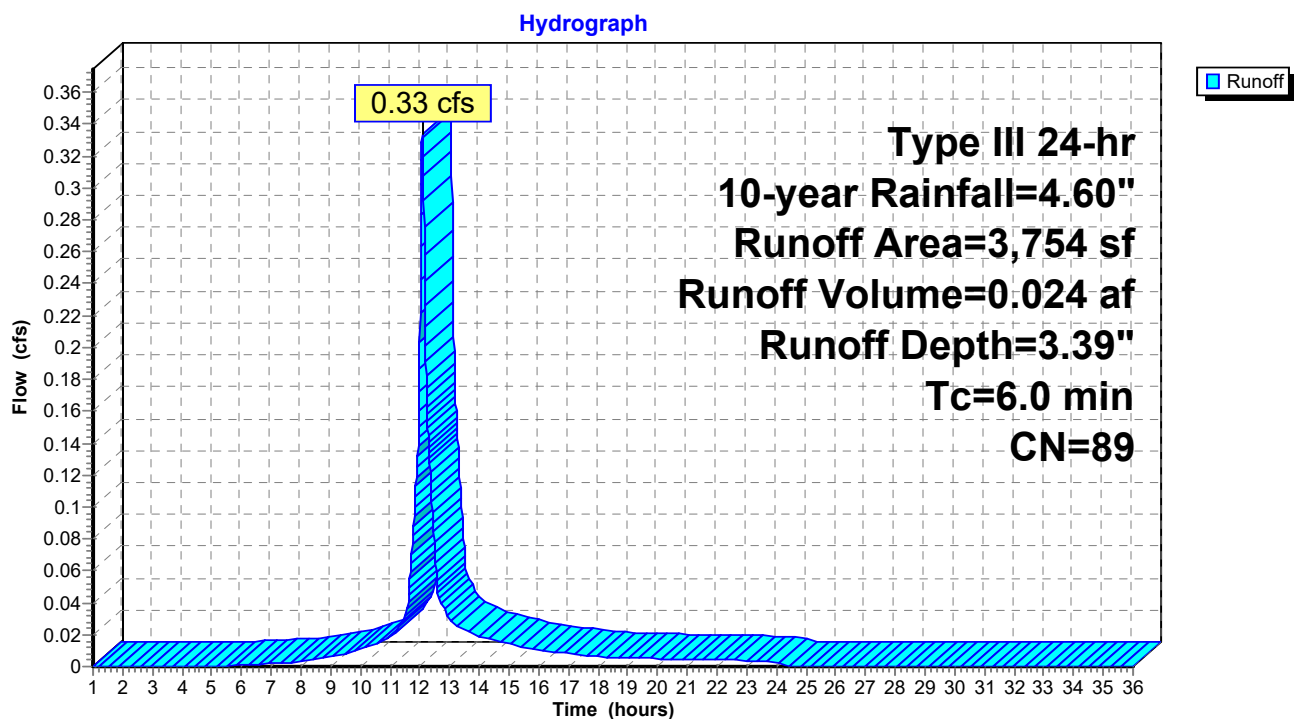
**Summary for Subcatchment 1S.10: East Lot 1**

Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.024 af, Depth= 3.39"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,190     | 98 | Pavement                      |
|   | 564       | 39 | >75% Grass cover, Good, HSG A |
|   | 3,754     | 89 | Weighted Average              |
|   | 564       |    | 15.02% Pervious Area          |
|   | 3,190     |    | 84.98% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.10: East Lot 1**

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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Subcatchment 1S.11: South Lot Treated**

Runoff = 0.80 cfs @ 12.09 hrs, Volume= 0.057 af, Depth= 2.72"

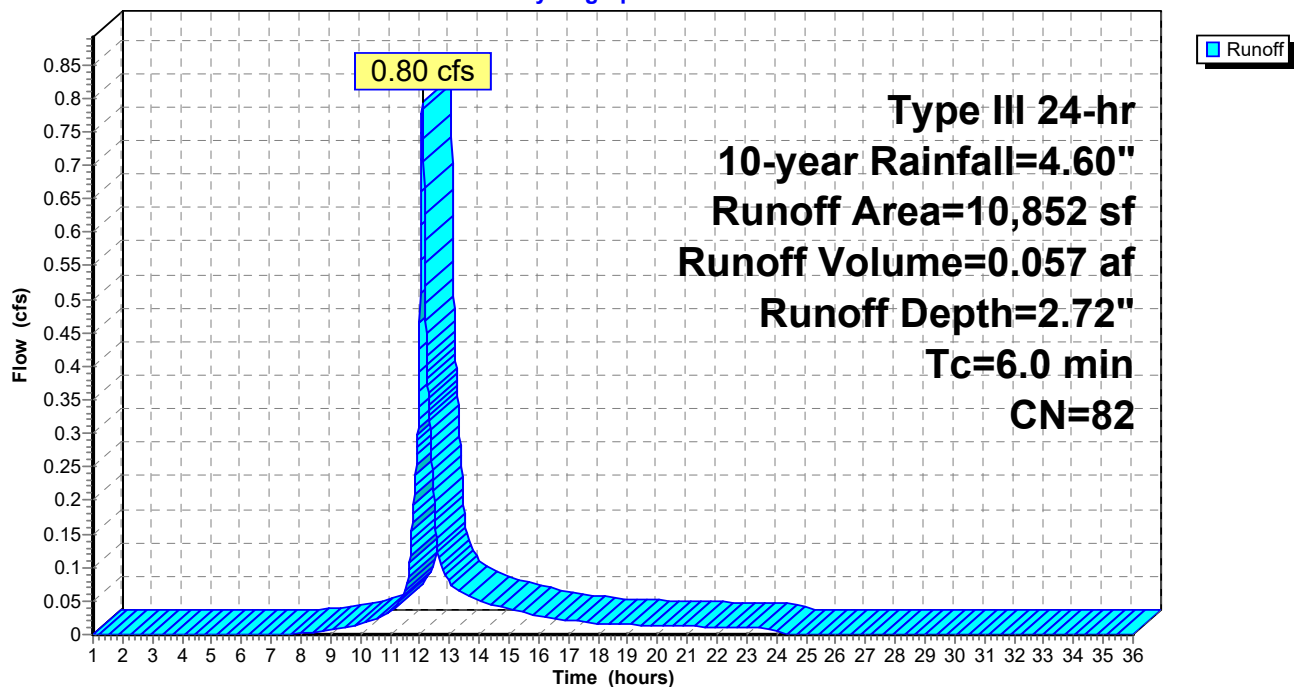
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-year Rainfall=4.60"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 8,274     | 98 | Paved parking          |
|   | 2,578     | 30 | Brush, Good, HSG A     |
|   | 10,852    | 82 | Weighted Average       |
|   | 2,578     |    | 23.76% Pervious Area   |
|   | 8,274     |    | 76.24% Impervious Area |

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

**Subcatchment 1S.11: South Lot Treated**

Hydrograph



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Type III 24-hr 10-year Rainfall=4.60"

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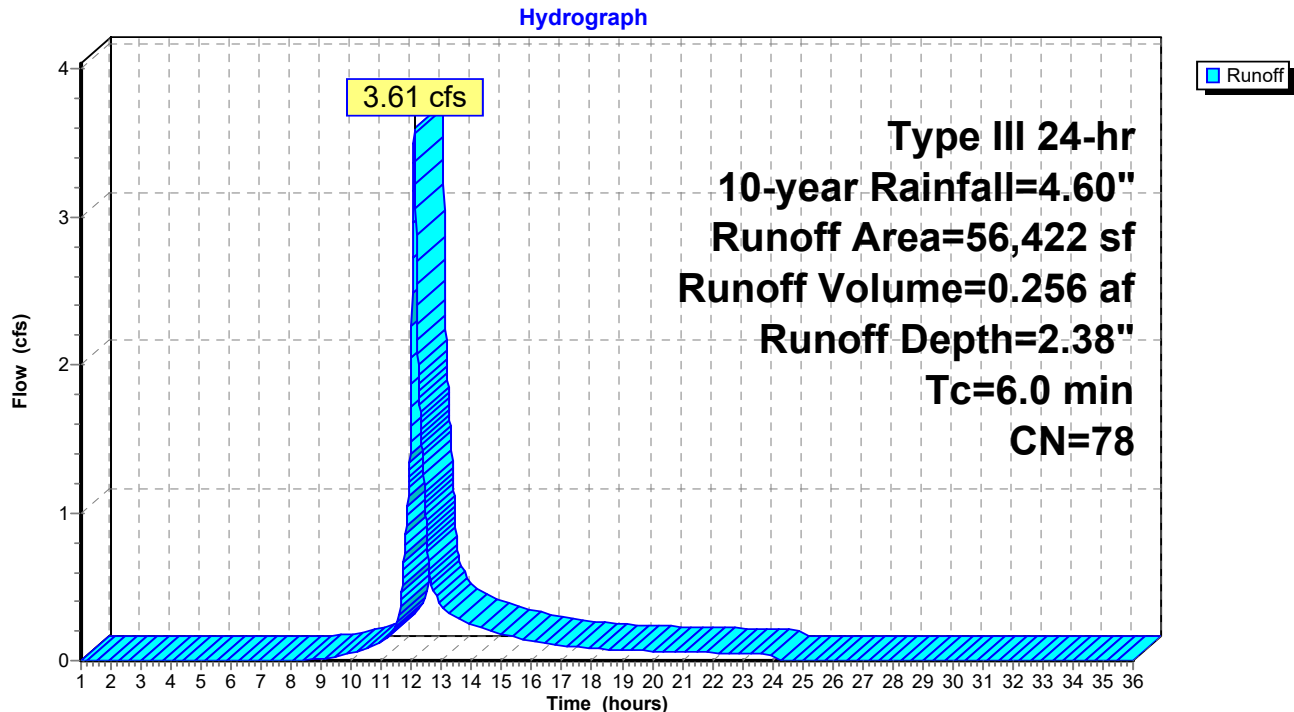
**Summary for Subcatchment 1S.2: Co Op Roof & yard**

Runoff = 3.61 cfs @ 12.09 hrs, Volume= 0.256 af, Depth= 2.38"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 5,239     | 98 | pavers                        |
|   | 16,100    | 39 | >75% Grass cover, Good, HSG A |
| * | 21,137    | 98 | Roofs                         |
| * | 4,191     | 98 | sidewalks                     |
| * | 618       | 98 | patios                        |
|   | 9,137     | 77 | 1/8 acre lots, 65% imp, HSG A |
|   | 56,422    | 78 | Weighted Average              |
|   | 19,298    |    | 34.20% Pervious Area          |
|   | 37,124    |    | 65.80% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.2: Co Op Roof & yard**



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**Summary for Subcatchment 1S.3: Runoff to park**

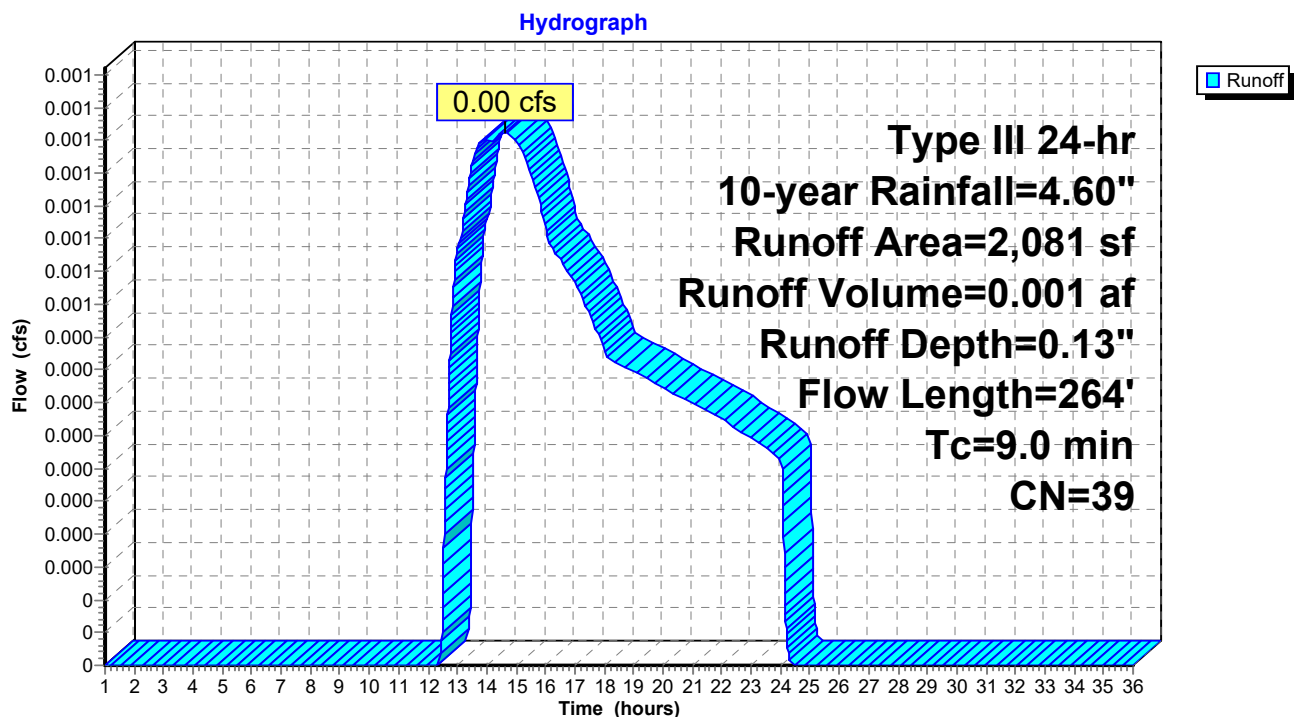
Runoff = 0.00 cfs @ 14.63 hrs, Volume= 0.001 af, Depth= 0.13"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,081     | 39 | >75% Grass cover, Good, HSG A |
| 2,081     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 6.2      | 100           | 0.0600        | 0.27              |                | <b>Sheet Flow, A to B</b><br>Grass: Short n= 0.150 P2= 3.27"                |
| 2.8      | 164           | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.0      | 264           | Total         |                   |                |                                                                             |

**Subcatchment 1S.3: Runoff to park**

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Type III 24-hr 10-year Rainfall=4.60"

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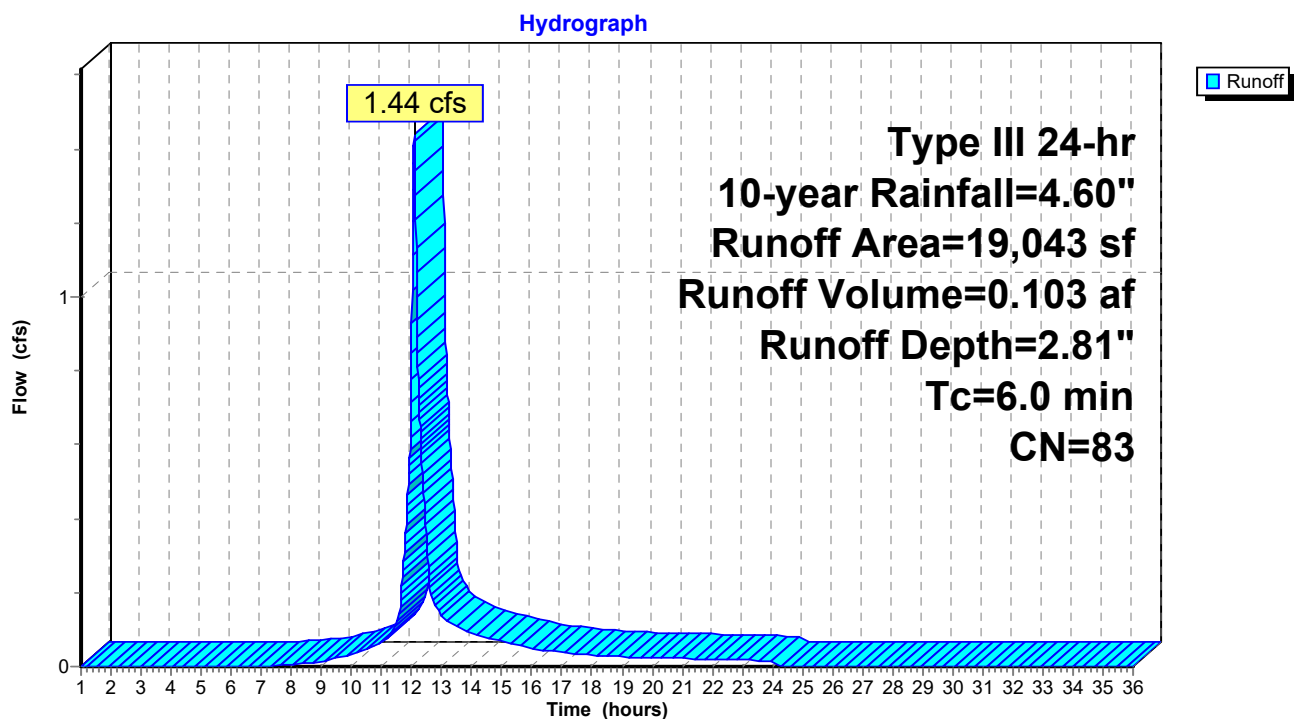
**Summary for Subcatchment 1S.4: Central parking/drive**

Runoff = 1.44 cfs @ 12.09 hrs, Volume= 0.103 af, Depth= 2.81"

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

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 14,850    | 98 | Pavement               |
|   | 4,193     | 30 | Brush, Good, HSG A     |
|   | 19,043    | 83 | Weighted Average       |
|   | 4,193     |    | 22.02% Pervious Area   |
|   | 14,850    |    | 77.98% Impervious Area |

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

**Subcatchment 1S.4: Central parking/drive**

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Type III 24-hr 10-year Rainfall=4.60"

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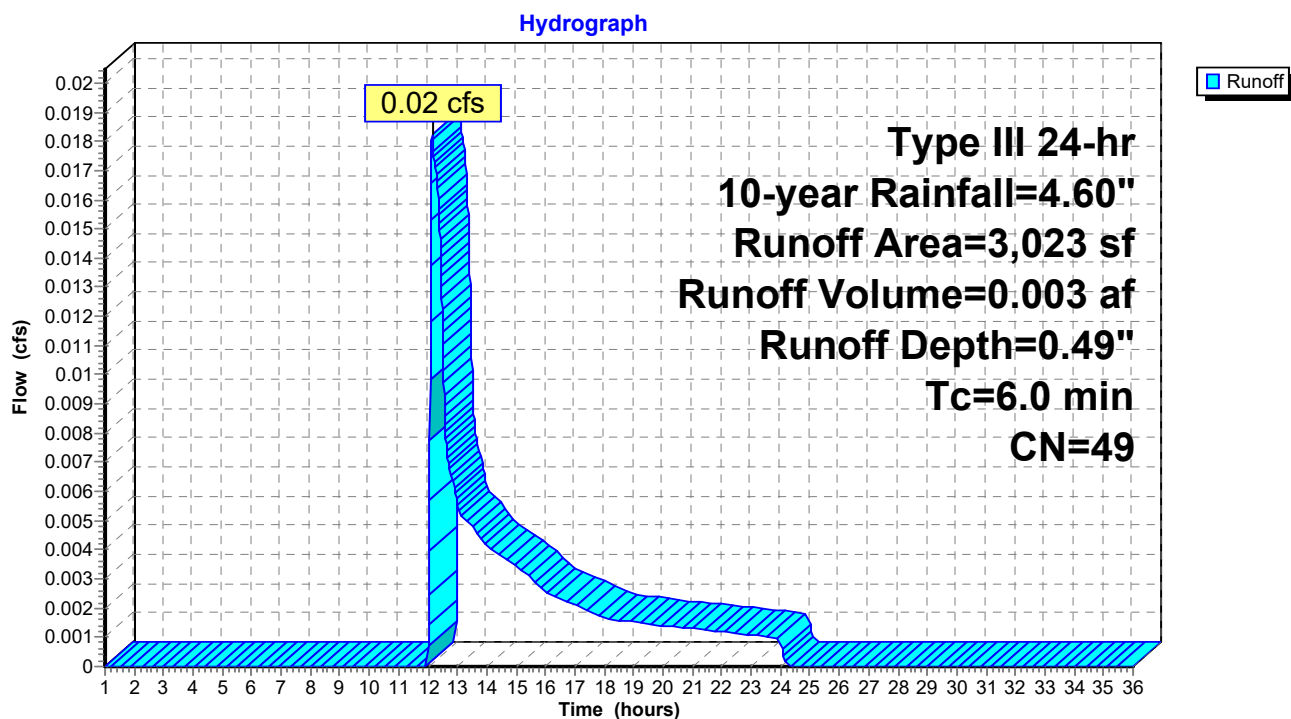
**Summary for Subcatchment 1S.5: Contained yard/park connection**

Runoff = 0.02 cfs @ 12.14 hrs, Volume= 0.003 af, Depth= 0.49"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,514     | 39 | >75% Grass cover, Good, HSG A |
| * 509     | 98 | sidewalks                     |
| 3,023     | 49 | Weighted Average              |
| 2,514     |    | 83.16% Pervious Area          |
| 509       |    | 16.84% Impervious Area        |

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

**Subcatchment 1S.5: Contained yard/park connection**

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Type III 24-hr 10-year Rainfall=4.60"

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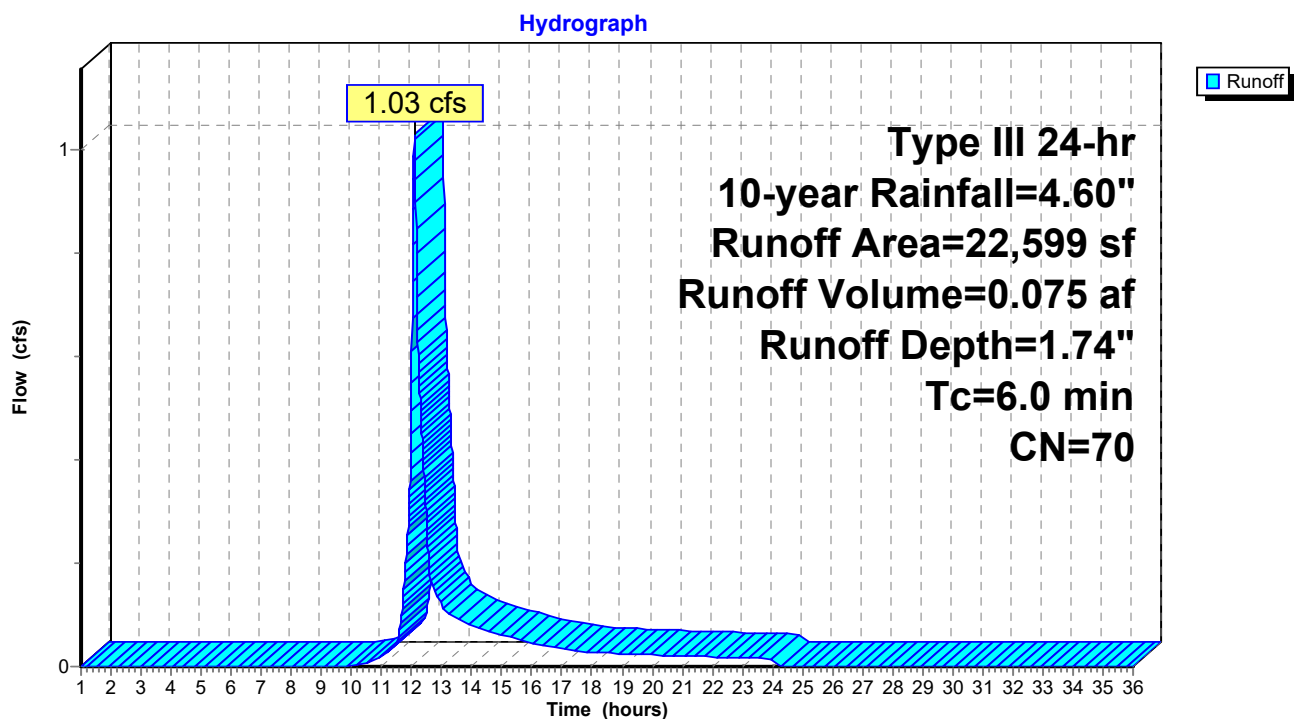
**Summary for Subcatchment 1S.6: Building E roof and yard**

Runoff = 1.03 cfs @ 12.09 hrs, Volume= 0.075 af, Depth= 1.74"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 10,599    | 39 | >75% Grass cover, Good, HSG A |
| * 12,000  | 98 | roof                          |
| 22,599    | 70 | Weighted Average              |
| 10,599    |    | 46.90% Pervious Area          |
| 12,000    |    | 53.10% Impervious Area        |

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

**Subcatchment 1S.6: Building E roof and yard**

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Type III 24-hr 10-year Rainfall=4.60"

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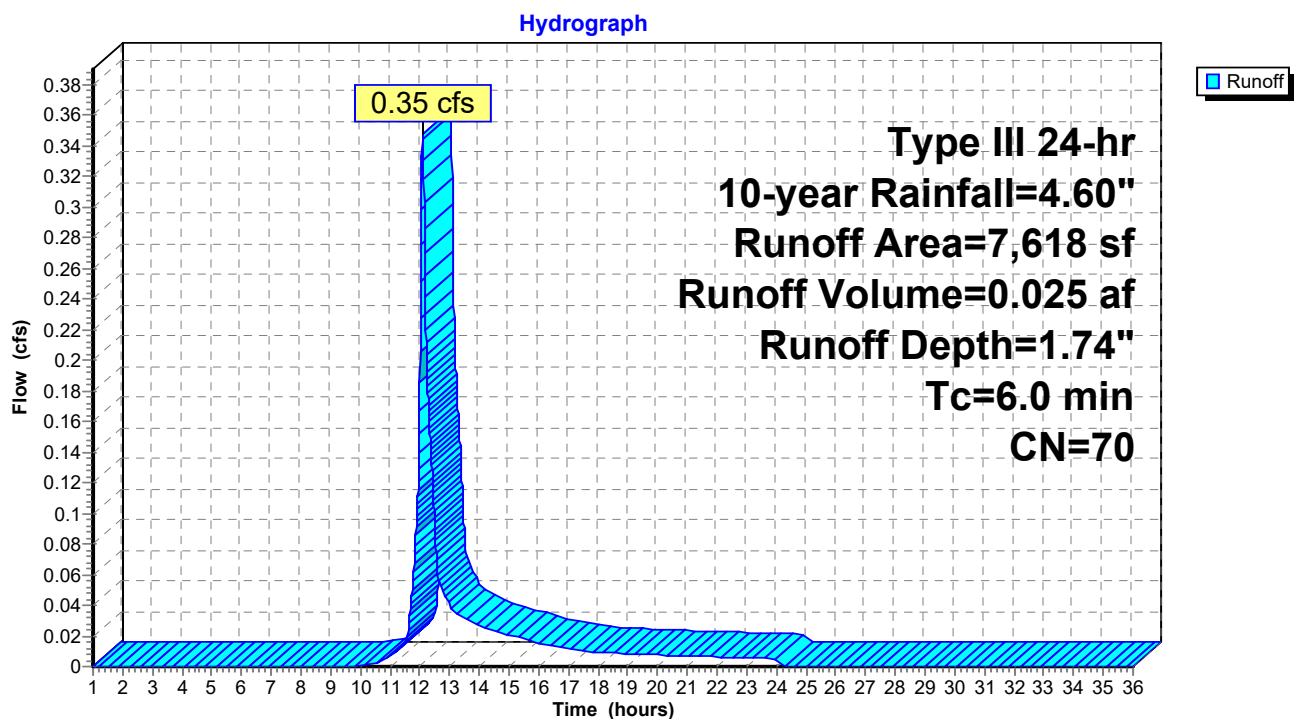
**Summary for Subcatchment 1S.7: East Lot 4**

Runoff = 0.35 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 1.74"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 4,038     | 98 | Paved parking                 |
|   | 3,580     | 39 | >75% Grass cover, Good, HSG A |
|   | 7,618     | 70 | Weighted Average              |
|   | 3,580     |    | 46.99% Pervious Area          |
|   | 4,038     |    | 53.01% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.7: East Lot 4**

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Type III 24-hr 10-year Rainfall=4.60"

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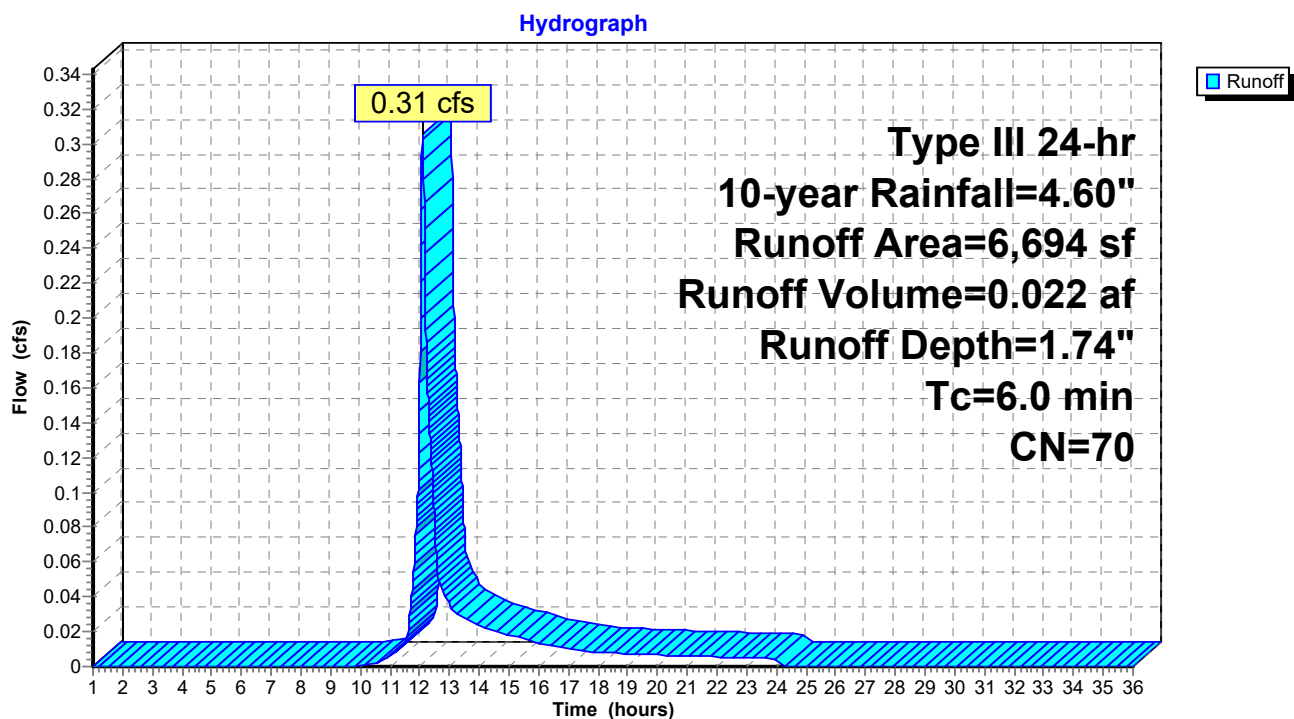
**Summary for Subcatchment 1S.8: East Lot 3**

Runoff = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af, Depth= 1.74"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,547     | 98 | Paved parking                 |
|   | 3,147     | 39 | >75% Grass cover, Good, HSG A |
|   | 6,694     | 70 | Weighted Average              |
|   | 3,147     |    | 47.01% Pervious Area          |
|   | 3,547     |    | 52.99% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.8: East Lot 3**



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Type III 24-hr 10-year Rainfall=4.60"

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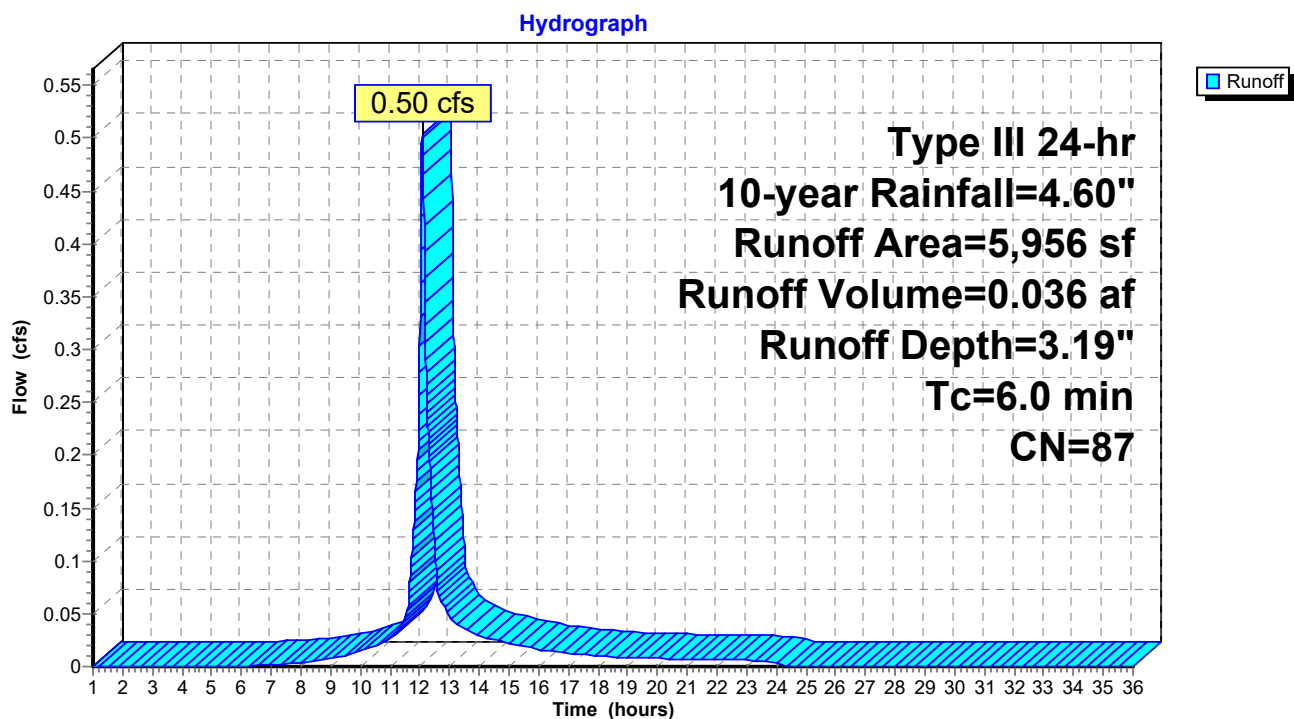
**Summary for Subcatchment 1S.9: East Lot 2**

Runoff = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af, Depth= 3.19"

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

|   | Area (sf) | CN | Description                    |
|---|-----------|----|--------------------------------|
| * | 4,809     | 98 | Paved parking, patio, sidewalk |
|   | 1,147     | 39 | >75% Grass cover, Good, HSG A  |
|   | 5,956     | 87 | Weighted Average               |
|   | 1,147     |    | 19.26% Pervious Area           |
|   | 4,809     |    | 80.74% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.9: East Lot 2**

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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Subcatchment 2S: 295 Embankment Trib**

Runoff = 0.05 cfs @ 12.65 hrs, Volume= 0.025 af, Depth= 0.18"

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

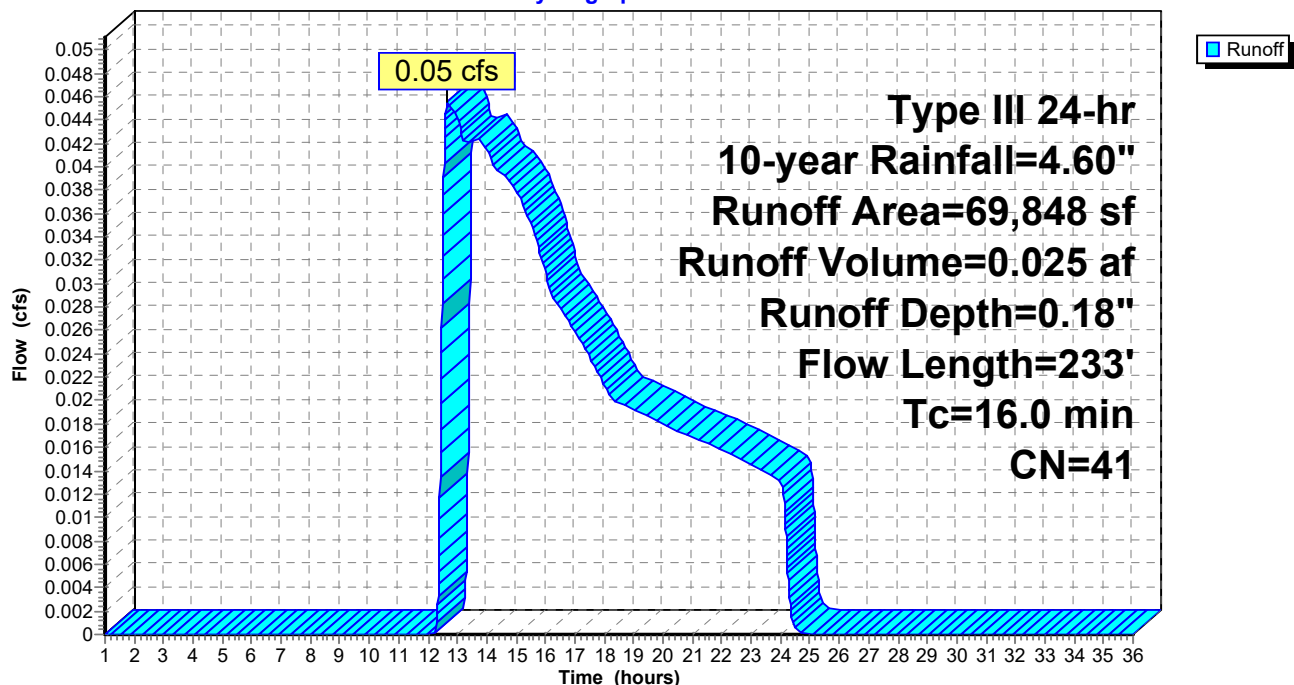
| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 8,183     | 39 | >75% Grass cover, Good, HSG A  |
| * 230     | 98 | Stairs                         |
| * 3,155   | 98 | Path                           |
| * 5,488   | 98 | Homes/driveways                |
| 52,792    | 32 | Woods/grass comb., Good, HSG A |
| 69,848    | 41 | Weighted Average               |
| 60,975    |    | 87.30% Pervious Area           |
| 8,873     |    | 12.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 14.7     | 100           | 0.0500        | 0.11              |                | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"     |
| 1.3      | 133           | 0.0600        | 1.71              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 233           | Total         |                   |                |                                                                             |

**Subcatchment 2S: 295 Embankment Trib**

Hydrograph



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Subcatchment 3S.1: Garden area runoff**

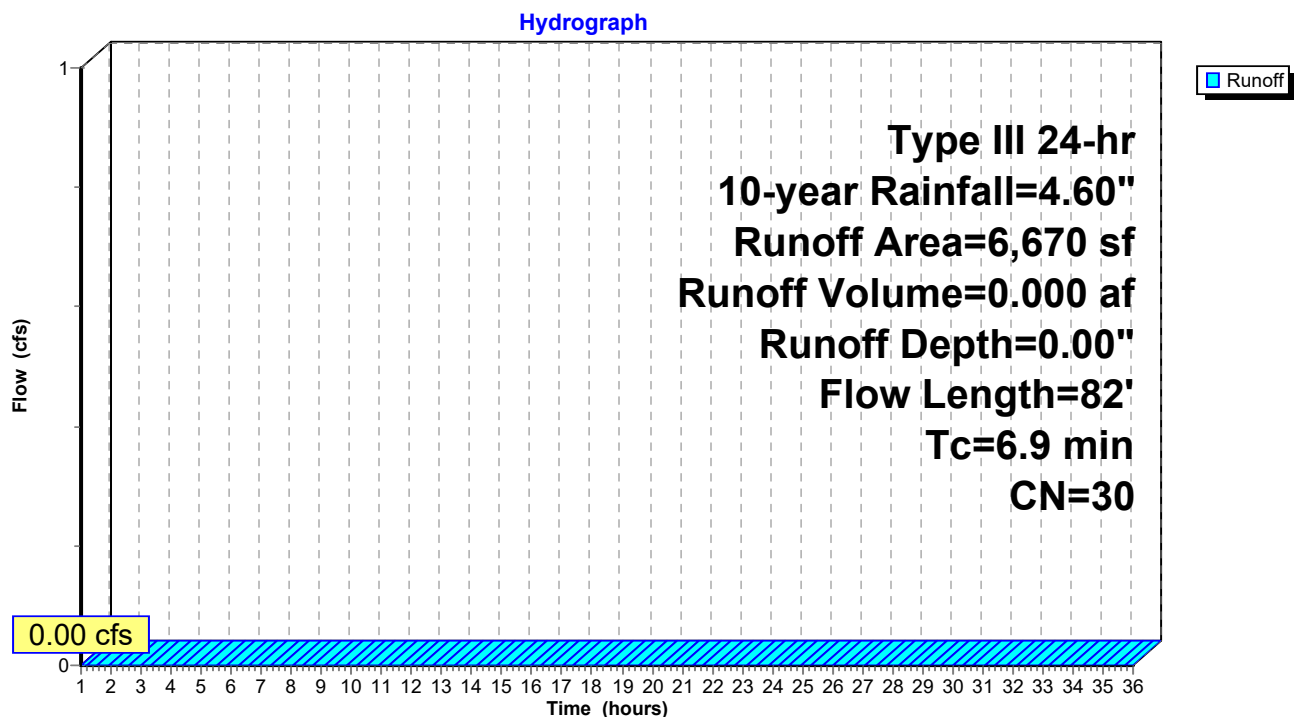
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description           |
|-----------|----|-----------------------|
| 6,670     | 30 | Brush, Good, HSG A    |
| 6,670     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 1.7      | 28            | 0.3330        | 0.28              |                | <b>Sheet Flow, A to B</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 5.2      | 54            | 0.0700        | 0.17              |                | <b>Sheet Flow, B to C</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 6.9      | 82            | Total         |                   |                |                                 |

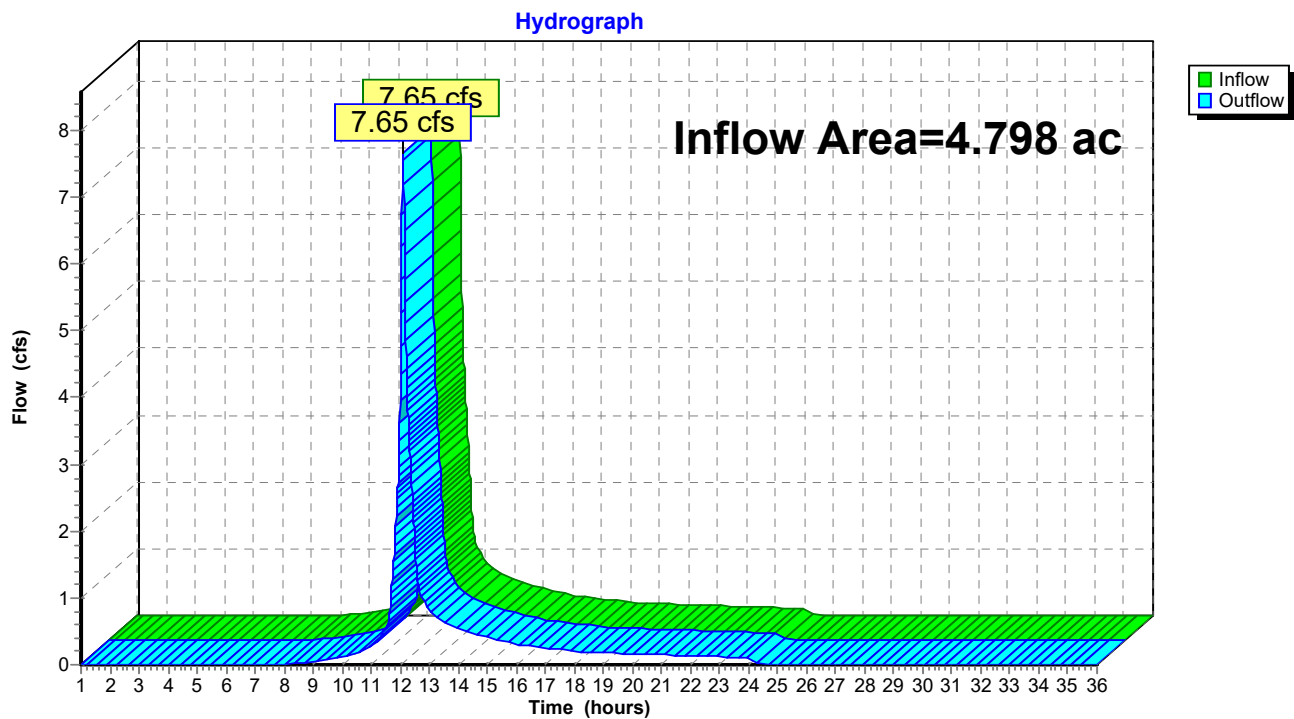
**Subcatchment 3S.1: Garden area runoff**

### Summary for Reach POI-1: POI #1 - 60" Douglass MS4

Inflow Area = 4.798 ac, 46.81% Impervious, Inflow Depth = 1.43" for 10-year event  
 Inflow = 7.65 cfs @ 12.09 hrs, Volume= 0.573 af  
 Outflow = 7.65 cfs @ 12.09 hrs, Volume= 0.573 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-1: POI #1 - 60" Douglass MS4

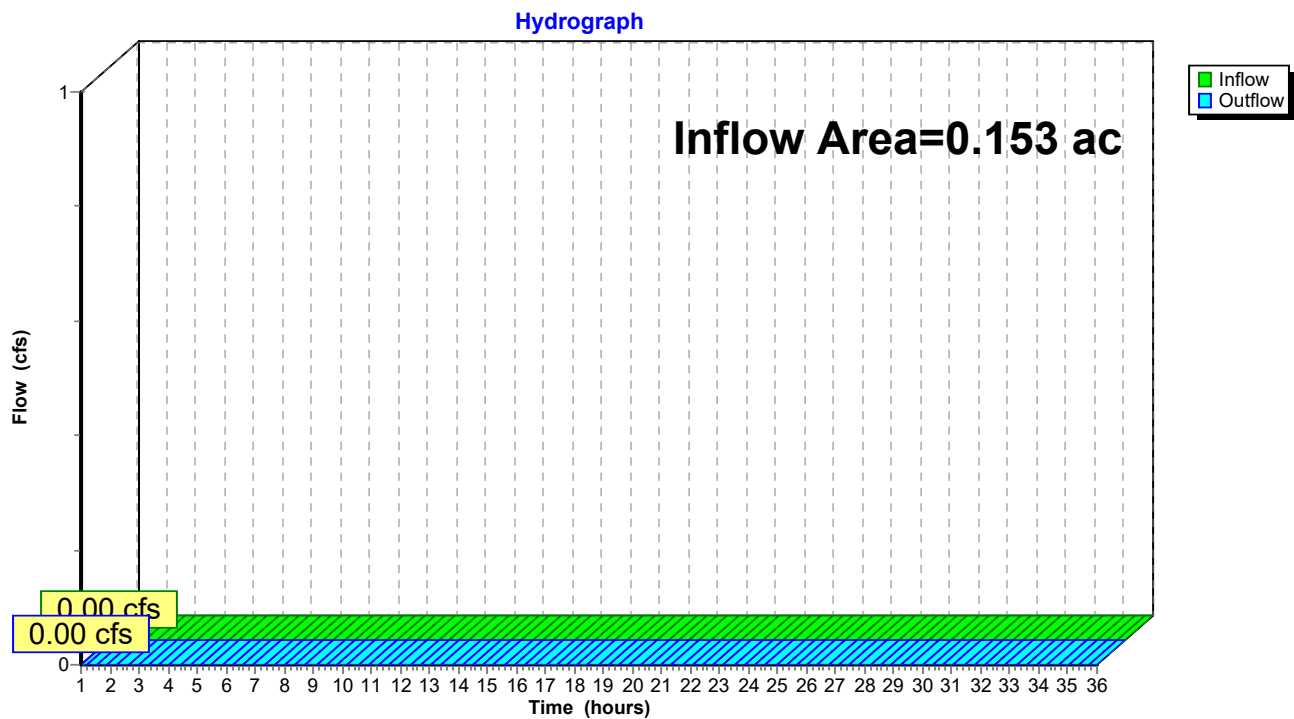


### Summary for Reach POI-3: POI #3 - Baseball Field

Inflow Area = 0.153 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-year event  
 Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-3: POI #3 - Baseball Field



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**Summary for Pond P1: VUSF**

Inflow Area = 0.249 ac, 76.24% Impervious, Inflow Depth = 2.72" for 10-year event  
 Inflow = 0.80 cfs @ 12.09 hrs, Volume= 0.057 af  
 Outflow = 0.07 cfs @ 13.29 hrs, Volume= 0.057 af, Atten= 92%, Lag= 72.1 min  
 Discarded = 0.05 cfs @ 13.29 hrs, Volume= 0.043 af  
 Primary = 0.01 cfs @ 13.29 hrs, Volume= 0.014 af

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

Peak Elev= 31.87' @ 13.29 hrs Surf.Area= 2,198 sf Storage= 1,177 cf

Plug-Flow detention time= 220.8 min calculated for 0.057 af (100% of inflow)

Center-of-Mass det. time= 220.8 min ( 1,040.6 - 819.8 )

| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 30.75' | 1,899 cf      | <b>Ponding (Prismatic)</b> Listed below (Recalc)           |
| #2     | 29.25' | 69 cf         | <b>Filter Media/Loam (Prismatic)</b> Listed below (Recalc) |
|        |        |               | 687 cf Overall x 10.0% Voids                               |
| #3     | 28.92' | 30 cf         | <b>Transition Gravel (Prismatic)</b> Listed below (Recalc) |
|        |        |               | 151 cf Overall x 20.0% Voids                               |
| #4     | 27.00' | 349 cf        | <b>Crushed Stone (Prismatic)</b> Listed below (Recalc)     |
|        |        |               | 879 cf Overall - 6 cf Embedded = 873 cf x 40.0% Voids      |
| #5     | 27.10' | 5 cf          | <b>4.0" Round Pipe Storage</b> x 2 Inside #4               |
|        |        |               | L= 30.0' S= 0.0005 '/'                                     |
|        |        |               | 6 cf Overall - 0.2" Wall Thickness = 5 cf                  |
|        |        | 2,353 cf      | Total Available Storage                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 30.75               | 465                  | 0                         | 0                         |
| 32.25               | 945                  | 1,058                     | 1,058                     |
| 33.00               | 1,300                | 842                       | 1,899                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 29.25               | 458                  | 0                         | 0                         |
| 30.75               | 458                  | 687                       | 687                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 28.92               | 458                  | 0                         | 0                         |
| 29.25               | 458                  | 151                       | 151                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 27.00               | 458                  | 0                         | 0                         |
| 28.92               | 458                  | 879                       | 879                       |



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Type III 24-hr 10-year Rainfall=4.60"

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| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                        |
|--------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 27.00' | <b>12.0" Round Culvert</b><br>L= 60.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 27.00' / 26.75' S= 0.0042 '/' Cc= 0.600<br>n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1  | 27.10' | <b>0.5" Vert. Soil Filter Media Drawdown Effect</b> C= 0.600                                                                                                                                          |
| #3     | Device 1  | 32.35' | <b>24.0" Horiz. Beehive Outlet</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                      |
| #4     | Discarded | 27.00' | <b>1.000 in/hr Exfiltration over Surface area</b>                                                                                                                                                     |

**Discarded OutFlow** Max=0.05 cfs @ 13.29 hrs HW=31.87' (Free Discharge)

↳ **4=Exfiltration** (Exfiltration Controls 0.05 cfs)

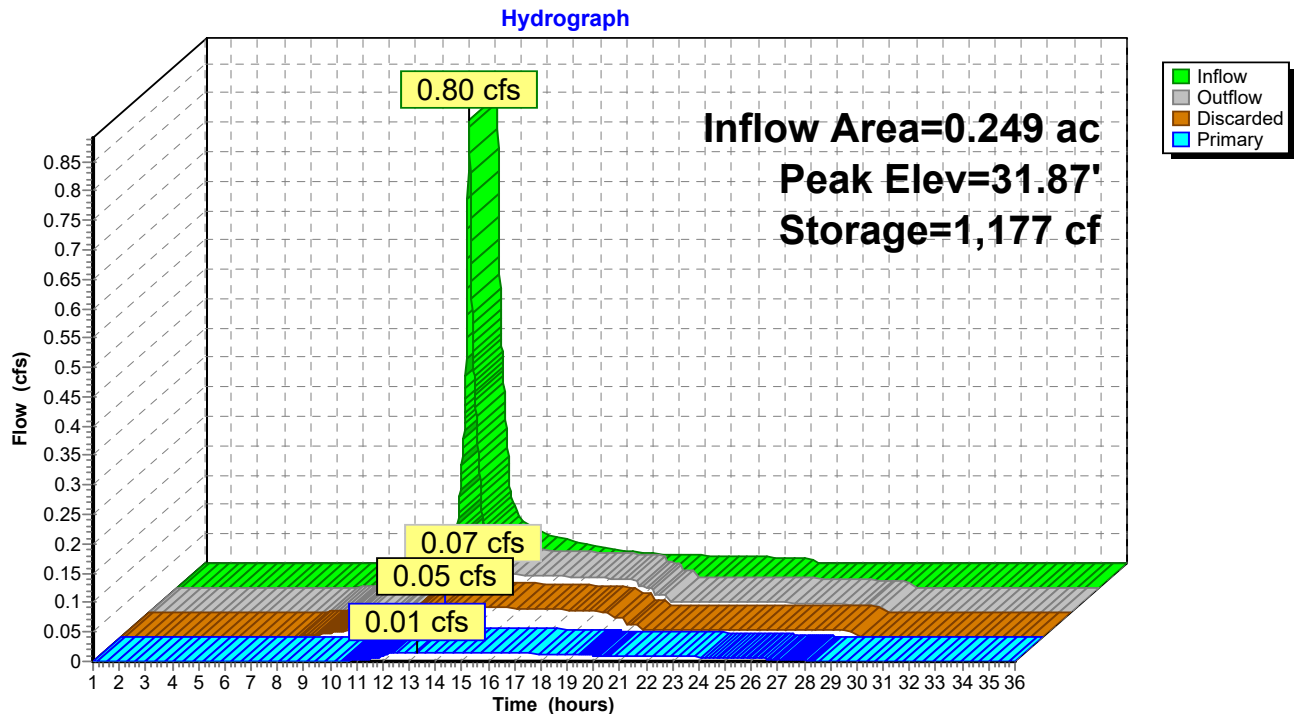
**Primary OutFlow** Max=0.01 cfs @ 13.29 hrs HW=31.87' TW=0.00' (Dynamic Tailwater)

↳ **1=Culvert** (Passes 0.01 cfs of 4.16 cfs potential flow)

↳ **2=Soil Filter Media Drawdown Effect** (Orifice Controls 0.01 cfs @ 10.50 fps)

↳ **3=Beehive Outlet** ( Controls 0.00 cfs)

## Pond P1: VUSF



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond P2: FP 4**

Inflow Area = 0.175 ac, 53.01% Impervious, Inflow Depth = 1.74" for 10-year event  
 Inflow = 0.35 cfs @ 12.09 hrs, Volume= 0.025 af  
 Outflow = 0.35 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.35 cfs @ 12.09 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.95' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.95' | 14 cf         | <b>4.00'W x 5.00'L x 3.60'H Media/Stone</b><br>72 cf Overall x 20.0% Voids |
| #2     | 35.95' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 52 cf         | Total Available Storage                                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.95               | 20                   | 0                         | 0                         |
| 36.95               | 56                   | 38                        | 38                        |

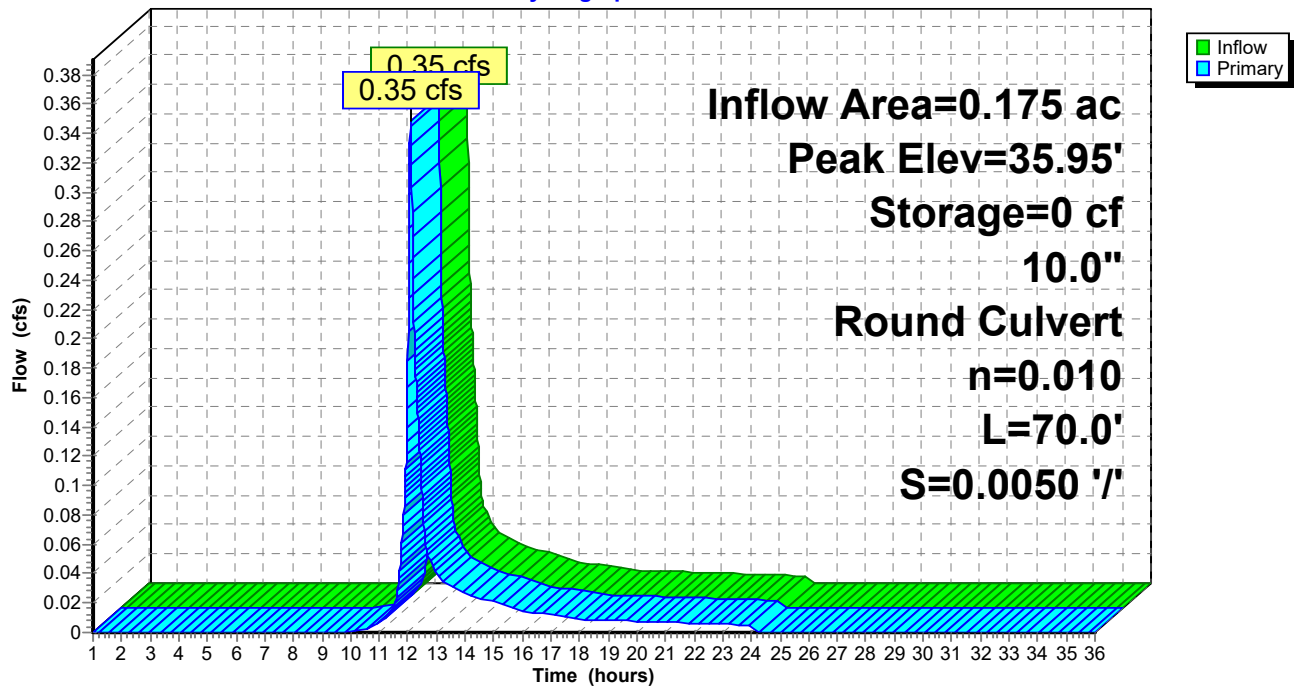
| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 32.35' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 32.35' / 32.00' S= 0.0050 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.95' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Passes 0.00 cfs of 3.51 cfs potential flow)

Pond P2: FP 4

Hydrograph



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond P3: FP 3**

Inflow Area = 0.154 ac, 52.99% Impervious, Inflow Depth = 1.74" for 10-year event  
 Inflow = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af  
 Outflow = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.31 cfs @ 12.09 hrs, Volume= 0.022 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 36.10' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 36.10' | 21 cf         | <b>5.00'W x 5.00'L x 4.20'H Media/Stone</b><br>105 cf Overall x 20.0% Voids |
| #2     | 36.10' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 66 cf         | Total Available Storage                                                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 36.10               | 25                   | 0                         | 0                         |
| 37.10               | 64                   | 45                        | 45                        |

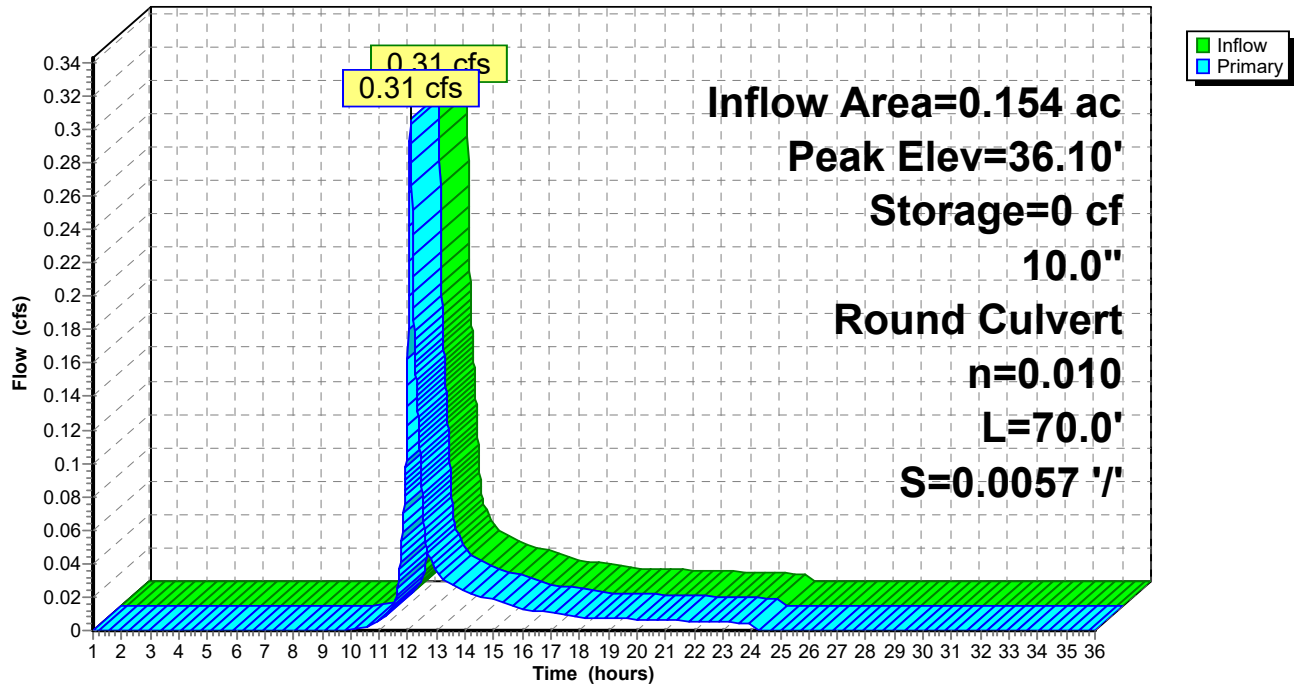
| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.90' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.90' / 31.50' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=36.10' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Passes 0.00 cfs of 3.83 cfs potential flow)

Pond P3: FP 3

Hydrograph



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond P4: FP 2**

Inflow Area = 0.137 ac, 80.74% Impervious, Inflow Depth = 3.19" for 10-year event  
 Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af  
 Outflow = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.50 cfs @ 12.09 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.90' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 35.90' | 23 cf         | <b>5.00'W x 5.00'L x 4.50'H Media/Stone</b><br>113 cf Overall x 20.0% Voids |
| #2     | 35.90' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 67 cf         | Total Available Storage                                                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.90               | 25                   | 0                         | 0                         |
| 36.90               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.40' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.40' / 31.00' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

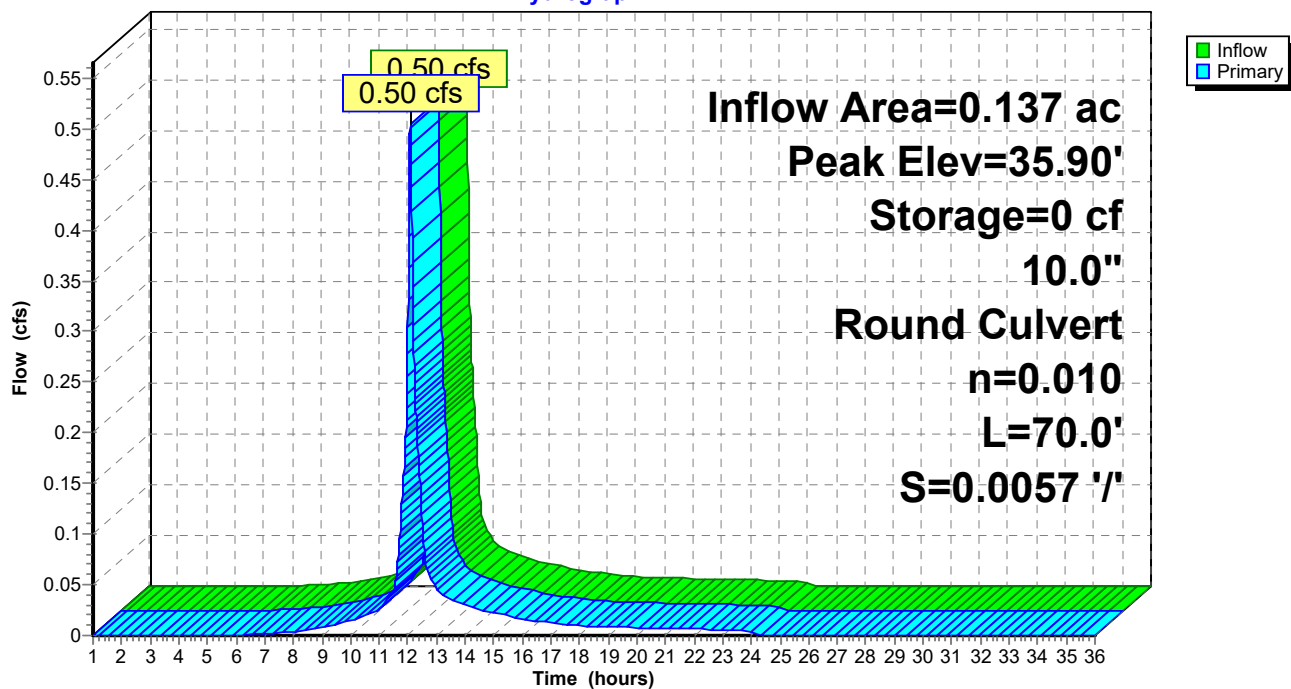
**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.90' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Passes 0.00 cfs of 3.98 cfs potential flow)



# Pond P4: FP 2

Hydrograph



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Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond P5: FP 1**

Inflow Area = 0.086 ac, 84.98% Impervious, Inflow Depth = 3.39" for 10-year event  
 Inflow = 0.33 cfs @ 12.09 hrs, Volume= 0.024 af  
 Outflow = 0.33 cfs @ 12.09 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.33 cfs @ 12.09 hrs, Volume= 0.024 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.70' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 797.3 - 797.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.70' | 19 cf         | <b>4.00'W x 5.00'L x 4.80'H Media/Stone</b><br>96 cf Overall x 20.0% Voids |
| #2     | 35.70' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 57 cf         | Total Available Storage                                                    |

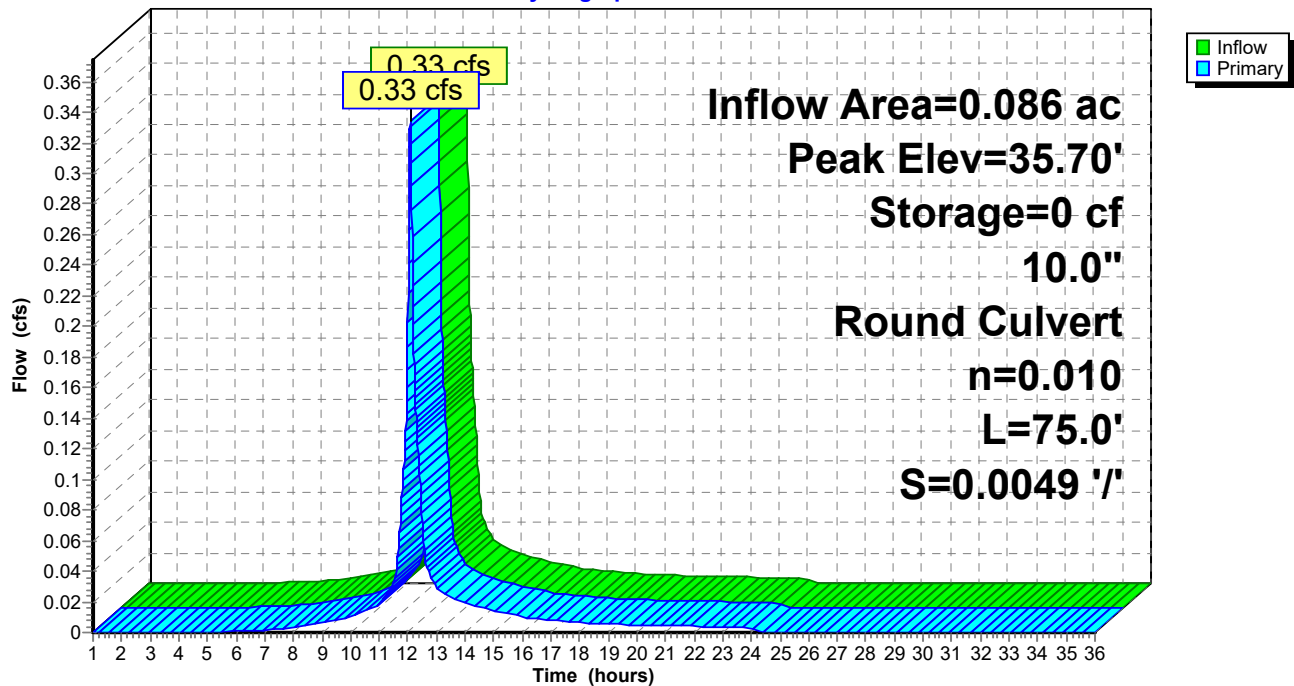
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.70               | 20                   | 0                         | 0                         |
| 36.70               | 56                   | 38                        | 38                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 30.90' | <b>10.0" Round Culvert</b> L= 75.0' Ke= 1.000<br>Inlet / Outlet Invert= 30.90' / 30.53' S= 0.0049 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.70' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 4.12 cfs potential flow)

Pond P5: FP 1

Hydrograph



**Post Development 1.13 FINAL**

Type III 24-hr 10-year Rainfall=4.60"

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**Summary for Pond POI #2: POI #2 (295 Basin)**

Inflow Area = 1.603 ac, 12.70% Impervious, Inflow Depth = 0.18" for 10-year event  
 Inflow = 0.05 cfs @ 12.65 hrs, Volume= 0.025 af  
 Outflow = 0.02 cfs @ 17.23 hrs, Volume= 0.017 af, Atten= 45%, Lag= 274.8 min  
 Discarded = 0.01 cfs @ 17.23 hrs, Volume= 0.008 af  
 Primary = 0.01 cfs @ 17.23 hrs, Volume= 0.009 af  
 Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

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

Peak Elev= 26.67' @ 17.23 hrs Surf.Area= 2,411 sf Storage= 464 cf

Plug-Flow detention time= 310.4 min calculated for 0.017 af (71% of inflow)

Center-of-Mass det. time= 201.5 min ( 1,221.1 - 1,019.6 )

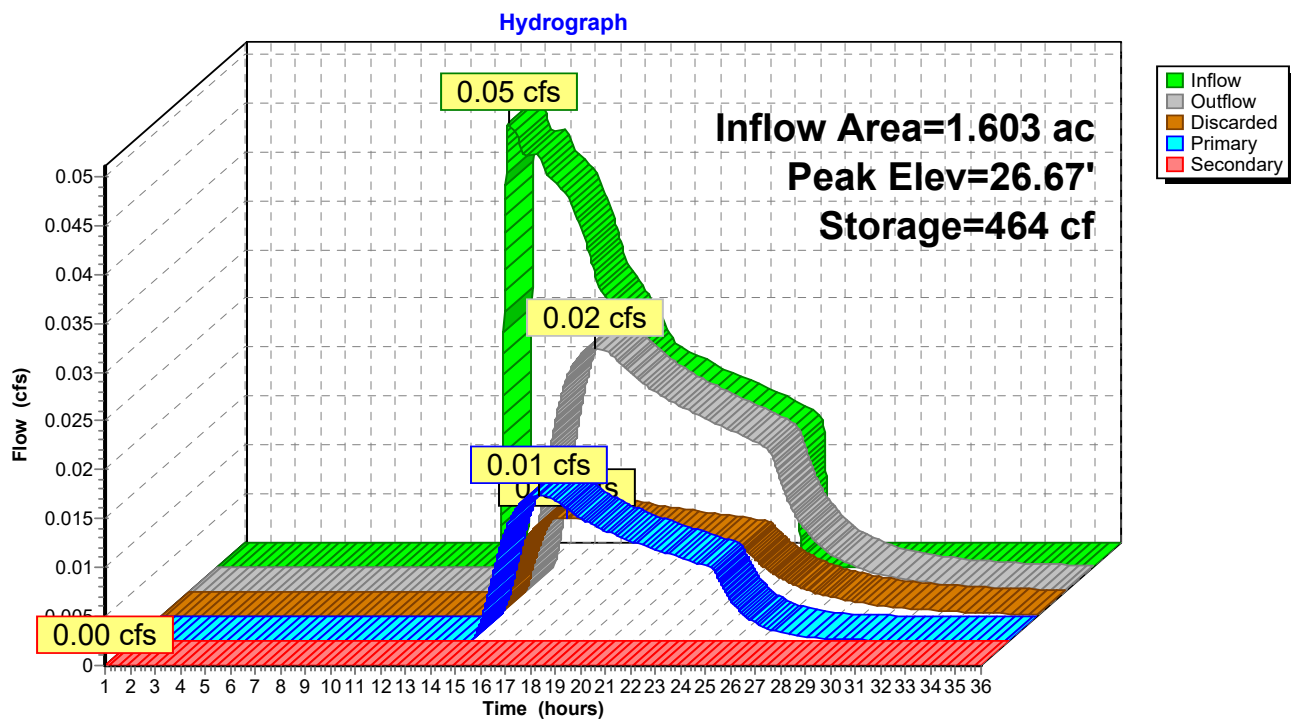
| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 105,037 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 10,120               | 7,298                     | 8,899                     |
| 29.00               | 14,131               | 12,126                    | 21,024                    |
| 30.00               | 17,326               | 15,729                    | 36,753                    |
| 32.00               | 24,023               | 41,349                    | 78,102                    |
| 33.00               | 29,847               | 26,935                    | 105,037                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                               |
|--------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 26.60' | <b>12.0" Round Culvert</b> L= 16.0' Ke= 0.600<br>Inlet / Outlet Invert= 26.60' / 26.51' S= 0.0056 ' S= 0.0056 ' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf    |
| #2     | Secondary | 32.40' | <b>20.0' long x 15.0' breadth Overflow</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #3     | Discarded | 26.60' | <b>1.000 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                           |

**Discarded OutFlow** Max=0.01 cfs @ 17.23 hrs HW=26.67' (Free Discharge)↑**3=Exfiltration** (Exfiltration Controls 0.01 cfs)**Primary OutFlow** Max=0.01 cfs @ 17.23 hrs HW=26.67' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 0.01 cfs @ 0.95 fps)**Secondary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**2=Overflow** ( Controls 0.00 cfs)

Pond POI #2: POI #2 (295 Basin)



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Type III 24-hr 25-year Rainfall=5.80"

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Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                                 |                                                                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment 1S.1: Drive to Street</b>       | Runoff Area=1,131 sf 55.00% Impervious Runoff Depth=2.74"<br>Tc=6.0 min CN=71 Runoff=0.08 cfs 0.006 af                                        |
| <b>Subcatchment 1S.10: East Lot 1</b>           | Runoff Area=3,754 sf 84.98% Impervious Runoff Depth=4.54"<br>Tc=6.0 min CN=89 Runoff=0.44 cfs 0.033 af                                        |
| <b>Subcatchment 1S.11: South Lot Treated</b>    | Runoff Area=10,852 sf 76.24% Impervious Runoff Depth=3.80"<br>Tc=6.0 min CN=82 Runoff=1.10 cfs 0.079 af                                       |
| <b>Subcatchment 1S.2: Co Op Roof &amp; yard</b> | Runoff Area=56,422 sf 65.80% Impervious Runoff Depth=3.40"<br>Tc=6.0 min CN=78 Runoff=5.17 cfs 0.367 af                                       |
| <b>Subcatchment 1S.3: Runoff to park</b>        | Runoff Area=2,081 sf 0.00% Impervious Runoff Depth=0.39"<br>Flow Length=264' Tc=9.0 min CN=39 Runoff=0.01 cfs 0.002 af                        |
| <b>Subcatchment 1S.4: Central parking/drive</b> | Runoff Area=19,043 sf 77.98% Impervious Runoff Depth=3.91"<br>Tc=6.0 min CN=83 Runoff=1.98 cfs 0.142 af                                       |
| <b>Subcatchment 1S.5: Contained yard/park</b>   | Runoff Area=3,023 sf 16.84% Impervious Runoff Depth=0.98"<br>Tc=6.0 min CN=49 Runoff=0.06 cfs 0.006 af                                        |
| <b>Subcatchment 1S.6: Building E roof and</b>   | Runoff Area=22,599 sf 53.10% Impervious Runoff Depth=2.65"<br>Tc=6.0 min CN=70 Runoff=1.60 cfs 0.114 af                                       |
| <b>Subcatchment 1S.7: East Lot 4</b>            | Runoff Area=7,618 sf 53.01% Impervious Runoff Depth=2.65"<br>Tc=6.0 min CN=70 Runoff=0.54 cfs 0.039 af                                        |
| <b>Subcatchment 1S.8: East Lot 3</b>            | Runoff Area=6,694 sf 52.99% Impervious Runoff Depth=2.65"<br>Tc=6.0 min CN=70 Runoff=0.47 cfs 0.034 af                                        |
| <b>Subcatchment 1S.9: East Lot 2</b>            | Runoff Area=5,956 sf 80.74% Impervious Runoff Depth=4.33"<br>Tc=6.0 min CN=87 Runoff=0.68 cfs 0.049 af                                        |
| <b>Subcatchment 2S: 295 Embankment Trib</b>     | Runoff Area=69,848 sf 12.70% Impervious Runoff Depth=0.49"<br>Flow Length=233' Tc=16.0 min CN=41 Runoff=0.31 cfs 0.066 af                     |
| <b>Subcatchment 3S.1: Garden area runoff</b>    | Runoff Area=6,670 sf 0.00% Impervious Runoff Depth=0.05"<br>Flow Length=82' Tc=6.9 min CN=30 Runoff=0.00 cfs 0.001 af                         |
| <b>Reach POI-1: POI #1 - 60" Douglass MS4</b>   | Inflow=11.03 cfs 0.854 af<br>Outflow=11.03 cfs 0.854 af                                                                                       |
| <b>Reach POI-3: POI #3 - Baseball Field</b>     | Inflow=0.00 cfs 0.001 af<br>Outflow=0.00 cfs 0.001 af                                                                                         |
| <b>Pond P1: VUSF</b>                            | Peak Elev=32.38' Storage=1,639 cf Inflow=1.10 cfs 0.079 af<br>Discarded=0.06 cfs 0.057 af Primary=0.13 cfs 0.022 af Outflow=0.18 cfs 0.079 af |



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**Pond P2: FP 4**

Peak Elev=35.95' Storage=0 cf Inflow=0.54 cfs 0.039 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0050 '/' Outflow=0.54 cfs 0.039 af

**Pond P3: FP 3**

Peak Elev=36.10' Storage=0 cf Inflow=0.47 cfs 0.034 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.47 cfs 0.034 af

**Pond P4: FP 2**

Peak Elev=35.90' Storage=0 cf Inflow=0.68 cfs 0.049 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.68 cfs 0.049 af

**Pond P5: FP 1**

Peak Elev=35.70' Storage=0 cf Inflow=0.44 cfs 0.033 af  
10.0" Round Culvert n=0.010 L=75.0' S=0.0049 '/' Outflow=0.44 cfs 0.033 af

**Pond POI #2: POI #2 (295 Basin)**

Peak Elev=26.76' Storage=709 cf Inflow=0.31 cfs 0.066 af  
Discarded=0.02 cfs 0.018 af Primary=0.08 cfs 0.041 af Secondary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.059 af

**Total Runoff Area = 4.952 ac Runoff Volume = 0.937 af Average Runoff Depth = 2.27"**  
**54.64% Pervious = 2.706 ac 45.36% Impervious = 2.246 ac**

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Type III 24-hr 25-year Rainfall=5.80"

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## Summary for Subcatchment 1.S1: Drive to Street

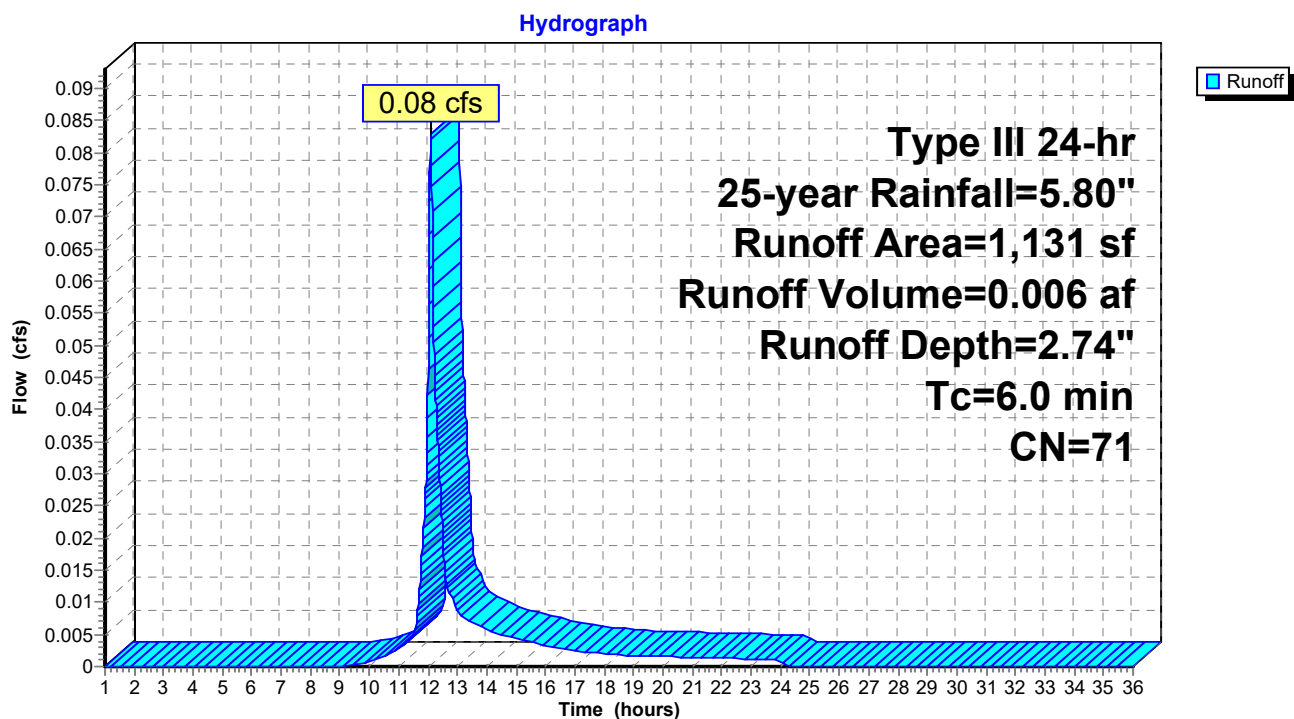
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 2.74"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 622       | 98 | Pavement                      |
|   | 509       | 39 | >75% Grass cover, Good, HSG A |
|   | 1,131     | 71 | Weighted Average              |
|   | 509       |    | 45.00% Pervious Area          |
|   | 622       |    | 55.00% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

## Subcatchment 1.S1: Drive to Street



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Type III 24-hr 25-year Rainfall=5.80"

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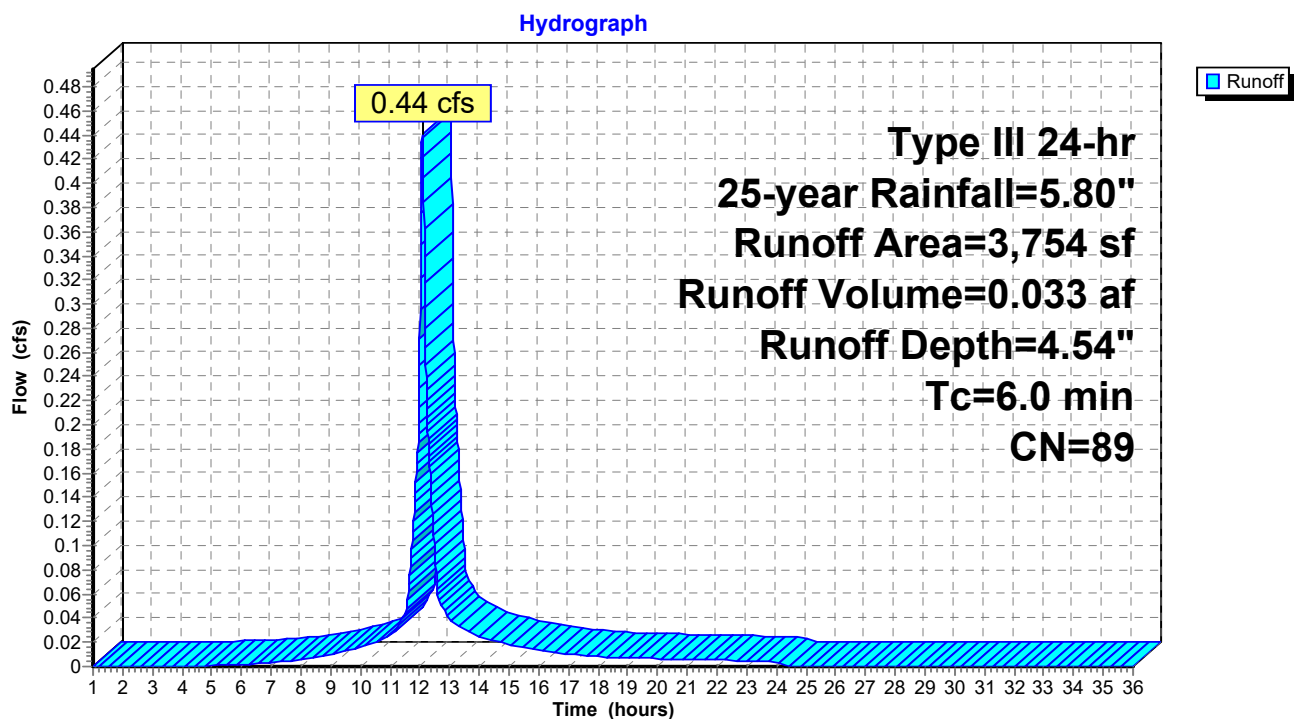
**Summary for Subcatchment 1S.10: East Lot 1**

Runoff = 0.44 cfs @ 12.08 hrs, Volume= 0.033 af, Depth= 4.54"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,190     | 98 | Pavement                      |
|   | 564       | 39 | >75% Grass cover, Good, HSG A |
|   | 3,754     | 89 | Weighted Average              |
|   | 564       |    | 15.02% Pervious Area          |
|   | 3,190     |    | 84.98% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.10: East Lot 1**

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Type III 24-hr 25-year Rainfall=5.80"

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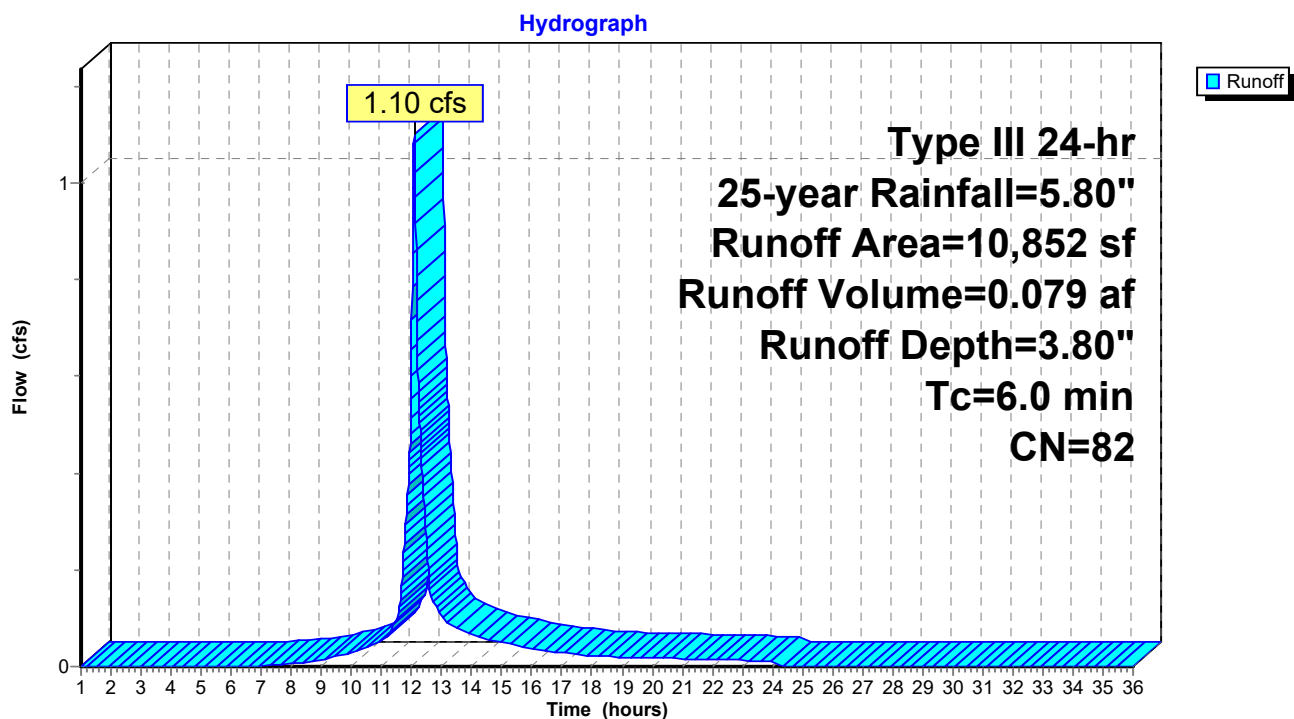
**Summary for Subcatchment 1S.11: South Lot Treated**

Runoff = 1.10 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 3.80"

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

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 8,274     | 98 | Paved parking          |
|   | 2,578     | 30 | Brush, Good, HSG A     |
|   | 10,852    | 82 | Weighted Average       |
|   | 2,578     |    | 23.76% Pervious Area   |
|   | 8,274     |    | 76.24% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.11: South Lot Treated**

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Type III 24-hr 25-year Rainfall=5.80"

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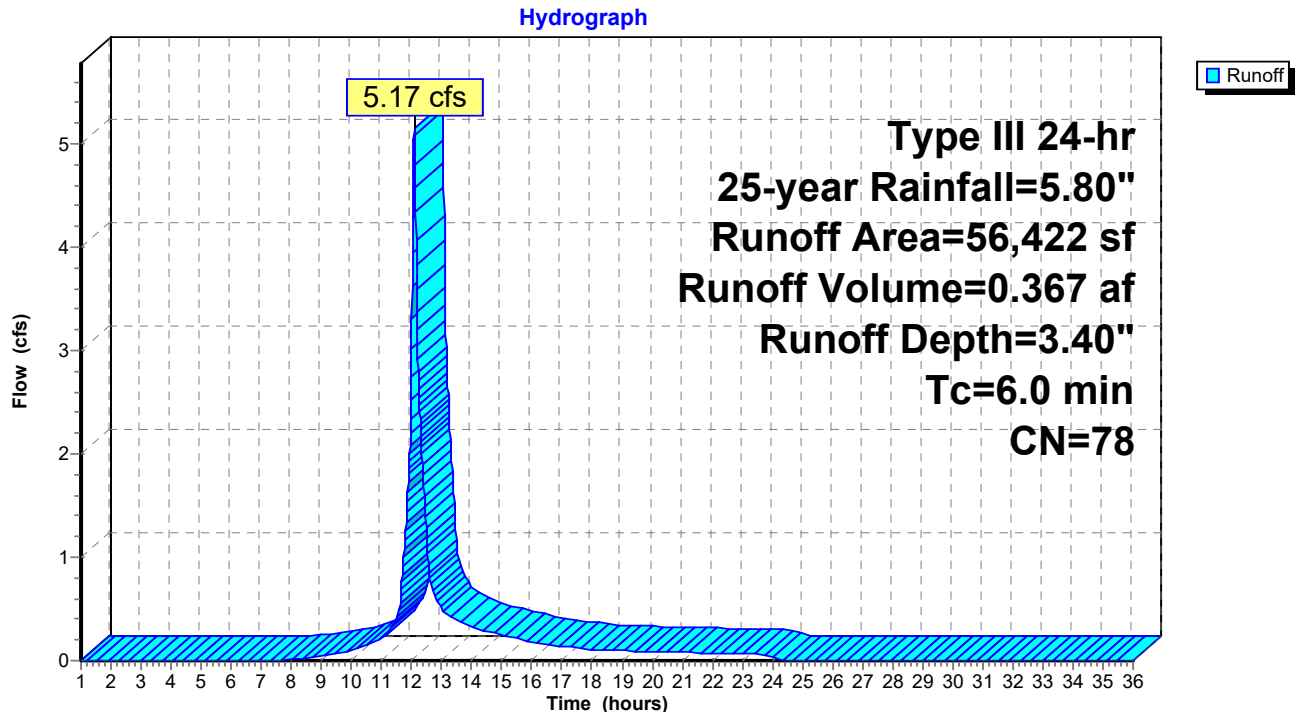
**Summary for Subcatchment 1S.2: Co Op Roof & yard**

Runoff = 5.17 cfs @ 12.09 hrs, Volume= 0.367 af, Depth= 3.40"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 5,239     | 98 | pavers                        |
|   | 16,100    | 39 | >75% Grass cover, Good, HSG A |
| * | 21,137    | 98 | Roofs                         |
| * | 4,191     | 98 | sidewalks                     |
| * | 618       | 98 | patios                        |
|   | 9,137     | 77 | 1/8 acre lots, 65% imp, HSG A |
|   | 56,422    | 78 | Weighted Average              |
|   | 19,298    |    | 34.20% Pervious Area          |
|   | 37,124    |    | 65.80% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.2: Co Op Roof & yard**

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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 1S.3: Runoff to park**

Runoff = 0.01 cfs @ 12.41 hrs, Volume= 0.002 af, Depth= 0.39"

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

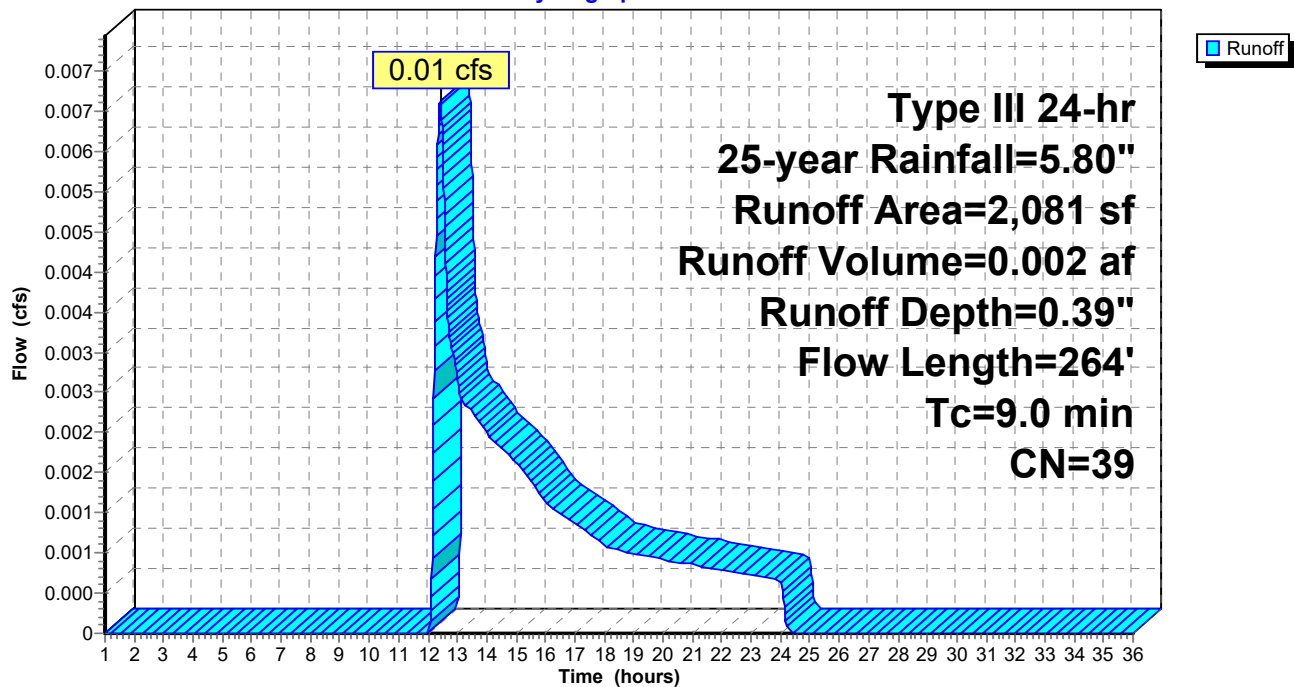
| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,081     | 39 | >75% Grass cover, Good, HSG A |
| 2,081     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 6.2      | 100           | 0.0600        | 0.27              |                | <b>Sheet Flow, A to B</b><br>Grass: Short n= 0.150 P2= 3.27"                |
| 2.8      | 164           | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.0      | 264           | Total         |                   |                |                                                                             |

**Subcatchment 1S.3: Runoff to park**

Hydrograph





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Type III 24-hr 25-year Rainfall=5.80"

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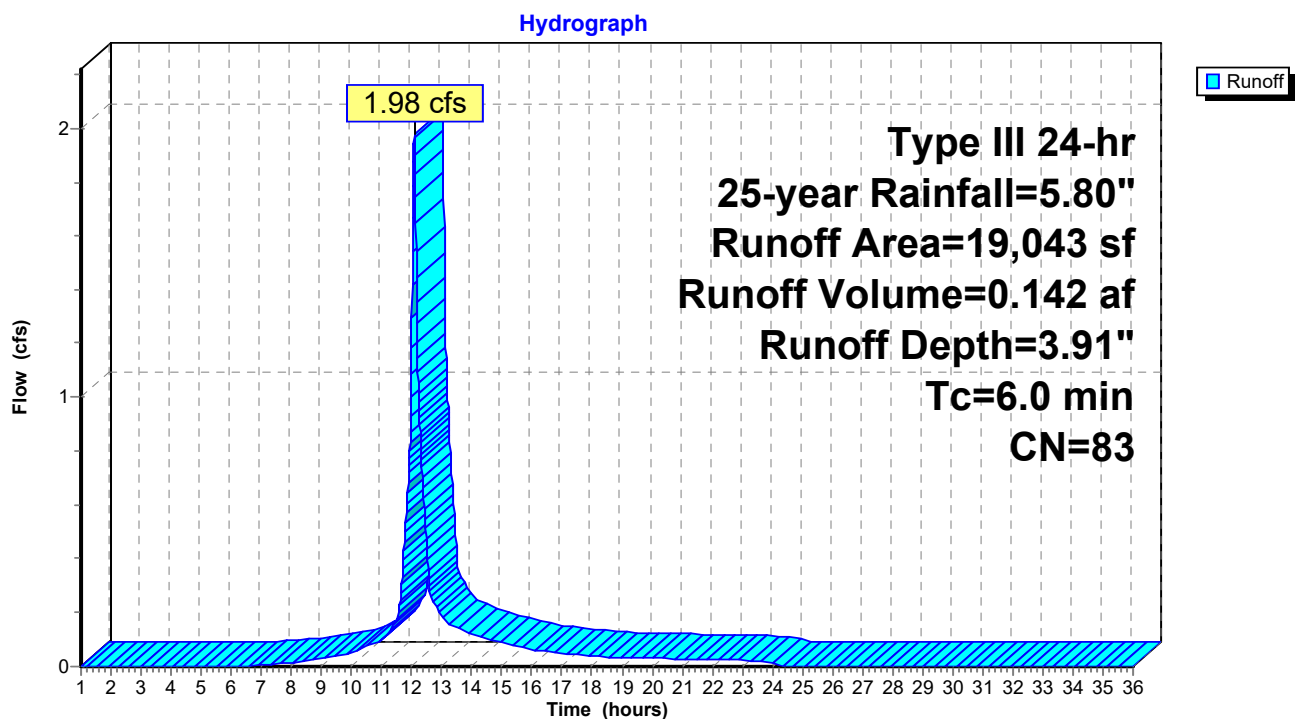
**Summary for Subcatchment 1S.4: Central parking/drive**

Runoff = 1.98 cfs @ 12.09 hrs, Volume= 0.142 af, Depth= 3.91"

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

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 14,850    | 98 | Pavement               |
|   | 4,193     | 30 | Brush, Good, HSG A     |
|   | 19,043    | 83 | Weighted Average       |
|   | 4,193     |    | 22.02% Pervious Area   |
|   | 14,850    |    | 77.98% Impervious Area |

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

**Subcatchment 1S.4: Central parking/drive**

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Type III 24-hr 25-year Rainfall=5.80"

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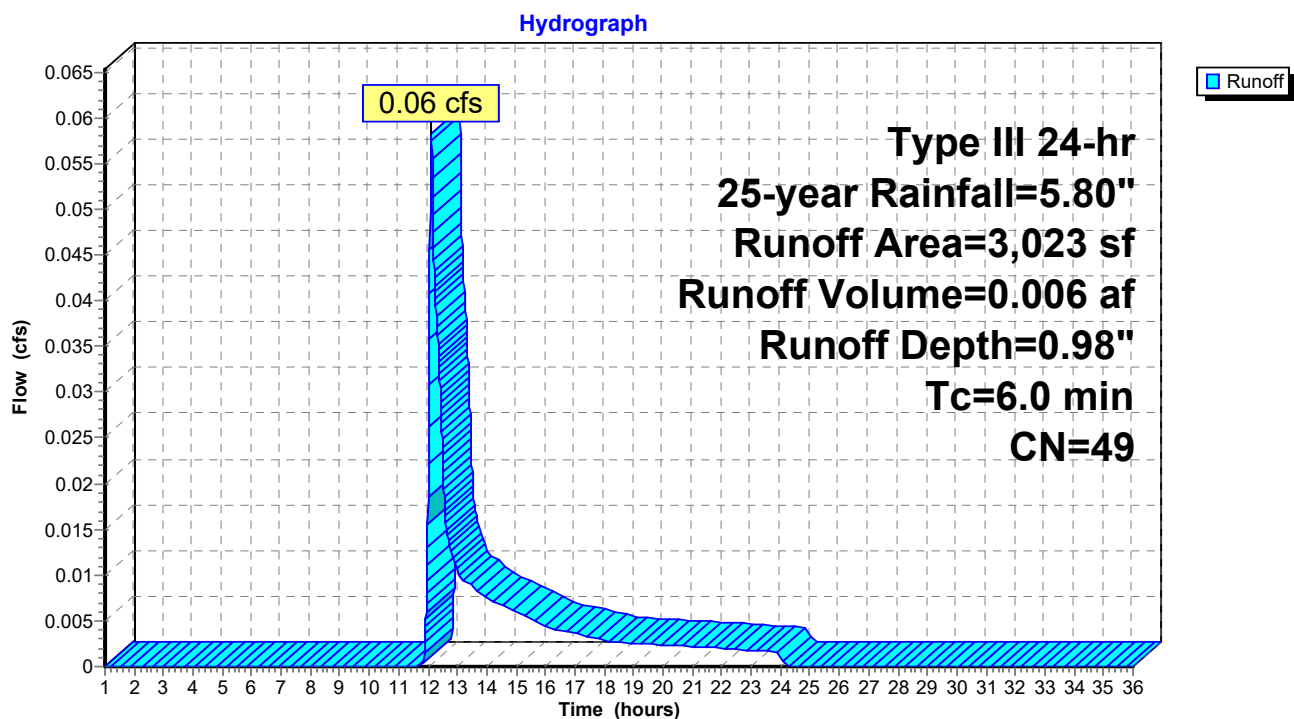
**Summary for Subcatchment 1S.5: Contained yard/park connection**

Runoff = 0.06 cfs @ 12.11 hrs, Volume= 0.006 af, Depth= 0.98"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,514     | 39 | >75% Grass cover, Good, HSG A |
| * 509     | 98 | sidewalks                     |
| 3,023     | 49 | Weighted Average              |
| 2,514     |    | 83.16% Pervious Area          |
| 509       |    | 16.84% Impervious Area        |

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

**Subcatchment 1S.5: Contained yard/park connection**

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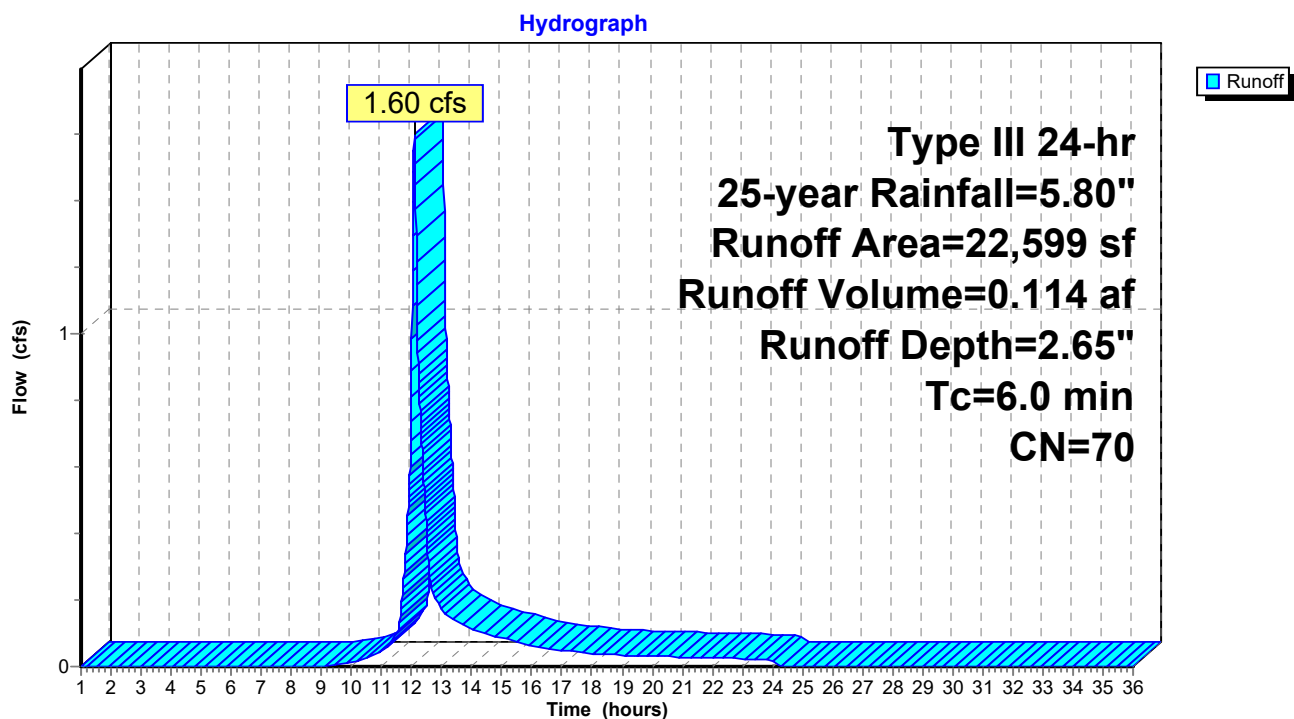
**Summary for Subcatchment 1S.6: Building E roof and yard**

Runoff = 1.60 cfs @ 12.09 hrs, Volume= 0.114 af, Depth= 2.65"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 10,599    | 39 | >75% Grass cover, Good, HSG A |
| * 12,000  | 98 | roof                          |
| 22,599    | 70 | Weighted Average              |
| 10,599    |    | 46.90% Pervious Area          |
| 12,000    |    | 53.10% Impervious Area        |

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

**Subcatchment 1S.6: Building E roof and yard**

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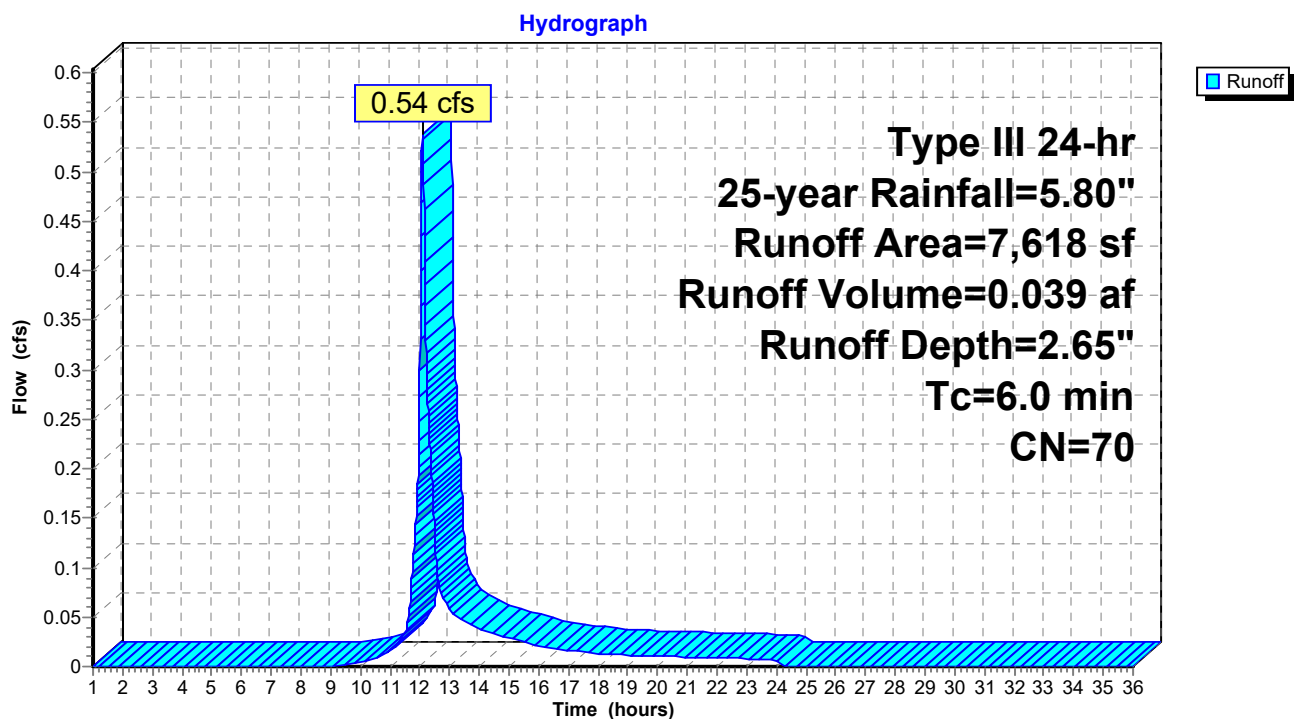
**Summary for Subcatchment 1S.7: East Lot 4**

Runoff = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af, Depth= 2.65"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 4,038     | 98 | Paved parking                 |
|   | 3,580     | 39 | >75% Grass cover, Good, HSG A |
|   | 7,618     | 70 | Weighted Average              |
|   | 3,580     |    | 46.99% Pervious Area          |
|   | 4,038     |    | 53.01% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.7: East Lot 4**

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Type III 24-hr 25-year Rainfall=5.80"

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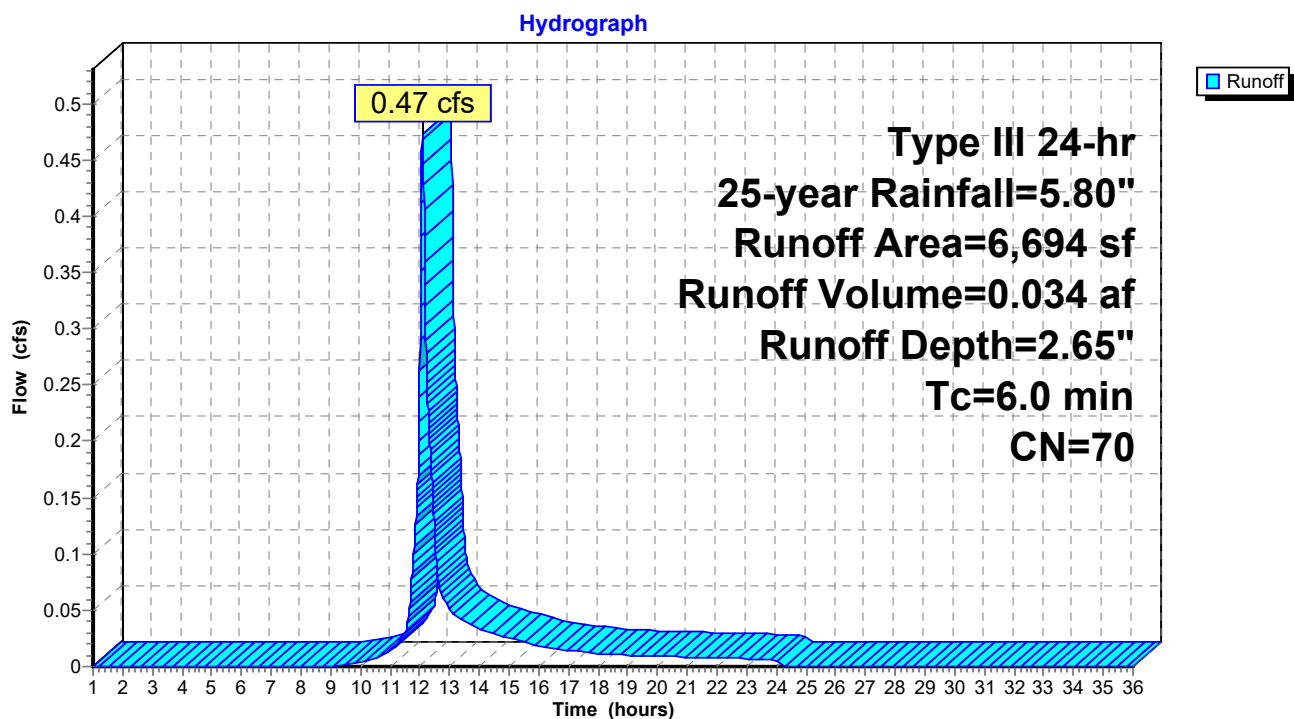
**Summary for Subcatchment 1S.8: East Lot 3**

Runoff = 0.47 cfs @ 12.09 hrs, Volume= 0.034 af, Depth= 2.65"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,547     | 98 | Paved parking                 |
|   | 3,147     | 39 | >75% Grass cover, Good, HSG A |
|   | 6,694     | 70 | Weighted Average              |
|   | 3,147     |    | 47.01% Pervious Area          |
|   | 3,547     |    | 52.99% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.8: East Lot 3**

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Type III 24-hr 25-year Rainfall=5.80"

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### Summary for Subcatchment 1S.9: East Lot 2

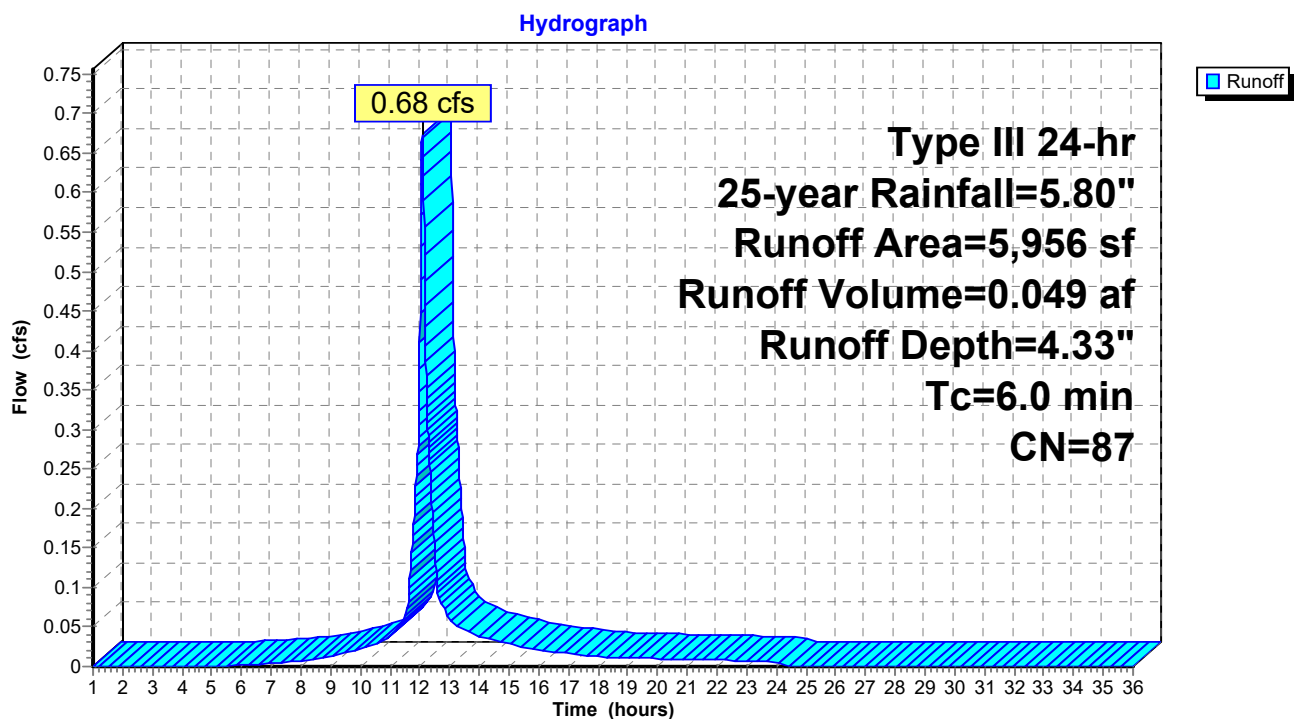
Runoff = 0.68 cfs @ 12.09 hrs, Volume= 0.049 af, Depth= 4.33"

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

|   | Area (sf) | CN | Description                    |
|---|-----------|----|--------------------------------|
| * | 4,809     | 98 | Paved parking, patio, sidewalk |
|   | 1,147     | 39 | >75% Grass cover, Good, HSG A  |
|   | 5,956     | 87 | Weighted Average               |
|   | 1,147     |    | 19.26% Pervious Area           |
|   | 4,809     |    | 80.74% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------|
| 6.0      |               |               |                   |                | Direct Entry, TR 55 .1 hour |

### Subcatchment 1S.9: East Lot 2





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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 2S: 295 Embankment Trib**

Runoff = 0.31 cfs @ 12.47 hrs, Volume= 0.066 af, Depth= 0.49"

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

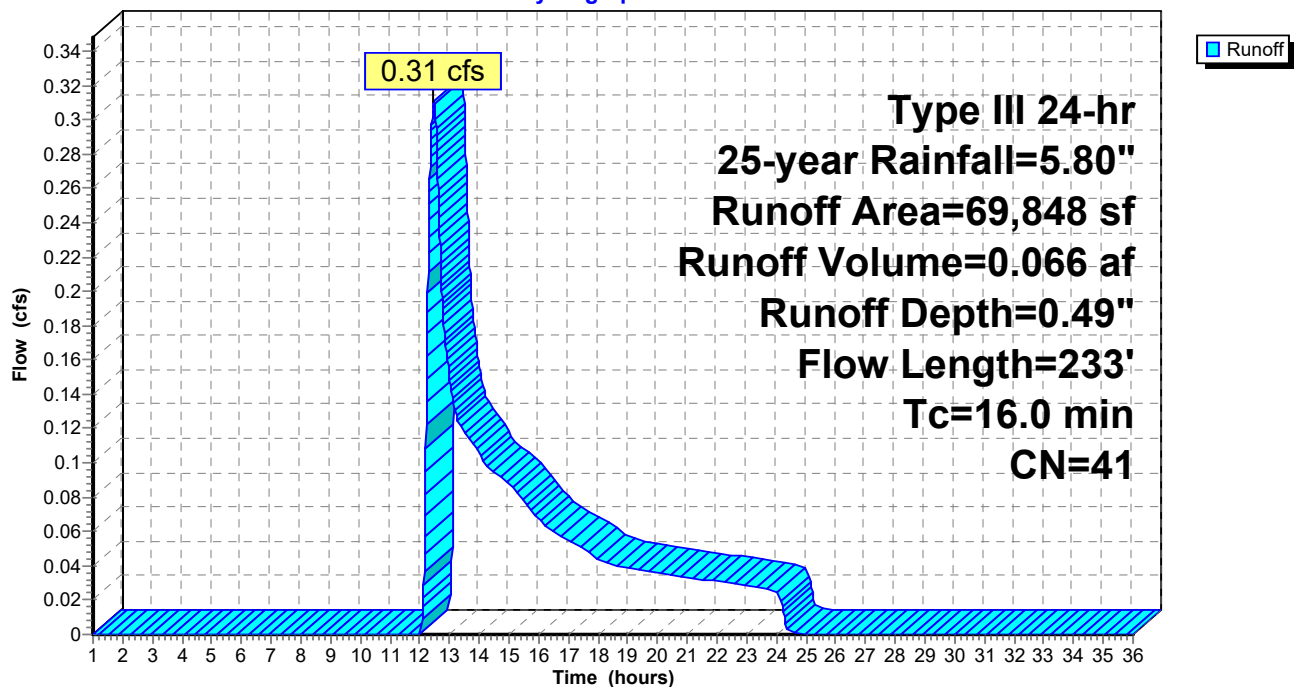
| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 8,183     | 39 | >75% Grass cover, Good, HSG A  |
| * 230     | 98 | Stairs                         |
| * 3,155   | 98 | Path                           |
| * 5,488   | 98 | Homes/driveways                |
| 52,792    | 32 | Woods/grass comb., Good, HSG A |
| 69,848    | 41 | Weighted Average               |
| 60,975    |    | 87.30% Pervious Area           |
| 8,873     |    | 12.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 14.7     | 100           | 0.0500        | 0.11              |                | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"     |
| 1.3      | 133           | 0.0600        | 1.71              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 233           | Total         |                   |                |                                                                             |

**Subcatchment 2S: 295 Embankment Trib**

Hydrograph



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 3S.1: Garden area runoff**

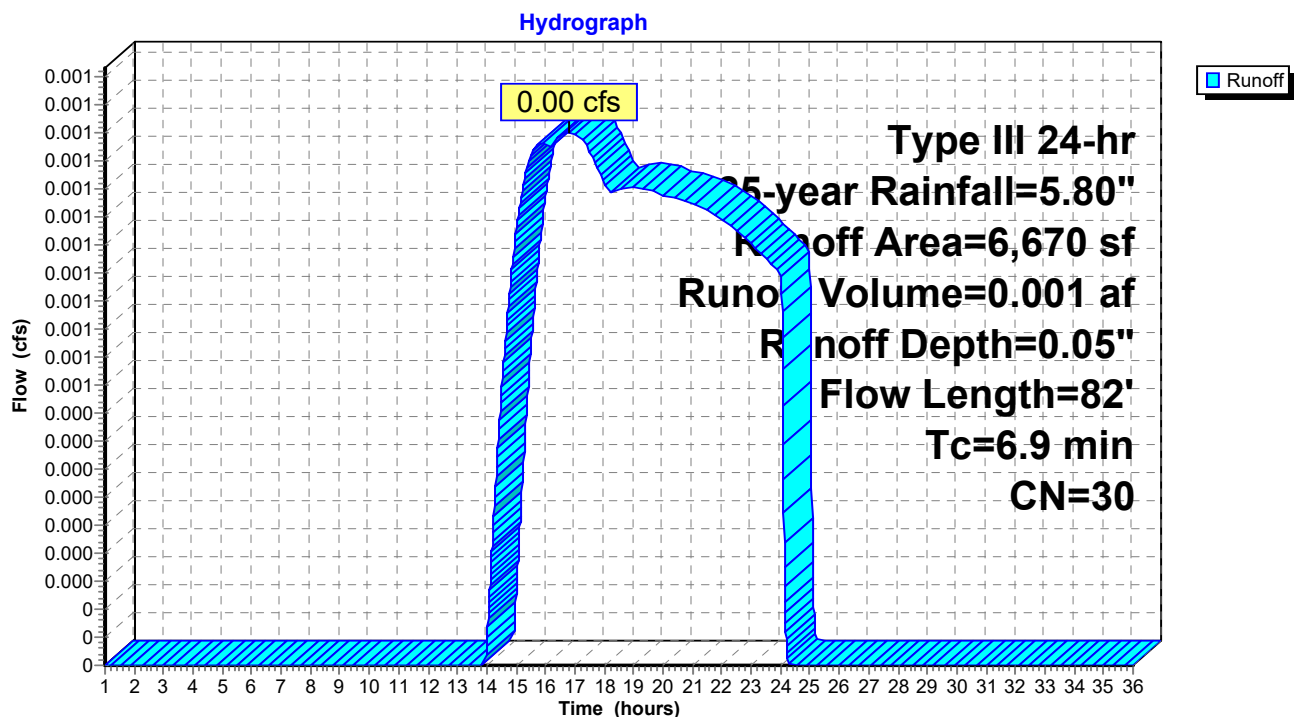
Runoff = 0.00 cfs @ 16.80 hrs, Volume= 0.001 af, Depth= 0.05"

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

| Area (sf) | CN | Description           |
|-----------|----|-----------------------|
| 6,670     | 30 | Brush, Good, HSG A    |
| 6,670     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 1.7      | 28            | 0.3330        | 0.28              |                | <b>Sheet Flow, A to B</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 5.2      | 54            | 0.0700        | 0.17              |                | <b>Sheet Flow, B to C</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 6.9      | 82            | Total         |                   |                |                                 |

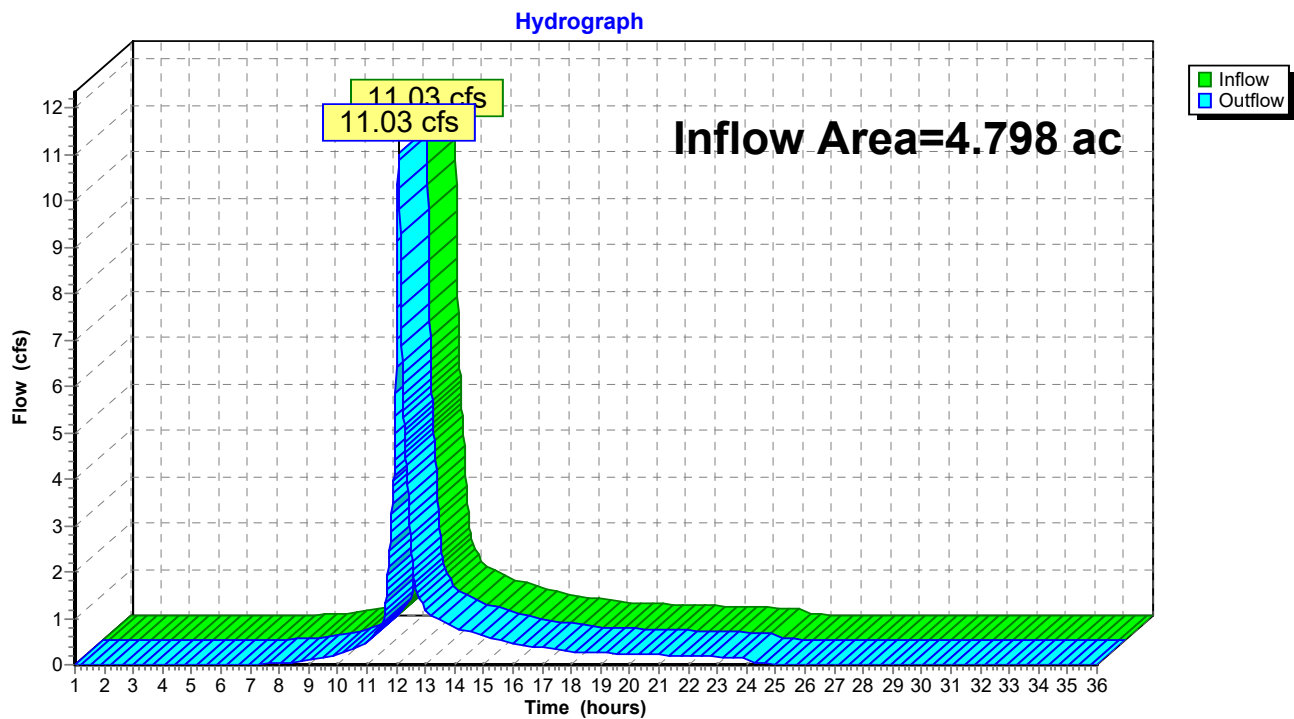
**Subcatchment 3S.1: Garden area runoff**

### Summary for Reach POI-1: POI #1 - 60" Douglass MS4

Inflow Area = 4.798 ac, 46.81% Impervious, Inflow Depth = 2.14" for 25-year event  
 Inflow = 11.03 cfs @ 12.09 hrs, Volume= 0.854 af  
 Outflow = 11.03 cfs @ 12.09 hrs, Volume= 0.854 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-1: POI #1 - 60" Douglass MS4

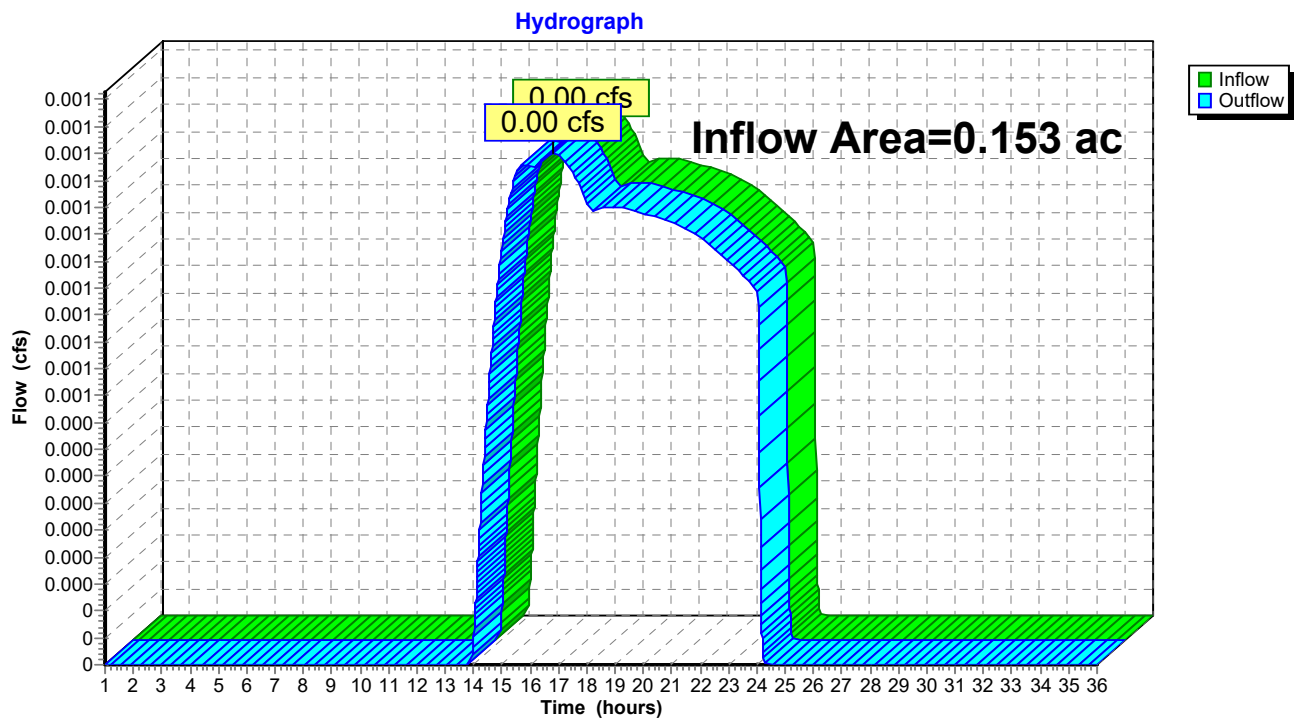


### Summary for Reach POI-3: POI #3 - Baseball Field

Inflow Area = 0.153 ac, 0.00% Impervious, Inflow Depth = 0.05" for 25-year event  
 Inflow = 0.00 cfs @ 16.80 hrs, Volume= 0.001 af  
 Outflow = 0.00 cfs @ 16.80 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-3: POI #3 - Baseball Field



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Pond P1: VUSF**

Inflow Area = 0.249 ac, 76.24% Impervious, Inflow Depth = 3.80" for 25-year event  
 Inflow = 1.10 cfs @ 12.09 hrs, Volume= 0.079 af  
 Outflow = 0.18 cfs @ 12.57 hrs, Volume= 0.079 af, Atten= 83%, Lag= 28.8 min  
 Discarded = 0.06 cfs @ 12.57 hrs, Volume= 0.057 af  
 Primary = 0.13 cfs @ 12.57 hrs, Volume= 0.022 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 32.38' @ 12.57 hrs Surf.Area= 2,381 sf Storage= 1,639 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 254.7 min ( 1,064.9 - 810.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                 |
|--------|--------|---------------|---------------------------------------------------------------------------------------------------------------------|
| #1     | 30.75' | 1,899 cf      | <b>Ponding (Prismatic)</b> Listed below (Recalc)                                                                    |
| #2     | 29.25' | 69 cf         | <b>Filter Media/Loam (Prismatic)</b> Listed below (Recalc)<br>687 cf Overall x 10.0% Voids                          |
| #3     | 28.92' | 30 cf         | <b>Transition Gravel (Prismatic)</b> Listed below (Recalc)<br>151 cf Overall x 20.0% Voids                          |
| #4     | 27.00' | 349 cf        | <b>Crushed Stone (Prismatic)</b> Listed below (Recalc)<br>879 cf Overall - 6 cf Embedded = 873 cf x 40.0% Voids     |
| #5     | 27.10' | 5 cf          | <b>4.0" Round Pipe Storage</b> x 2 Inside #4<br>L= 30.0' S= 0.0005 '/'<br>6 cf Overall - 0.2" Wall Thickness = 5 cf |
|        |        | 2,353 cf      | Total Available Storage                                                                                             |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 30.75               | 465                  | 0                         | 0                         |
| 32.25               | 945                  | 1,058                     | 1,058                     |
| 33.00               | 1,300                | 842                       | 1,899                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 29.25               | 458                  | 0                         | 0                         |
| 30.75               | 458                  | 687                       | 687                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 28.92               | 458                  | 0                         | 0                         |
| 29.25               | 458                  | 151                       | 151                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 27.00               | 458                  | 0                         | 0                         |
| 28.92               | 458                  | 879                       | 879                       |

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Type III 24-hr 25-year Rainfall=5.80"

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| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                        |
|--------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 27.00' | <b>12.0" Round Culvert</b><br>L= 60.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 27.00' / 26.75' S= 0.0042 '/' Cc= 0.600<br>n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1  | 27.10' | <b>0.5" Vert. Soil Filter Media Drawdown Effect</b> C= 0.600                                                                                                                                          |
| #3     | Device 1  | 32.35' | <b>24.0" Horiz. Beehive Outlet</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                      |
| #4     | Discarded | 27.00' | <b>1.000 in/hr Exfiltration over Surface area</b>                                                                                                                                                     |

**Discarded OutFlow** Max=0.06 cfs @ 12.57 hrs HW=32.38' (Free Discharge)

↳ **4=Exfiltration** (Exfiltration Controls 0.06 cfs)

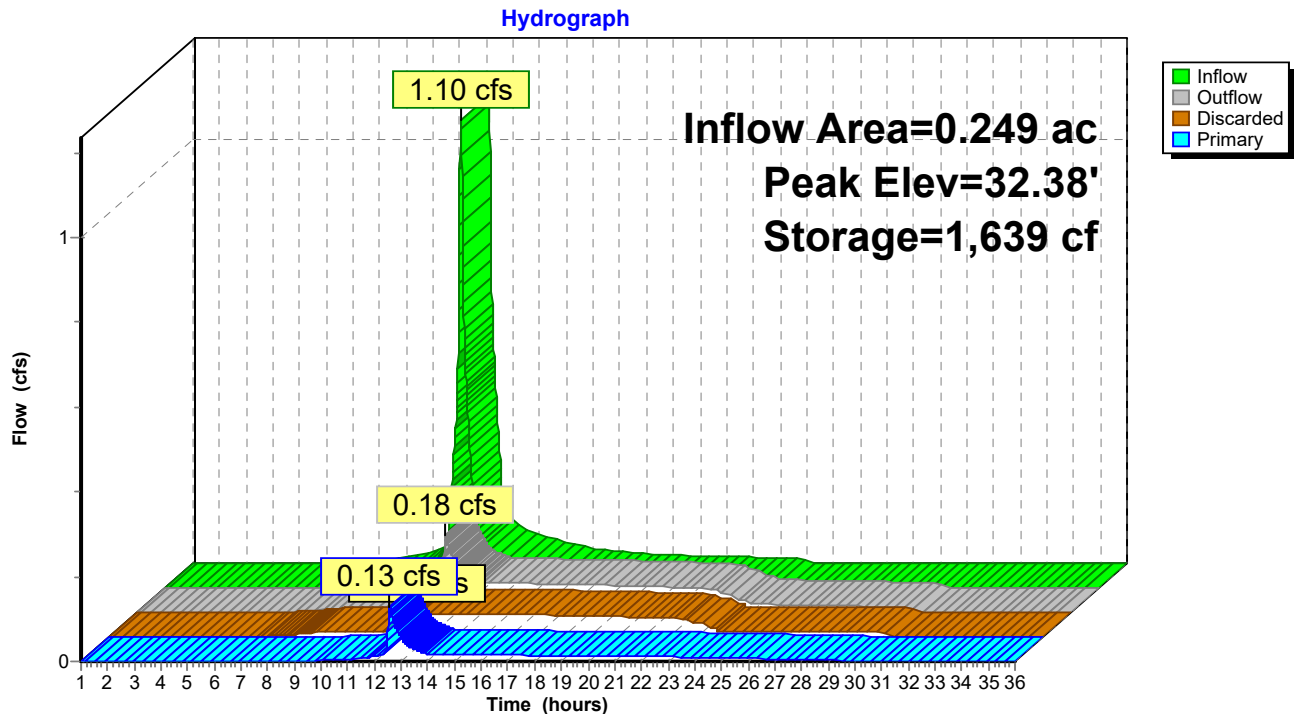
**Primary OutFlow** Max=0.13 cfs @ 12.57 hrs HW=32.38' TW=0.00' (Dynamic Tailwater)

↳ **1=Culvert** (Passes 0.13 cfs of 4.40 cfs potential flow)

↳ **2=Soil Filter Media Drawdown Effect** (Orifice Controls 0.02 cfs @ 11.04 fps)

↳ **3=Beehive Outlet** (Weir Controls 0.11 cfs @ 0.58 fps)

## Pond P1: VUSF





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**Summary for Pond P2: FP 4**

Inflow Area = 0.175 ac, 53.01% Impervious, Inflow Depth = 2.65" for 25-year event  
 Inflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af  
 Outflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.95' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.95' | 14 cf         | <b>4.00'W x 5.00'L x 3.60'H Media/Stone</b><br>72 cf Overall x 20.0% Voids |
| #2     | 35.95' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 52 cf         | Total Available Storage                                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.95               | 20                   | 0                         | 0                         |
| 36.95               | 56                   | 38                        | 38                        |

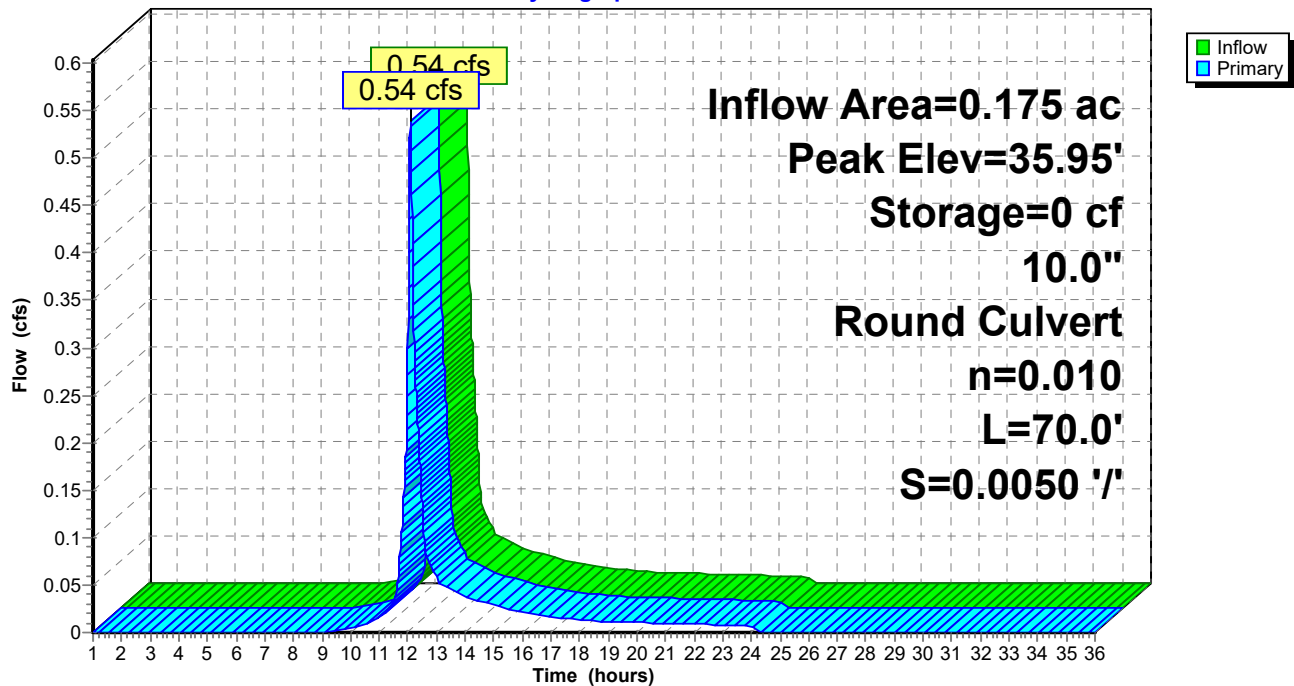
| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 32.35' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 32.35' / 32.00' S= 0.0050 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.95' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Passes 0.00 cfs of 3.51 cfs potential flow)

Pond P2: FP 4

Hydrograph



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Pond P3: FP 3**

Inflow Area = 0.154 ac, 52.99% Impervious, Inflow Depth = 2.65" for 25-year event  
 Inflow = 0.47 cfs @ 12.09 hrs, Volume= 0.034 af  
 Outflow = 0.47 cfs @ 12.09 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.47 cfs @ 12.09 hrs, Volume= 0.034 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 36.10' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 839.9 - 839.9 )

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 36.10' | 21 cf         | <b>5.00'W x 5.00'L x 4.20'H Media/Stone</b><br>105 cf Overall x 20.0% Voids |
| #2     | 36.10' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 66 cf         | Total Available Storage                                                     |

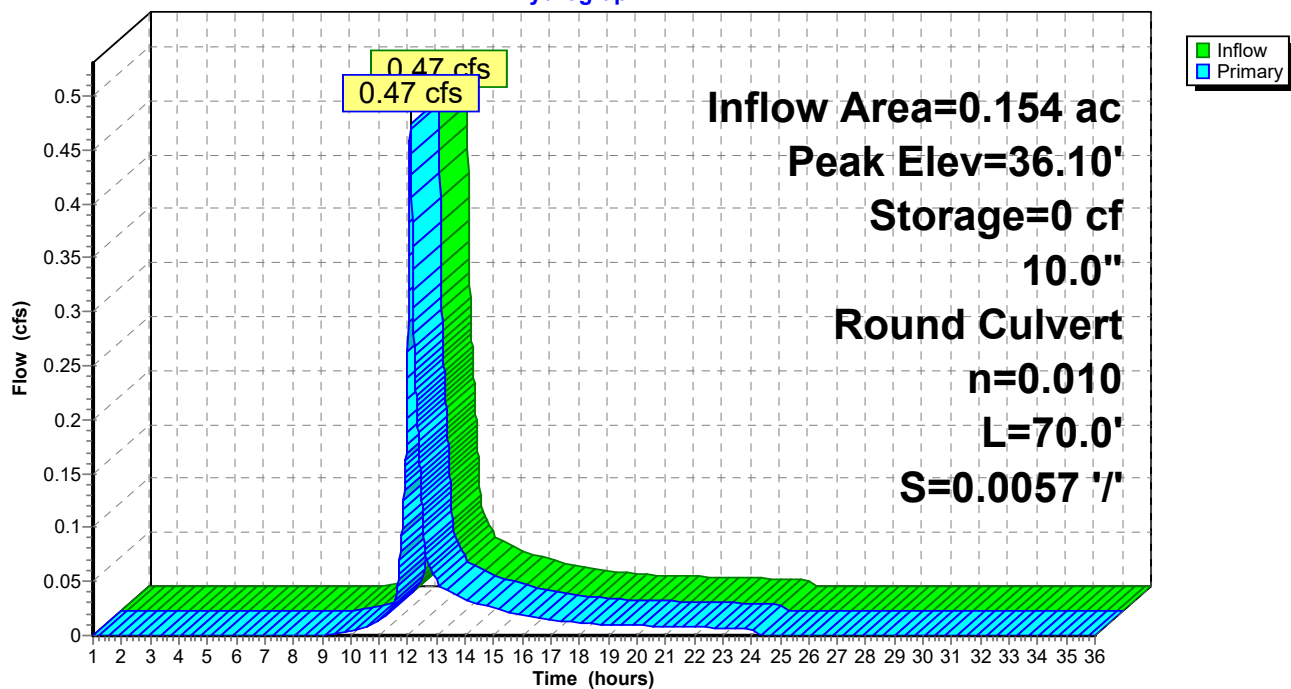
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 36.10               | 25                   | 0                         | 0                         |
| 37.10               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.90' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.90' / 31.50' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=36.10' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.83 cfs potential flow)

Pond P3: FP 3

Hydrograph



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Pond P4: FP 2**

Inflow Area = 0.137 ac, 80.74% Impervious, Inflow Depth = 4.33" for 25-year event  
 Inflow = 0.68 cfs @ 12.09 hrs, Volume= 0.049 af  
 Outflow = 0.68 cfs @ 12.09 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.68 cfs @ 12.09 hrs, Volume= 0.049 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.90' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 795.9 - 795.9 )

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 35.90' | 23 cf         | <b>5.00'W x 5.00'L x 4.50'H Media/Stone</b><br>113 cf Overall x 20.0% Voids |
| #2     | 35.90' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 67 cf         | Total Available Storage                                                     |

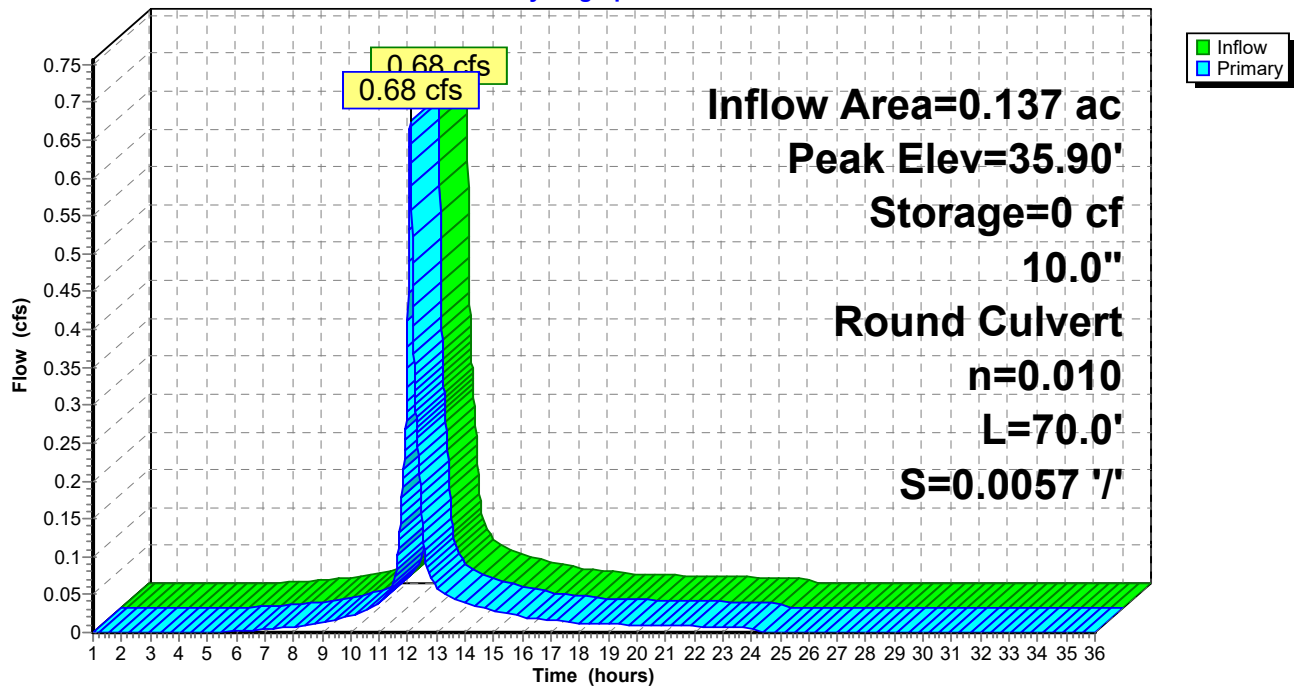
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.90               | 25                   | 0                         | 0                         |
| 36.90               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.40' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.40' / 31.00' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.09 hrs HW=35.90' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.98 cfs potential flow)

# Pond P4: FP 2

Hydrograph





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**Summary for Pond P5: FP 1**

Inflow Area = 0.086 ac, 84.98% Impervious, Inflow Depth = 4.54" for 25-year event  
 Inflow = 0.44 cfs @ 12.08 hrs, Volume= 0.033 af  
 Outflow = 0.44 cfs @ 12.08 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.44 cfs @ 12.08 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.70' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 789.3 - 789.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.70' | 19 cf         | <b>4.00'W x 5.00'L x 4.80'H Media/Stone</b><br>96 cf Overall x 20.0% Voids |
| #2     | 35.70' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 57 cf         | Total Available Storage                                                    |

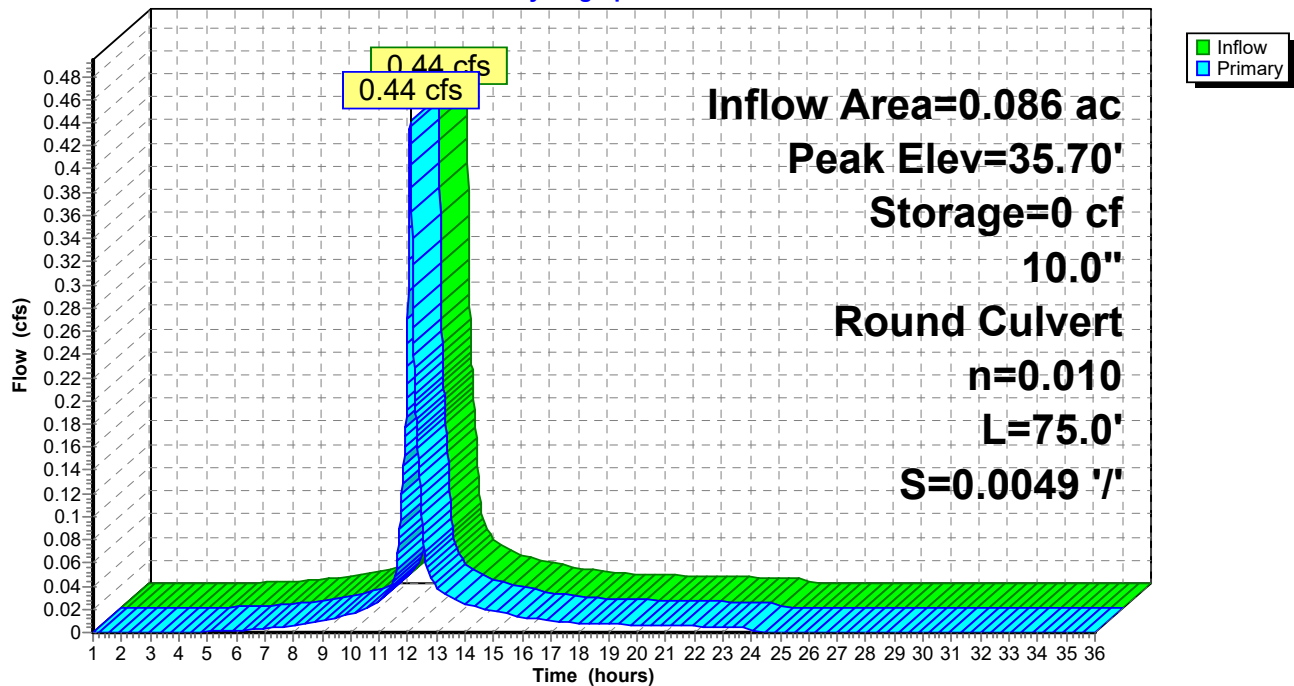
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.70               | 20                   | 0                         | 0                         |
| 36.70               | 56                   | 38                        | 38                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 30.90' | <b>10.0" Round Culvert</b> L= 75.0' Ke= 1.000<br>Inlet / Outlet Invert= 30.90' / 30.53' S= 0.0049 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.08 hrs HW=35.70' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 4.12 cfs potential flow)

Pond P5: FP 1

Hydrograph



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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Pond POI #2: POI #2 (295 Basin)**

Inflow Area = 1.603 ac, 12.70% Impervious, Inflow Depth = 0.49" for 25-year event  
 Inflow = 0.31 cfs @ 12.47 hrs, Volume= 0.066 af  
 Outflow = 0.10 cfs @ 14.06 hrs, Volume= 0.059 af, Atten= 67%, Lag= 95.5 min  
 Discarded = 0.02 cfs @ 14.06 hrs, Volume= 0.018 af  
 Primary = 0.08 cfs @ 14.06 hrs, Volume= 0.041 af  
 Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

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

Peak Elev= 26.76' @ 14.06 hrs Surf.Area= 2,978 sf Storage= 709 cf

Plug-Flow detention time= 154.2 min calculated for 0.059 af (89% of inflow)

Center-of-Mass det. time= 105.0 min ( 1,063.5 - 958.5 )

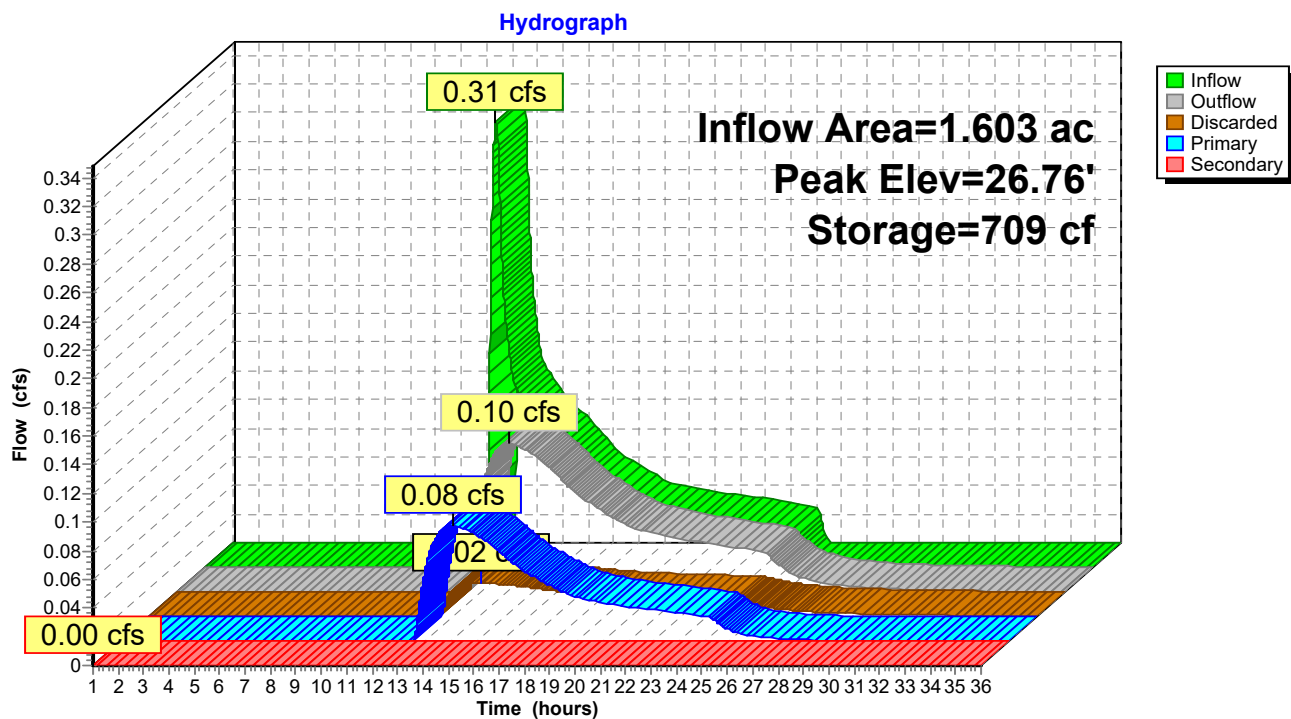
| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 105,037 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 10,120               | 7,298                     | 8,899                     |
| 29.00               | 14,131               | 12,126                    | 21,024                    |
| 30.00               | 17,326               | 15,729                    | 36,753                    |
| 32.00               | 24,023               | 41,349                    | 78,102                    |
| 33.00               | 29,847               | 26,935                    | 105,037                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                               |
|--------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 26.60' | <b>12.0" Round Culvert</b> L= 16.0' Ke= 0.600<br>Inlet / Outlet Invert= 26.60' / 26.51' S= 0.0056 ' S= 0.0056 ' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf    |
| #2     | Secondary | 32.40' | <b>20.0' long x 15.0' breadth Overflow</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #3     | Discarded | 26.60' | <b>1.000 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                           |

**Discarded OutFlow** Max=0.02 cfs @ 14.06 hrs HW=26.76' (Free Discharge)↑**3=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=0.08 cfs @ 14.06 hrs HW=26.76' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 0.08 cfs @ 1.50 fps)**Secondary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**2=Overflow** ( Controls 0.00 cfs)

Pond POI #2: POI #2 (295 Basin)



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

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

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

|                                                 |                                                                                                                                           |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment 1S.1: Drive to Street</b>       | Runoff Area=1,131 sf 55.00% Impervious Runoff Depth=0.01"<br>Tc=6.0 min CN=71 Runoff=0.00 cfs 0.000 af                                    |
| <b>Subcatchment 1S.10: East Lot 1</b>           | Runoff Area=3,754 sf 84.98% Impervious Runoff Depth=0.28"<br>Tc=6.0 min CN=89 Runoff=0.03 cfs 0.002 af                                    |
| <b>Subcatchment 1S.11: South Lot Treated</b>    | Runoff Area=10,852 sf 76.24% Impervious Runoff Depth=0.11"<br>Tc=6.0 min CN=82 Runoff=0.02 cfs 0.002 af                                   |
| <b>Subcatchment 1S.2: Co Op Roof &amp; yard</b> | Runoff Area=56,422 sf 65.80% Impervious Runoff Depth=0.06"<br>Tc=6.0 min CN=78 Runoff=0.02 cfs 0.006 af                                   |
| <b>Subcatchment 1S.3: Runoff to park</b>        | Runoff Area=2,081 sf 0.00% Impervious Runoff Depth=0.00"<br>Flow Length=264' Tc=9.0 min CN=39 Runoff=0.00 cfs 0.000 af                    |
| <b>Subcatchment 1S.4: Central parking/drive</b> | Runoff Area=19,043 sf 77.98% Impervious Runoff Depth=0.13"<br>Tc=6.0 min CN=83 Runoff=0.04 cfs 0.005 af                                   |
| <b>Subcatchment 1S.5: Contained yard/park</b>   | Runoff Area=3,023 sf 16.84% Impervious Runoff Depth=0.00"<br>Tc=6.0 min CN=49 Runoff=0.00 cfs 0.000 af                                    |
| <b>Subcatchment 1S.6: Building E roof and</b>   | Runoff Area=22,599 sf 53.10% Impervious Runoff Depth=0.00"<br>Tc=6.0 min CN=70 Runoff=0.00 cfs 0.000 af                                   |
| <b>Subcatchment 1S.7: East Lot 4</b>            | Runoff Area=7,618 sf 53.01% Impervious Runoff Depth=0.00"<br>Tc=6.0 min CN=70 Runoff=0.00 cfs 0.000 af                                    |
| <b>Subcatchment 1S.8: East Lot 3</b>            | Runoff Area=6,694 sf 52.99% Impervious Runoff Depth=0.00"<br>Tc=6.0 min CN=70 Runoff=0.00 cfs 0.000 af                                    |
| <b>Subcatchment 1S.9: East Lot 2</b>            | Runoff Area=5,956 sf 80.74% Impervious Runoff Depth=0.22"<br>Tc=6.0 min CN=87 Runoff=0.03 cfs 0.003 af                                    |
| <b>Subcatchment 2S: 295 Embankment Trib</b>     | Runoff Area=69,848 sf 12.70% Impervious Runoff Depth=0.00"<br>Flow Length=233' Tc=16.0 min CN=41 Runoff=0.00 cfs 0.000 af                 |
| <b>Subcatchment 3S.1: Garden area runoff</b>    | Runoff Area=6,670 sf 0.00% Impervious Runoff Depth=0.00"<br>Flow Length=82' Tc=6.9 min CN=30 Runoff=0.00 cfs 0.000 af                     |
| <b>Reach POI-1: POI #1 - 60" Douglass MS4</b>   | Inflow=0.10 cfs 0.016 af<br>Outflow=0.10 cfs 0.016 af                                                                                     |
| <b>Reach POI-3: POI #3 - Baseball Field</b>     | Inflow=0.00 cfs 0.000 af<br>Outflow=0.00 cfs 0.000 af                                                                                     |
| <b>Pond P1: VUSF</b>                            | Peak Elev=27.03' Storage=5 cf Inflow=0.02 cfs 0.002 af<br>Discarded=0.01 cfs 0.002 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.002 af |

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Type III 24-hr WQ Rainfall=1.00"

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**Pond P2: FP 4**

Peak Elev=35.95' Storage=0 cf Inflow=0.00 cfs 0.000 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0050 '/' Outflow=0.00 cfs 0.000 af

**Pond P3: FP 3**

Peak Elev=36.10' Storage=0 cf Inflow=0.00 cfs 0.000 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.00 cfs 0.000 af

**Pond P4: FP 2**

Peak Elev=35.90' Storage=0 cf Inflow=0.03 cfs 0.003 af  
10.0" Round Culvert n=0.010 L=70.0' S=0.0057 '/' Outflow=0.03 cfs 0.003 af

**Pond P5: FP 1**

Peak Elev=35.70' Storage=0 cf Inflow=0.03 cfs 0.002 af  
10.0" Round Culvert n=0.010 L=75.0' S=0.0049 '/' Outflow=0.03 cfs 0.002 af

**Pond POI #2: POI #2 (295 Basin)**

Peak Elev=26.30' Storage=0 cf Inflow=0.00 cfs 0.000 af  
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

**Total Runoff Area = 4.952 ac Runoff Volume = 0.018 af Average Runoff Depth = 0.04"**  
**54.64% Pervious = 2.706 ac 45.36% Impervious = 2.246 ac**



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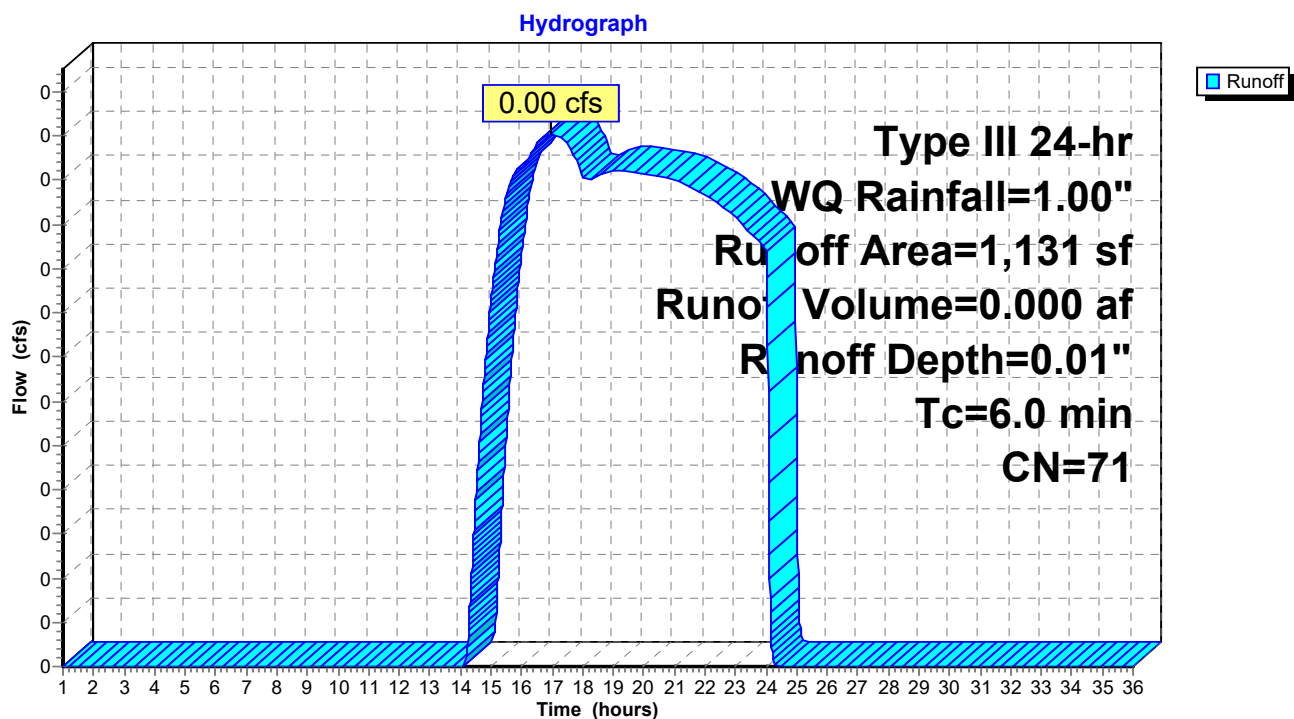
**Summary for Subcatchment 1.S1: Drive to Street**

Runoff = 0.00 cfs @ 16.98 hrs, Volume= 0.000 af, Depth= 0.01"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 622       | 98 | Pavement                      |
|   | 509       | 39 | >75% Grass cover, Good, HSG A |
|   | 1,131     | 71 | Weighted Average              |
|   | 509       |    | 45.00% Pervious Area          |
|   | 622       |    | 55.00% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1.S1: Drive to Street**

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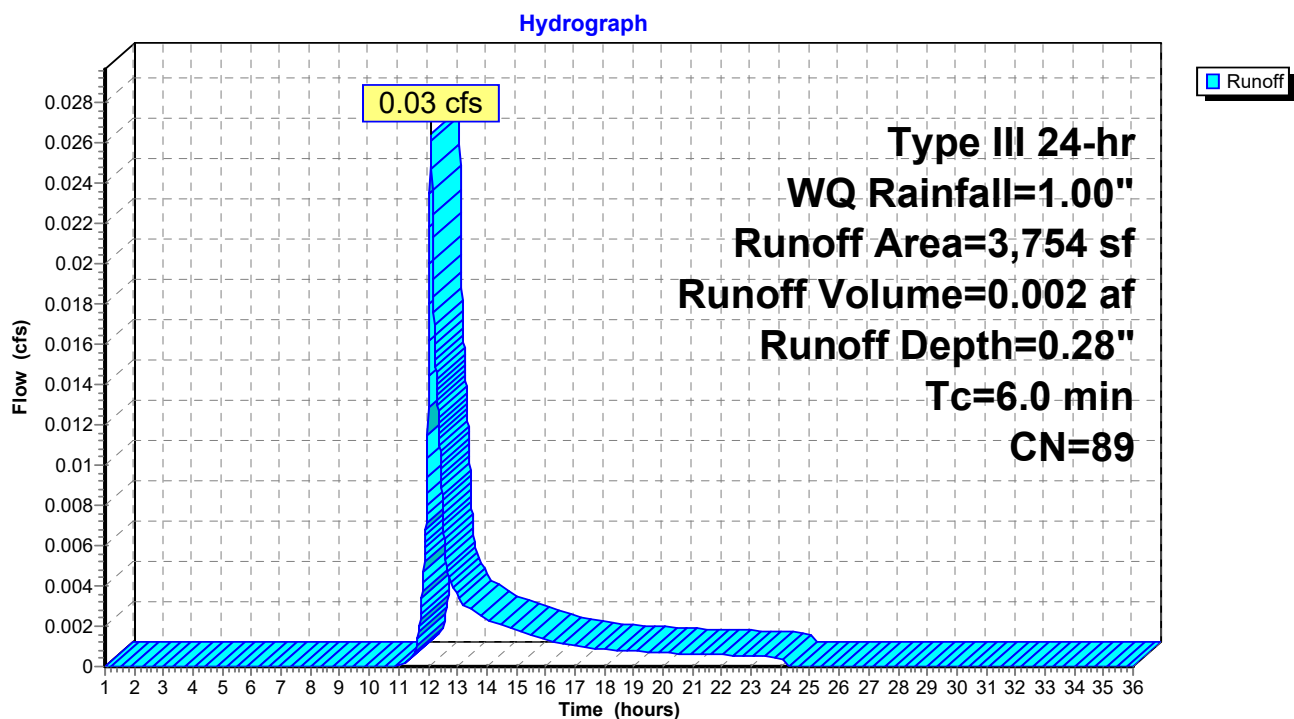
**Summary for Subcatchment 1S.10: East Lot 1**

Runoff = 0.03 cfs @ 12.10 hrs, Volume= 0.002 af, Depth= 0.28"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,190     | 98 | Pavement                      |
|   | 564       | 39 | >75% Grass cover, Good, HSG A |
|   | 3,754     | 89 | Weighted Average              |
|   | 564       |    | 15.02% Pervious Area          |
|   | 3,190     |    | 84.98% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.10: East Lot 1**

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**Summary for Subcatchment 1S.11: South Lot Treated**

Runoff = 0.02 cfs @ 12.14 hrs, Volume= 0.002 af, Depth= 0.11"

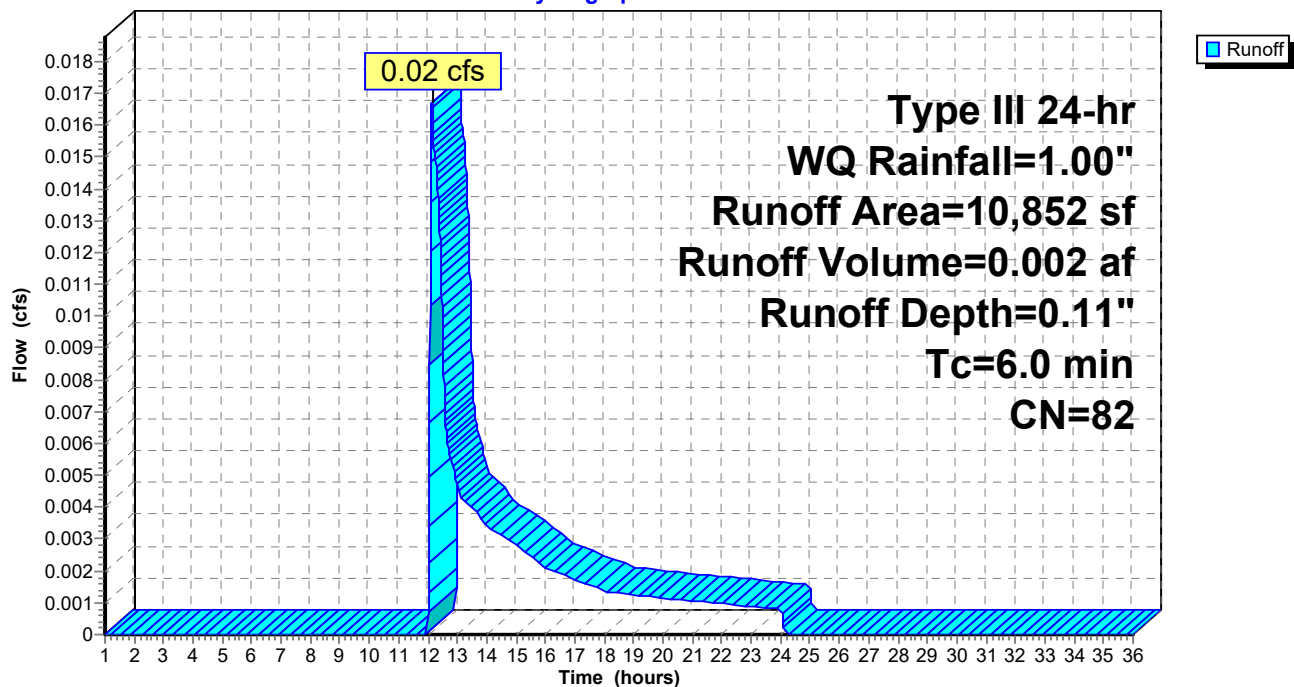
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr WQ Rainfall=1.00"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 8,274     | 98 | Paved parking          |
|   | 2,578     | 30 | Brush, Good, HSG A     |
|   | 10,852    | 82 | Weighted Average       |
|   | 2,578     |    | 23.76% Pervious Area   |
|   | 8,274     |    | 76.24% Impervious Area |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.11: South Lot Treated**

Hydrograph



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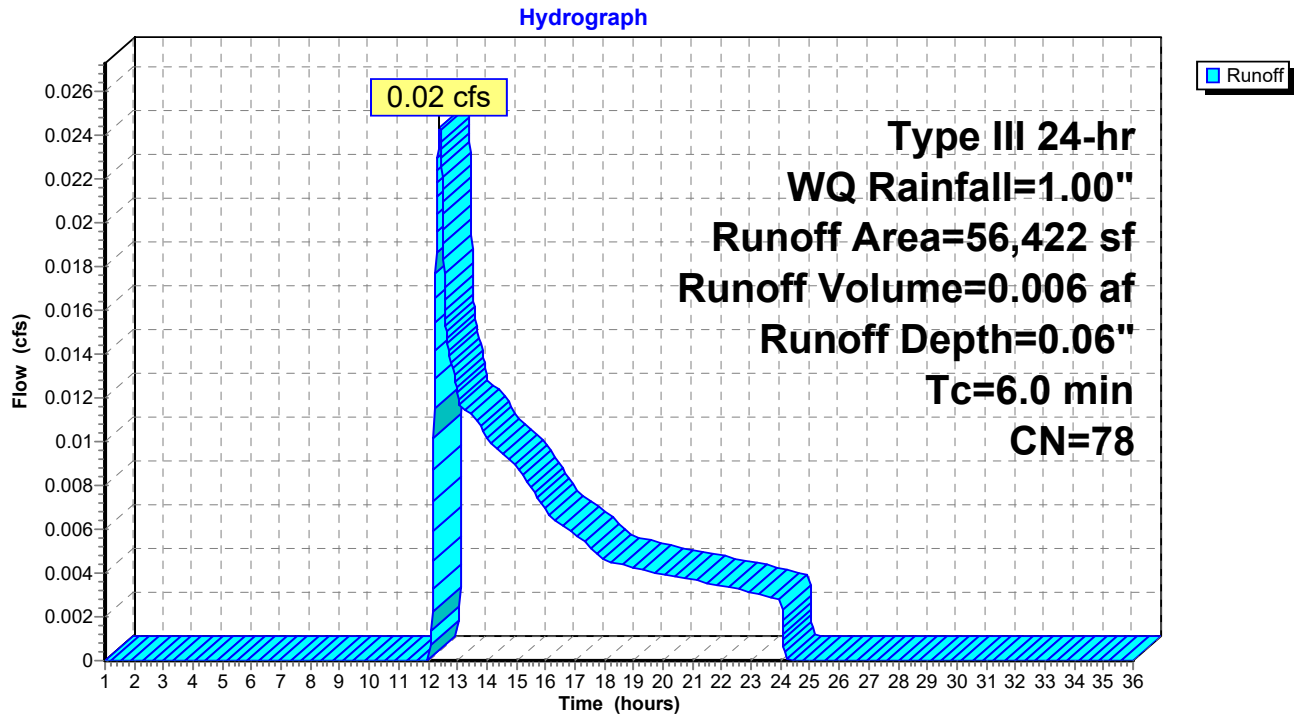
**Summary for Subcatchment 1S.2: Co Op Roof & yard**

Runoff = 0.02 cfs @ 12.39 hrs, Volume= 0.006 af, Depth= 0.06"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 5,239     | 98 | pavers                        |
|   | 16,100    | 39 | >75% Grass cover, Good, HSG A |
| * | 21,137    | 98 | Roofs                         |
| * | 4,191     | 98 | sidewalks                     |
| * | 618       | 98 | patios                        |
|   | 9,137     | 77 | 1/8 acre lots, 65% imp, HSG A |
|   | 56,422    | 78 | Weighted Average              |
|   | 19,298    |    | 34.20% Pervious Area          |
|   | 37,124    |    | 65.80% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.2: Co Op Roof & yard**

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**Summary for Subcatchment 1S.3: Runoff to park**

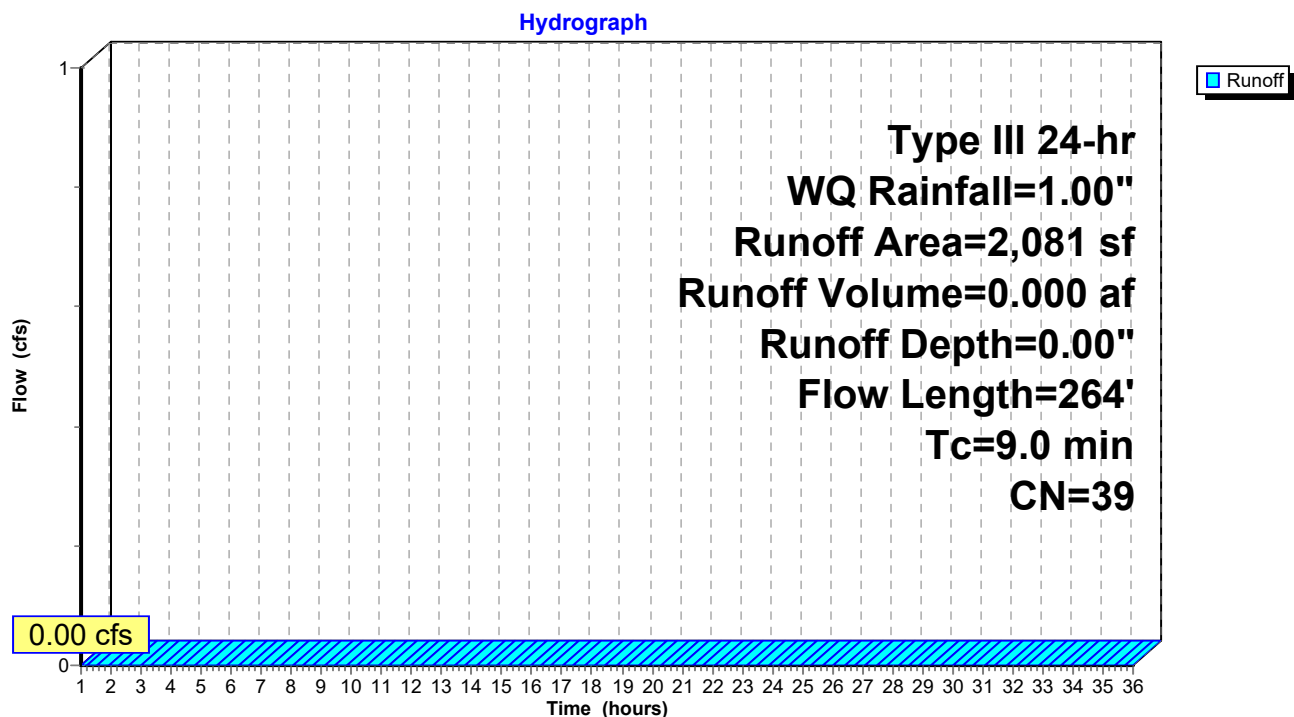
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,081     | 39 | >75% Grass cover, Good, HSG A |
| 2,081     |    | 100.00% Pervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 6.2      | 100           | 0.0600        | 0.27              |                | <b>Sheet Flow, A to B</b><br>Grass: Short n= 0.150 P2= 3.27"                |
| 2.8      | 164           | 0.0200        | 0.99              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 9.0      | 264           | Total         |                   |                |                                                                             |

**Subcatchment 1S.3: Runoff to park**

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## Summary for Subcatchment 1S.4: Central parking/drive

Runoff = 0.04 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 0.13"

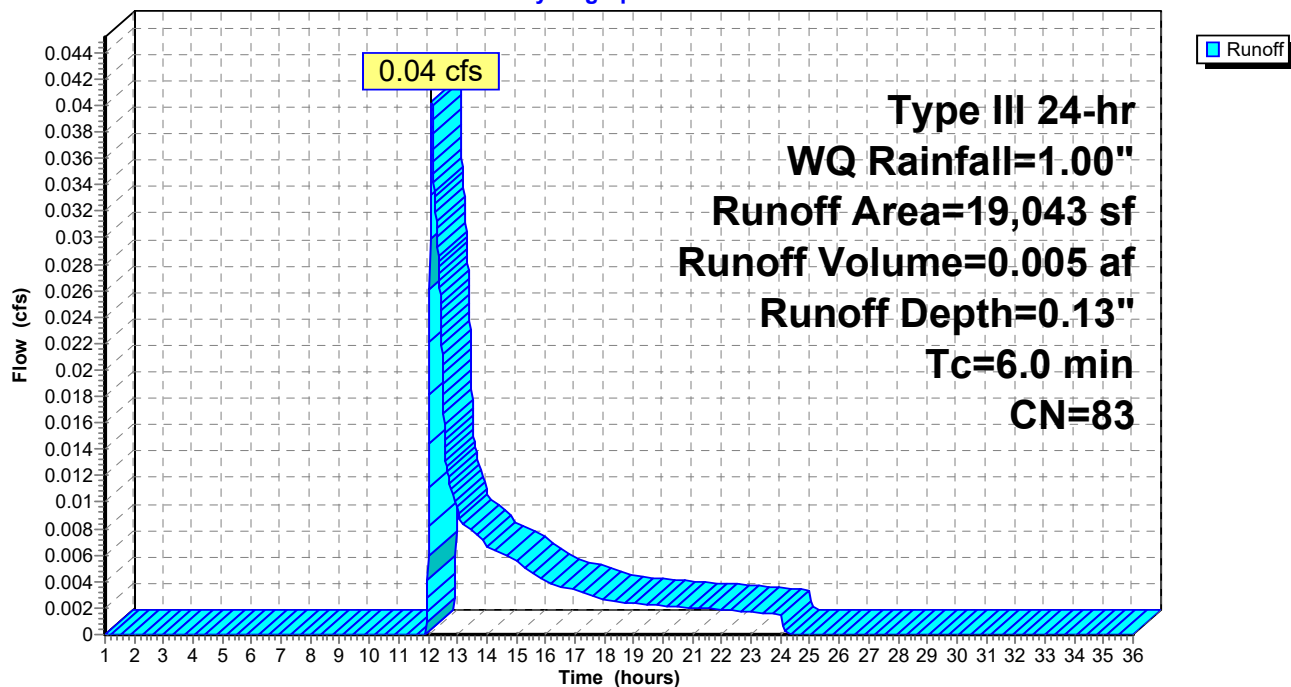
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr WQ Rainfall=1.00"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 14,850    | 98 | Pavement               |
|   | 4,193     | 30 | Brush, Good, HSG A     |
|   | 19,043    | 83 | Weighted Average       |
|   | 4,193     |    | 22.02% Pervious Area   |
|   | 14,850    |    | 77.98% Impervious Area |

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

## Subcatchment 1S.4: Central parking/drive

Hydrograph





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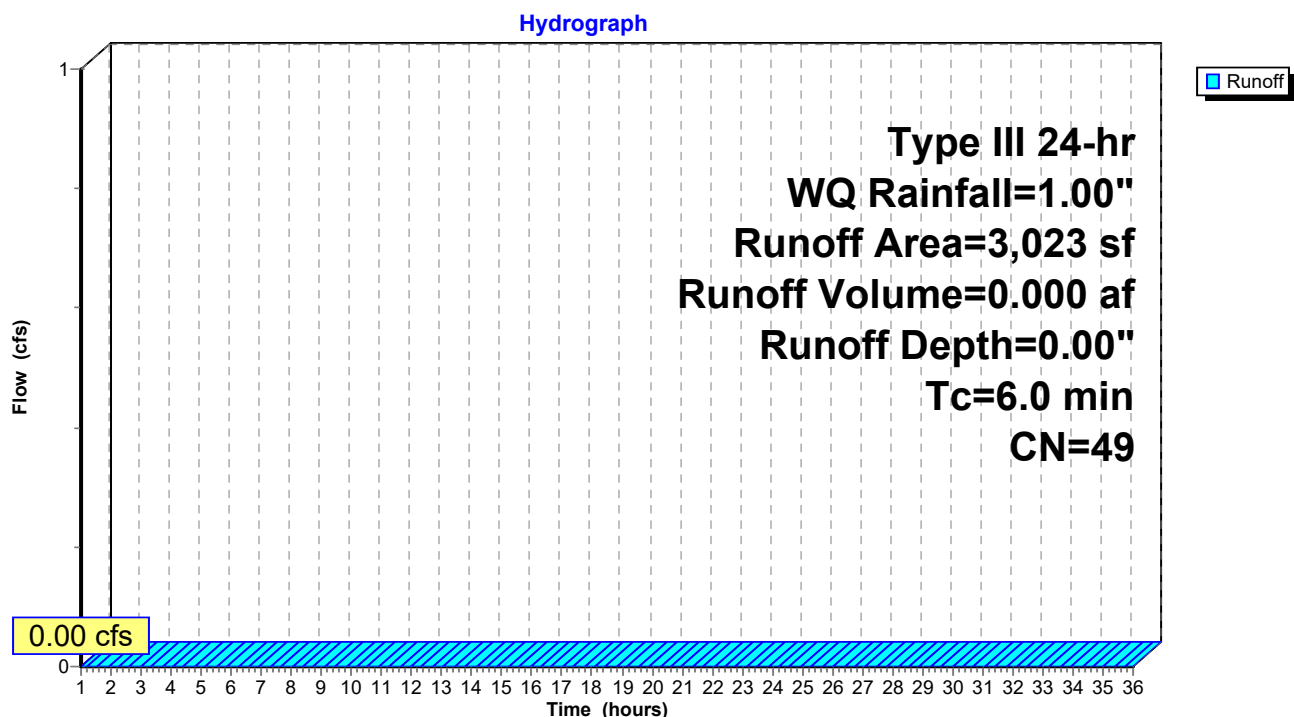
**Summary for Subcatchment 1S.5: Contained yard/park connection**

Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 2,514     | 39 | >75% Grass cover, Good, HSG A |
| * 509     | 98 | sidewalks                     |
| 3,023     | 49 | Weighted Average              |
| 2,514     |    | 83.16% Pervious Area          |
| 509       |    | 16.84% Impervious Area        |

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

**Subcatchment 1S.5: Contained yard/park connection**

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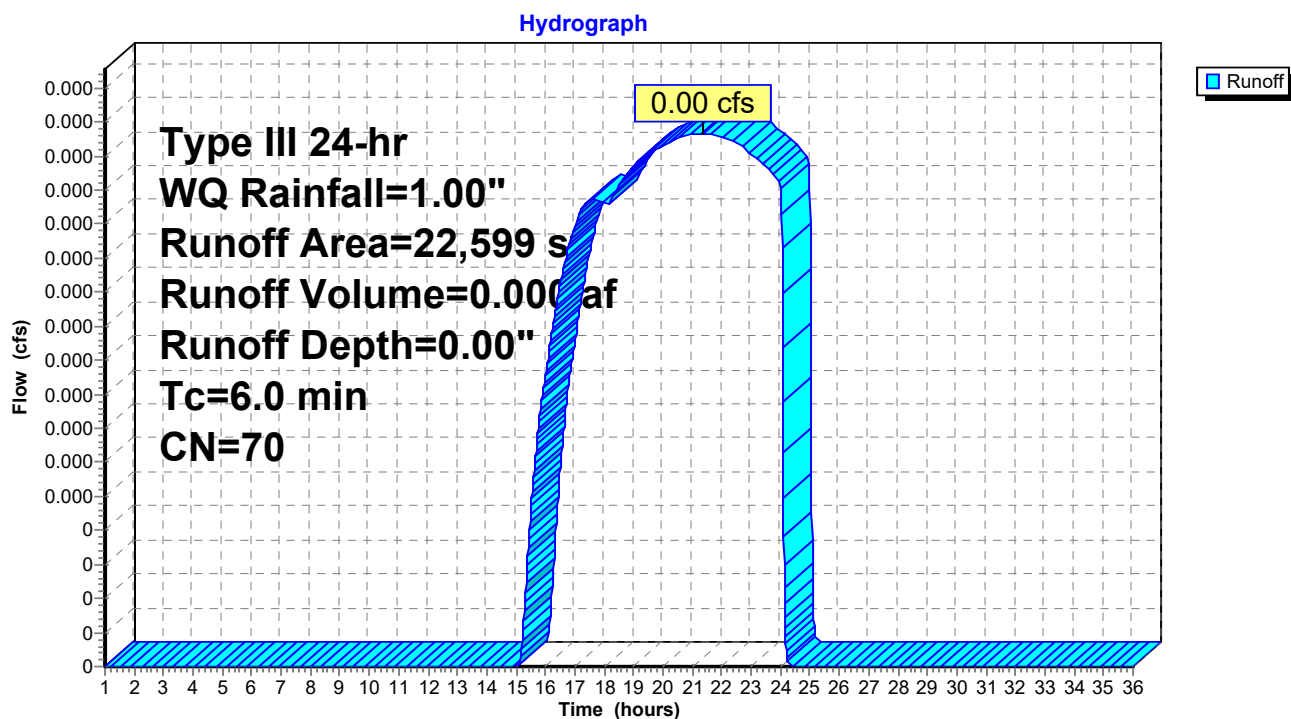
**Summary for Subcatchment 1S.6: Building E roof and yard**

Runoff = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af, Depth= 0.00"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
|   | 10,599    | 39 | >75% Grass cover, Good, HSG A |
| * | 12,000    | 98 | roof                          |
|   | 22,599    | 70 | Weighted Average              |
|   | 10,599    |    | 46.90% Pervious Area          |
|   | 12,000    |    | 53.10% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S.6: Building E roof and yard**

### Summary for Subcatchment 1S.7: East Lot 4

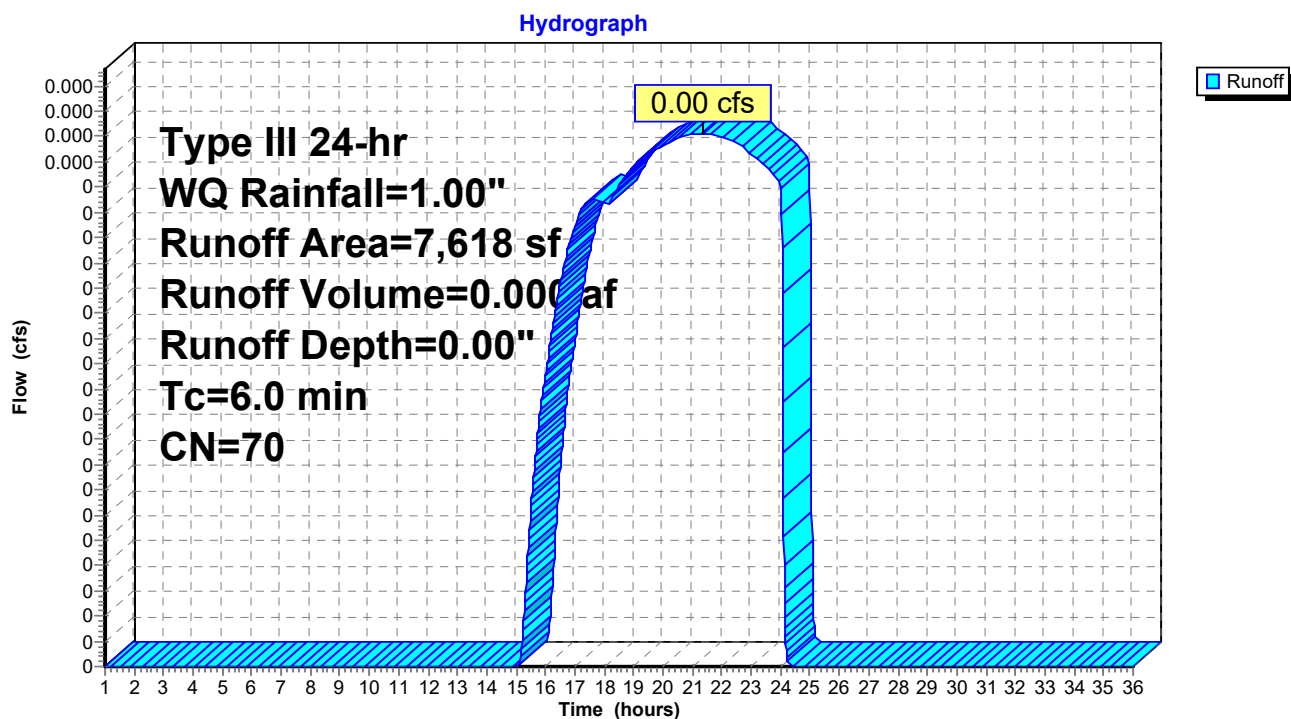
Runoff = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af, Depth= 0.00"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 4,038     | 98 | Paved parking                 |
|   | 3,580     | 39 | >75% Grass cover, Good, HSG A |
|   | 7,618     | 70 | Weighted Average              |
|   | 3,580     |    | 46.99% Pervious Area          |
|   | 4,038     |    | 53.01% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                        |
|-------------|------------------|------------------|----------------------|-------------------|------------------------------------|
| 6.0         |                  |                  |                      |                   | <b>Direct Entry, TR 55 .1 hour</b> |

### Subcatchment 1S.7: East Lot 4



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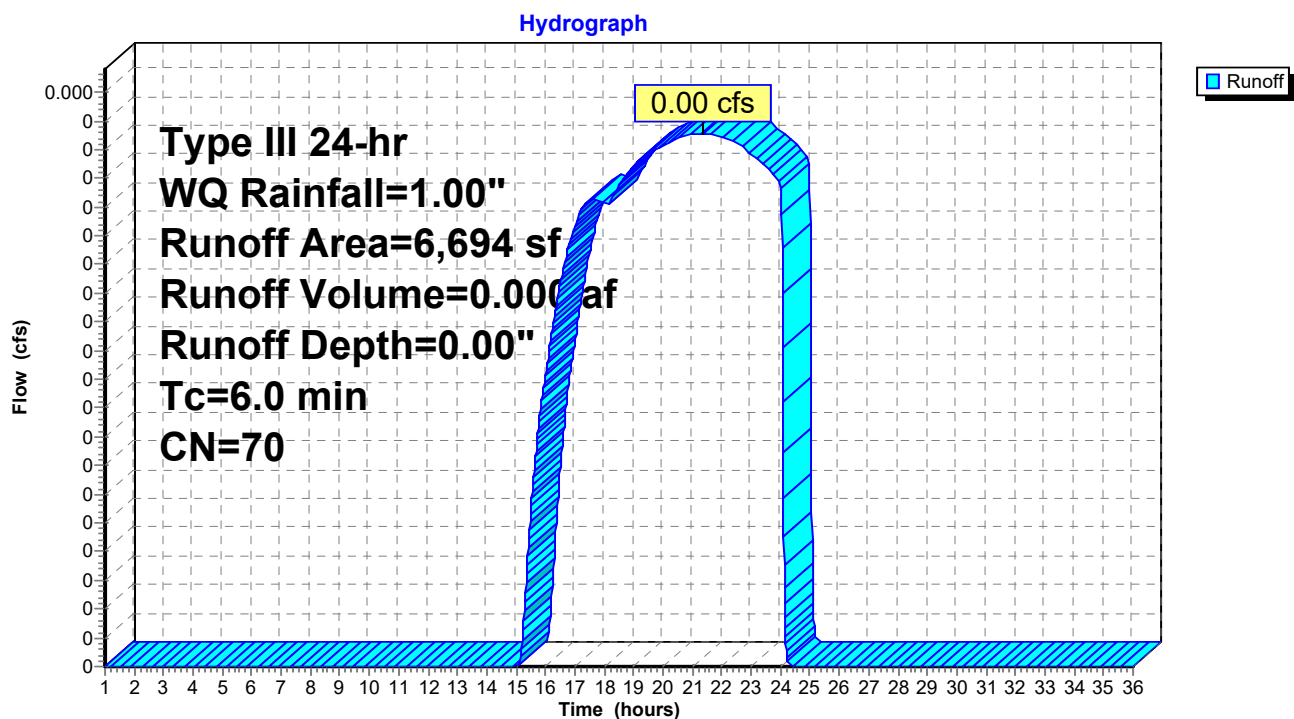
**Summary for Subcatchment 1S.8: East Lot 3**

Runoff = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af, Depth= 0.00"

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

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 3,547     | 98 | Paved parking                 |
|   | 3,147     | 39 | >75% Grass cover, Good, HSG A |
|   | 6,694     | 70 | Weighted Average              |
|   | 3,147     |    | 47.01% Pervious Area          |
|   | 3,547     |    | 52.99% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

**Subcatchment 1S.8: East Lot 3**

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## Summary for Subcatchment 1S.9: East Lot 2

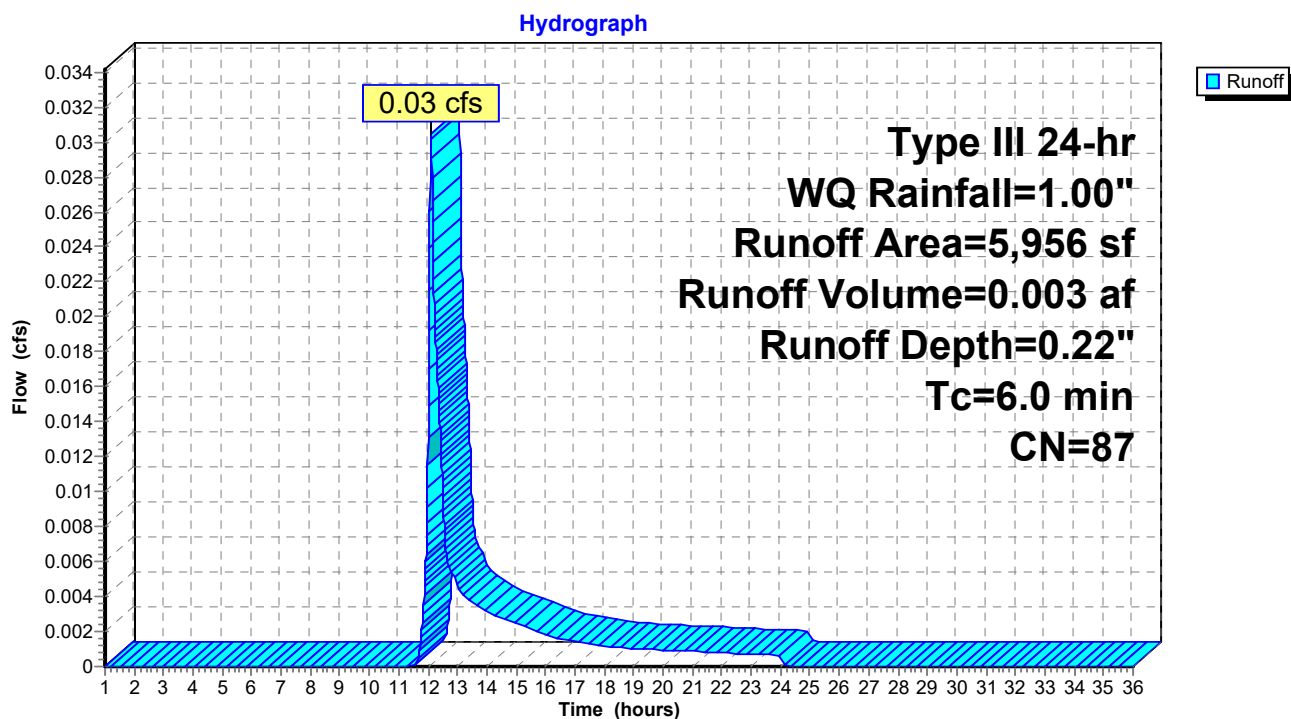
Runoff = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Depth= 0.22"

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

|   | Area (sf) | CN | Description                    |
|---|-----------|----|--------------------------------|
| * | 4,809     | 98 | Paved parking, patio, sidewalk |
|   | 1,147     | 39 | >75% Grass cover, Good, HSG A  |
|   | 5,956     | 87 | Weighted Average               |
|   | 1,147     |    | 19.26% Pervious Area           |
|   | 4,809     |    | 80.74% Impervious Area         |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR 55 .1 hour |

## Subcatchment 1S.9: East Lot 2



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**Summary for Subcatchment 2S: 295 Embankment Trib**

Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

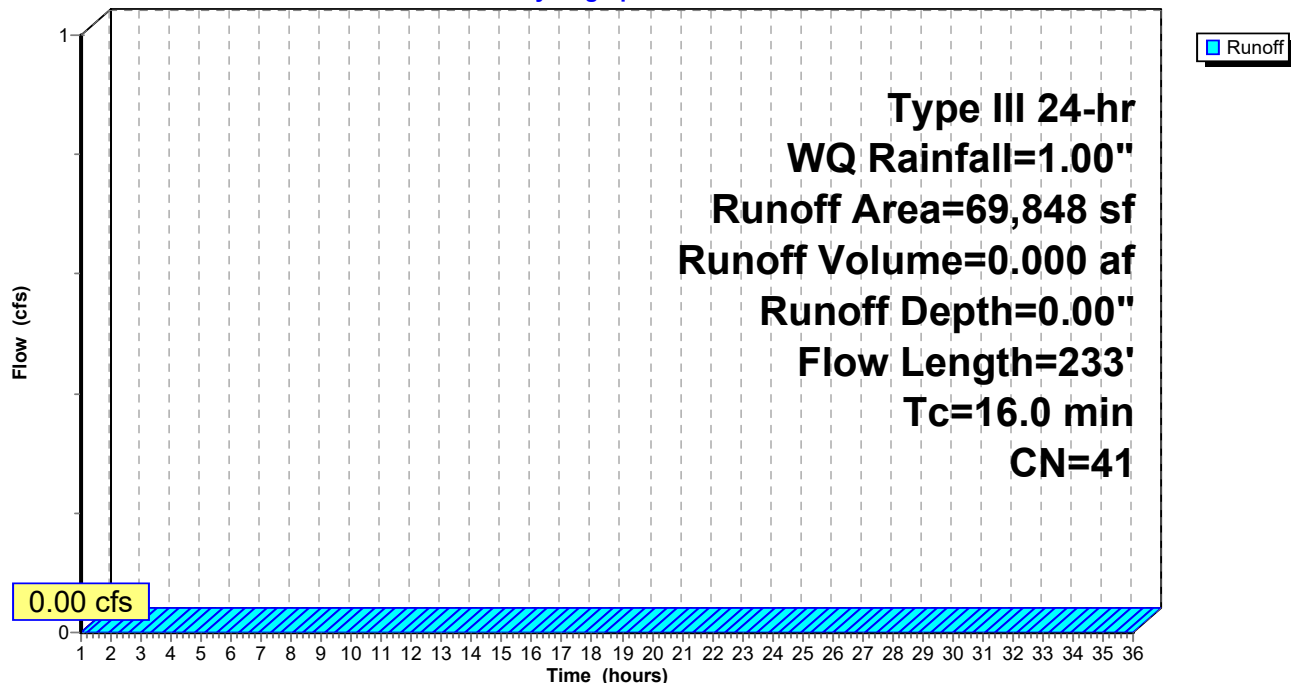
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
Type III 24-hr WQ Rainfall=1.00"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 8,183     | 39 | >75% Grass cover, Good, HSG A  |
| * 230     | 98 | Stairs                         |
| * 3,155   | 98 | Path                           |
| * 5,488   | 98 | Homes/driveways                |
| 52,792    | 32 | Woods/grass comb., Good, HSG A |
| 69,848    | 41 | Weighted Average               |
| 60,975    |    | 87.30% Pervious Area           |
| 8,873     |    | 12.70% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                 |
|----------|---------------|---------------|-------------------|----------------|-----------------------------------------------------------------------------|
| 14.7     | 100           | 0.0500        | 0.11              |                | <b>Sheet Flow, A to B</b><br>Woods: Light underbrush n= 0.400 P2= 3.27"     |
| 1.3      | 133           | 0.0600        | 1.71              |                | <b>Shallow Concentrated Flow, B to C</b><br>Short Grass Pasture Kv= 7.0 fps |
| 16.0     | 233           | Total         |                   |                |                                                                             |

**Subcatchment 2S: 295 Embankment Trib**

Hydrograph





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**Summary for Subcatchment 3S.1: Garden area runoff**

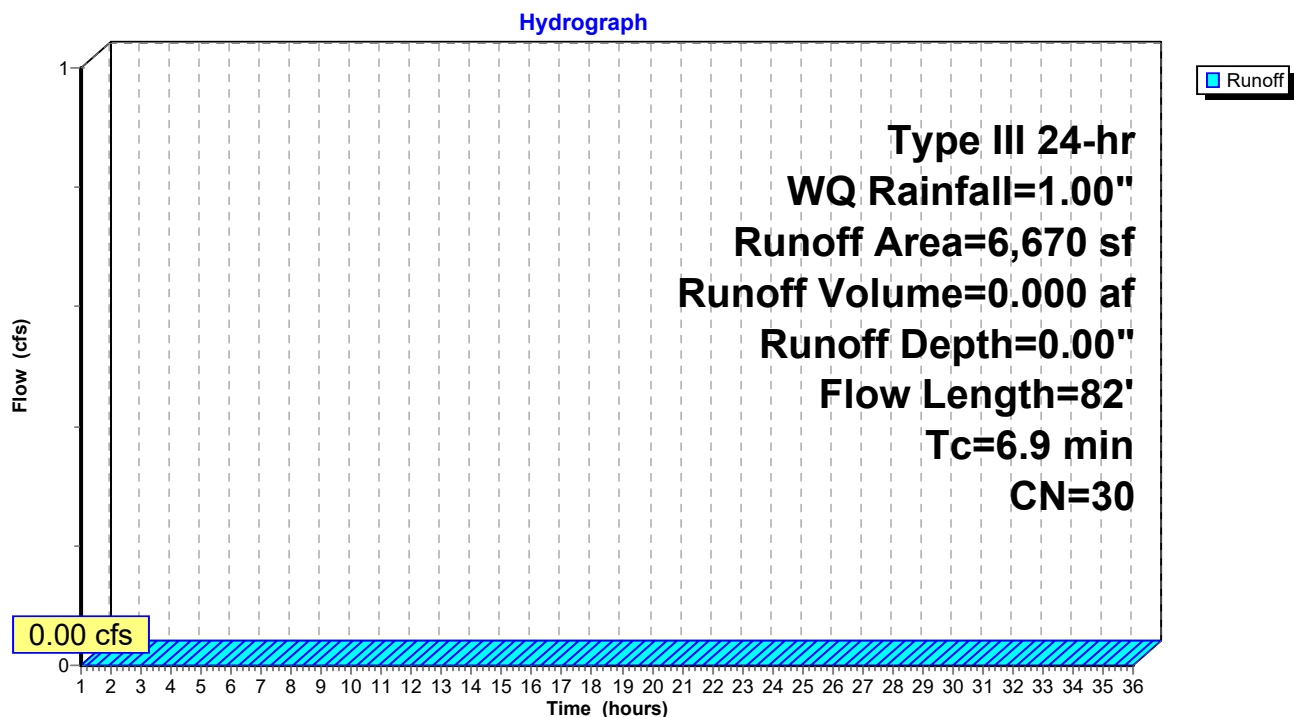
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

| Area (sf) | CN | Description           |
|-----------|----|-----------------------|
| 6,670     | 30 | Brush, Good, HSG A    |
| 6,670     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------|
| 1.7      | 28            | 0.3330        | 0.28              |                | <b>Sheet Flow, A to B</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 5.2      | 54            | 0.0700        | 0.17              |                | <b>Sheet Flow, B to C</b>       |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.27" |
| 6.9      | 82            | Total         |                   |                |                                 |

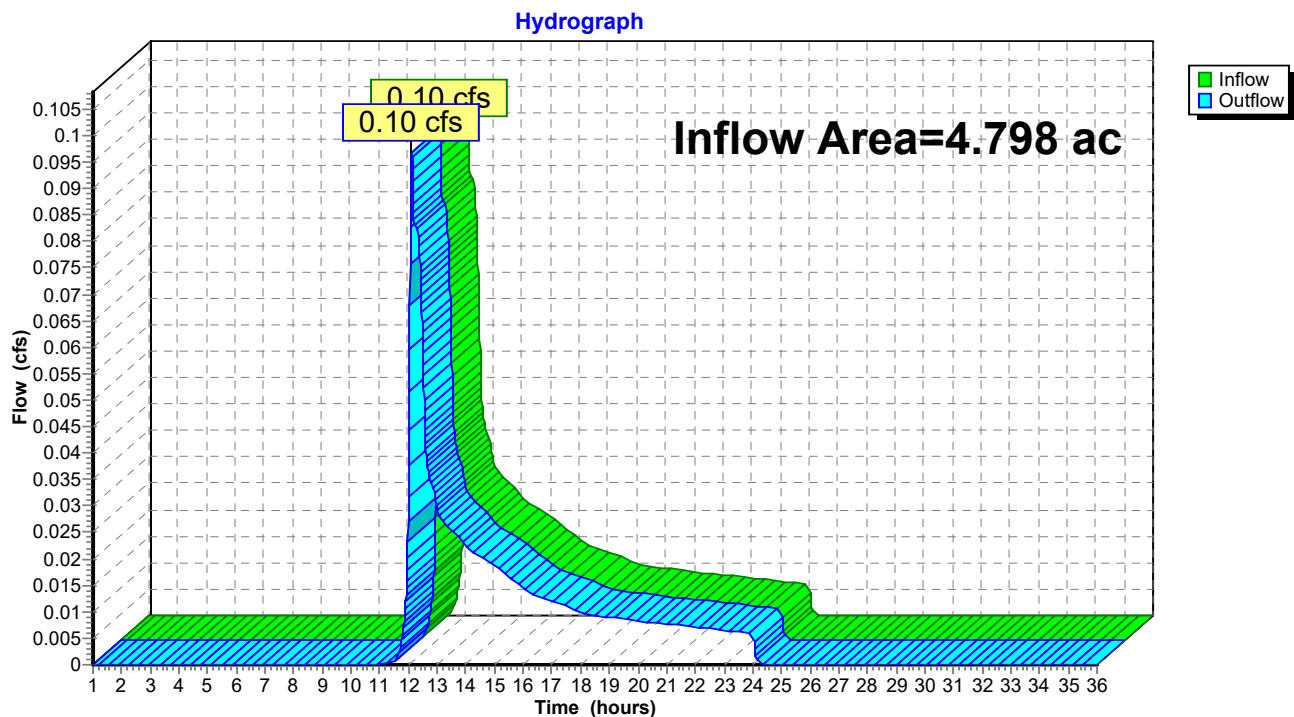
**Subcatchment 3S.1: Garden area runoff**

### Summary for Reach POI-1: POI #1 - 60" Douglass MS4

Inflow Area = 4.798 ac, 46.81% Impervious, Inflow Depth = 0.04" for WQ event  
 Inflow = 0.10 cfs @ 12.11 hrs, Volume= 0.016 af  
 Outflow = 0.10 cfs @ 12.11 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-1: POI #1 - 60" Douglass MS4

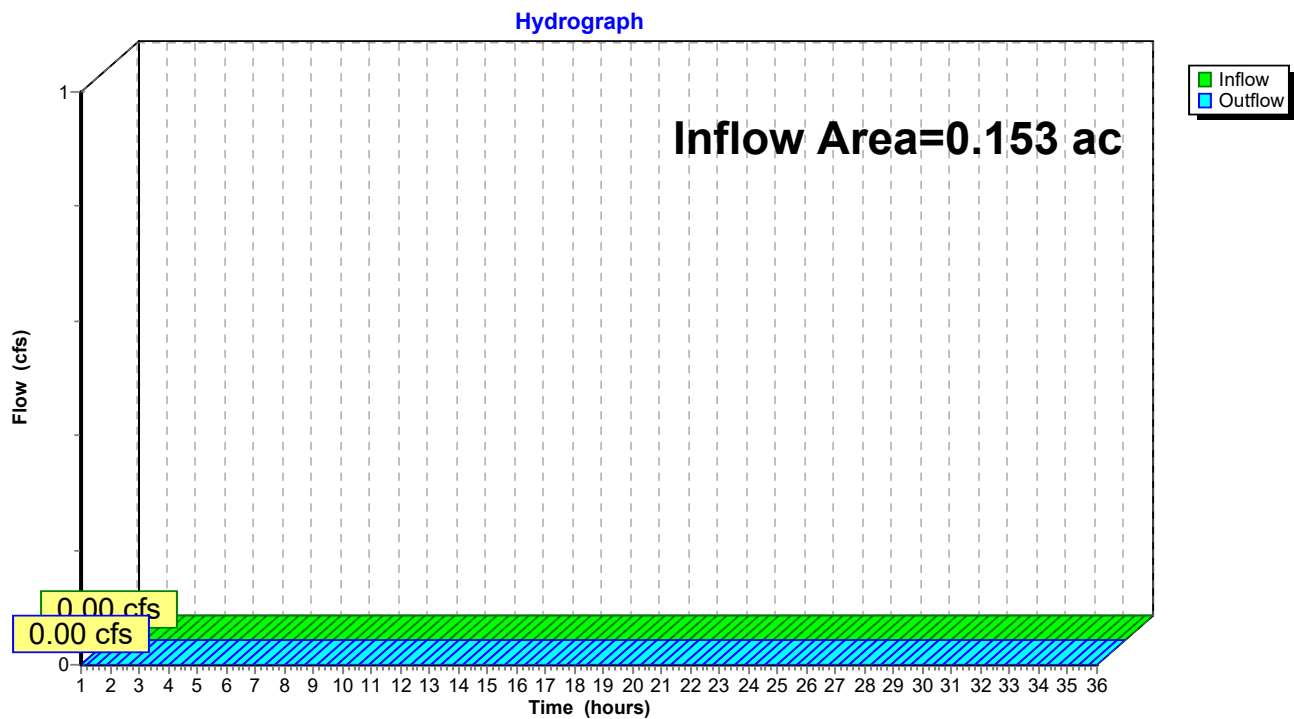


### Summary for Reach POI-3: POI #3 - Baseball Field

Inflow Area = 0.153 ac, 0.00% Impervious, Inflow Depth = 0.00" for WQ event  
 Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

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

### Reach POI-3: POI #3 - Baseball Field



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**Summary for Pond P1: VUSF**

Inflow Area = 0.249 ac, 76.24% Impervious, Inflow Depth = 0.11" for WQ event  
 Inflow = 0.02 cfs @ 12.14 hrs, Volume= 0.002 af  
 Outflow = 0.01 cfs @ 12.10 hrs, Volume= 0.002 af, Atten= 37%, Lag= 0.0 min  
 Discarded = 0.01 cfs @ 12.10 hrs, Volume= 0.002 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

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

Peak Elev= 27.03' @ 12.47 hrs Surf.Area= 458 sf Storage= 5 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 1.5 min ( 929.5 - 928.0 )

| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 30.75' | 1,899 cf      | <b>Ponding (Prismatic)</b> Listed below (Recalc)           |
| #2     | 29.25' | 69 cf         | <b>Filter Media/Loam (Prismatic)</b> Listed below (Recalc) |
|        |        |               | 687 cf Overall x 10.0% Voids                               |
| #3     | 28.92' | 30 cf         | <b>Transition Gravel (Prismatic)</b> Listed below (Recalc) |
|        |        |               | 151 cf Overall x 20.0% Voids                               |
| #4     | 27.00' | 349 cf        | <b>Crushed Stone (Prismatic)</b> Listed below (Recalc)     |
|        |        |               | 879 cf Overall - 6 cf Embedded = 873 cf x 40.0% Voids      |
| #5     | 27.10' | 5 cf          | <b>4.0" Round Pipe Storage</b> x 2 Inside #4               |
|        |        |               | L= 30.0' S= 0.0005 '/'                                     |
|        |        |               | 6 cf Overall - 0.2" Wall Thickness = 5 cf                  |
|        |        | 2,353 cf      | Total Available Storage                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 30.75               | 465                  | 0                         | 0                         |
| 32.25               | 945                  | 1,058                     | 1,058                     |
| 33.00               | 1,300                | 842                       | 1,899                     |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 29.25               | 458                  | 0                         | 0                         |
| 30.75               | 458                  | 687                       | 687                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 28.92               | 458                  | 0                         | 0                         |
| 29.25               | 458                  | 151                       | 151                       |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 27.00               | 458                  | 0                         | 0                         |
| 28.92               | 458                  | 879                       | 879                       |

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| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                          |
|--------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 27.00' | <b>12.0" Round Culvert</b><br>L= 60.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 27.00' / 26.75' S= 0.0042 ' / ' Cc= 0.600<br>n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf |
| #2     | Device 1  | 27.10' | <b>0.5" Vert. Soil Filter Media Drawdown Effect</b> C= 0.600                                                                                                                                            |
| #3     | Device 1  | 32.35' | <b>24.0" Horiz. Beehive Outlet</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                        |
| #4     | Discarded | 27.00' | <b>1.000 in/hr Exfiltration over Surface area</b>                                                                                                                                                       |

**Discarded OutFlow** Max=0.01 cfs @ 12.10 hrs HW=27.00' (Free Discharge)

↳ **4=Exfiltration** (Exfiltration Controls 0.01 cfs)

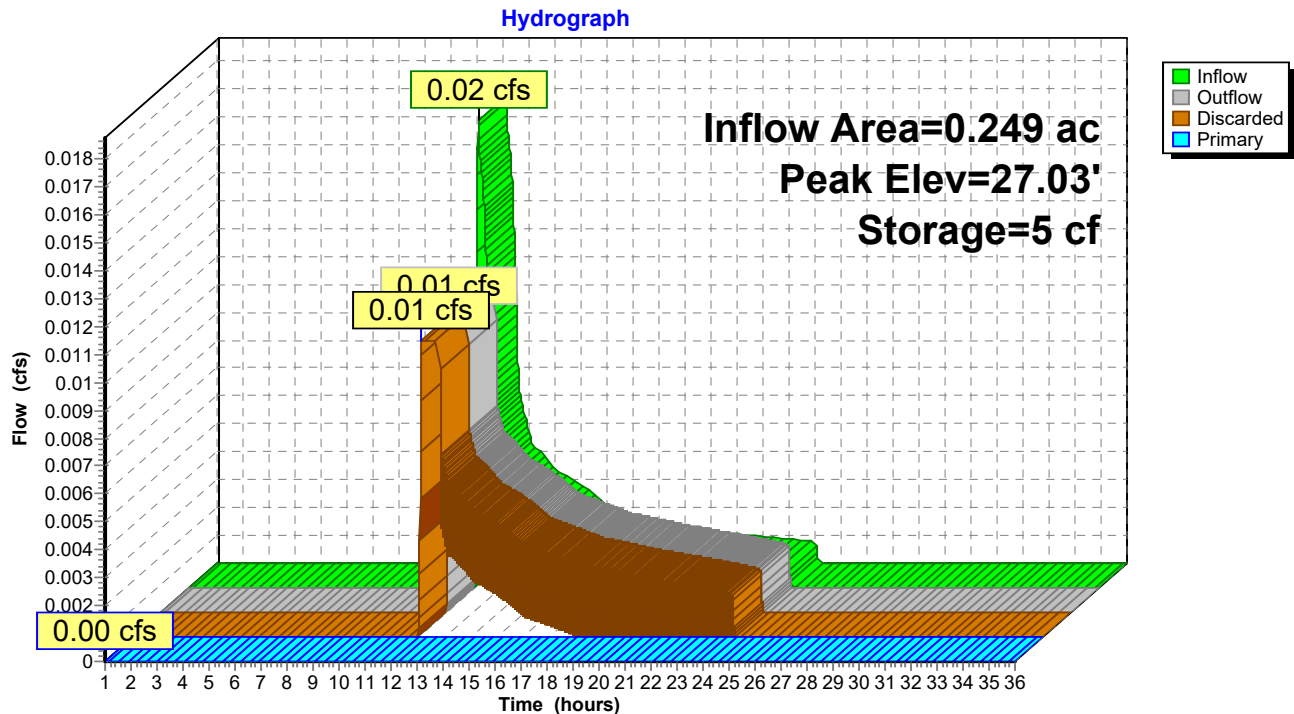
**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=27.00' TW=0.00' (Dynamic Tailwater)

↳ **1=Culvert** ( Controls 0.00 cfs)

↳ **2=Soil Filter Media Drawdown Effect** ( Controls 0.00 cfs)

↳ **3=Beehive Outlet** ( Controls 0.00 cfs)

## Pond P1: VUSF



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**Summary for Pond P2: FP 4**

Inflow Area = 0.175 ac, 53.01% Impervious, Inflow Depth = 0.00" for WQ event  
 Inflow = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.95' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 1,203.6 - 1,203.6 )

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.95' | 14 cf         | <b>4.00'W x 5.00'L x 3.60'H Media/Stone</b><br>72 cf Overall x 20.0% Voids |
| #2     | 35.95' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 52 cf         | Total Available Storage                                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.95               | 20                   | 0                         | 0                         |
| 36.95               | 56                   | 38                        | 38                        |

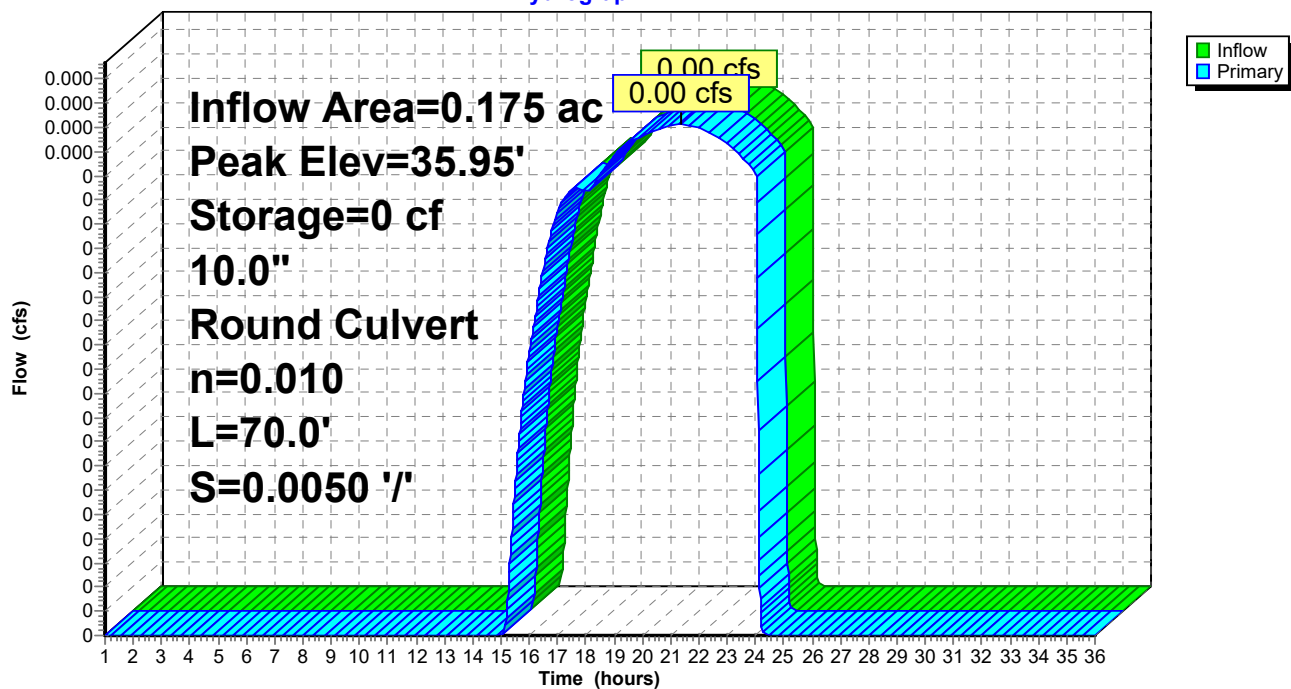
| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 32.35' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 32.35' / 32.00' S= 0.0050 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 21.34 hrs HW=35.95' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.51 cfs potential flow)



# Pond P2: FP 4

## Hydrograph



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**Summary for Pond P3: FP 3**

Inflow Area = 0.154 ac, 52.99% Impervious, Inflow Depth = 0.00" for WQ event  
 Inflow = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.00 cfs @ 21.34 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 36.10' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 1,203.6 - 1,203.6 )

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 36.10' | 21 cf         | <b>5.00'W x 5.00'L x 4.20'H Media/Stone</b><br>105 cf Overall x 20.0% Voids |
| #2     | 36.10' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 66 cf         | Total Available Storage                                                     |

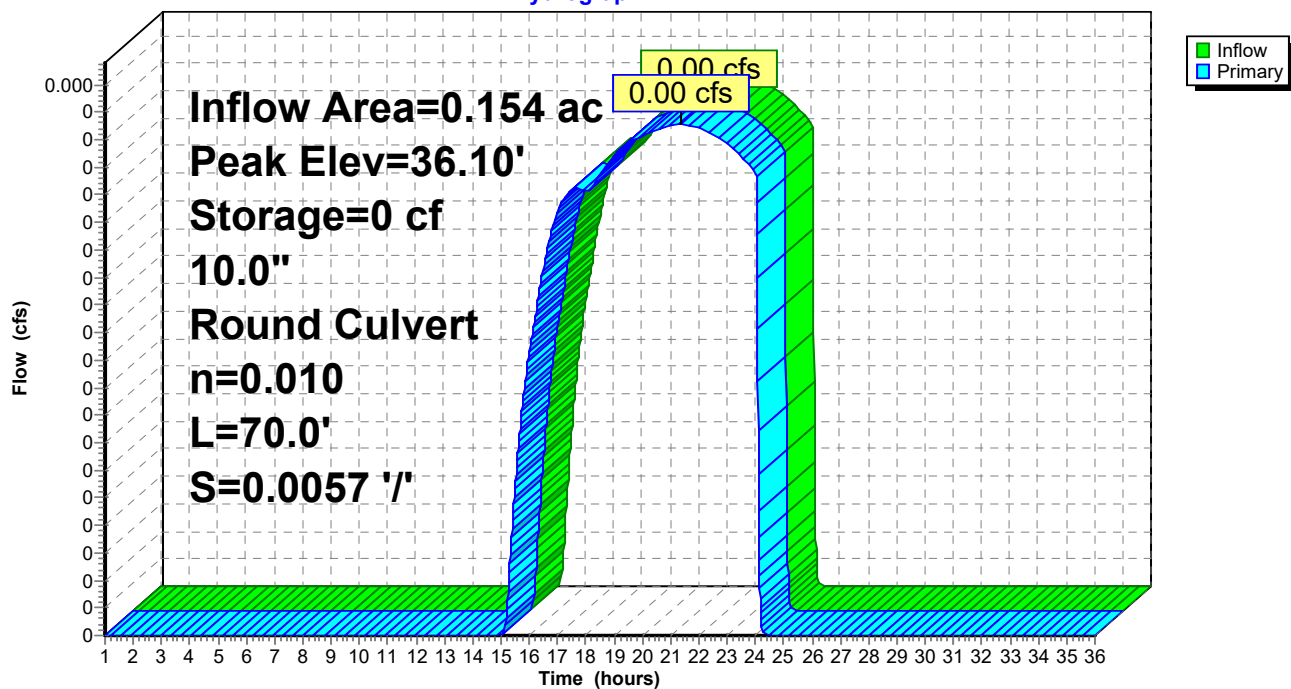
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 36.10               | 25                   | 0                         | 0                         |
| 37.10               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.90' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.90' / 31.50' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 21.34 hrs HW=36.10' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 3.83 cfs potential flow)

### Pond P3: FP 3

#### Hydrograph



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**Summary for Pond P4: FP 2**

Inflow Area = 0.137 ac, 80.74% Impervious, Inflow Depth = 0.22" for WQ event  
 Inflow = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af  
 Outflow = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af

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

Peak Elev= 35.90' @ 1.00 hrs Surf.Area= 50 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

| Volume | Invert | Avail.Storage | Storage Description                                                         |
|--------|--------|---------------|-----------------------------------------------------------------------------|
| #1     | 35.90' | 23 cf         | <b>5.00'W x 5.00'L x 4.50'H Media/Stone</b><br>113 cf Overall x 20.0% Voids |
| #2     | 35.90' | 45 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                  |
|        |        | 67 cf         | Total Available Storage                                                     |

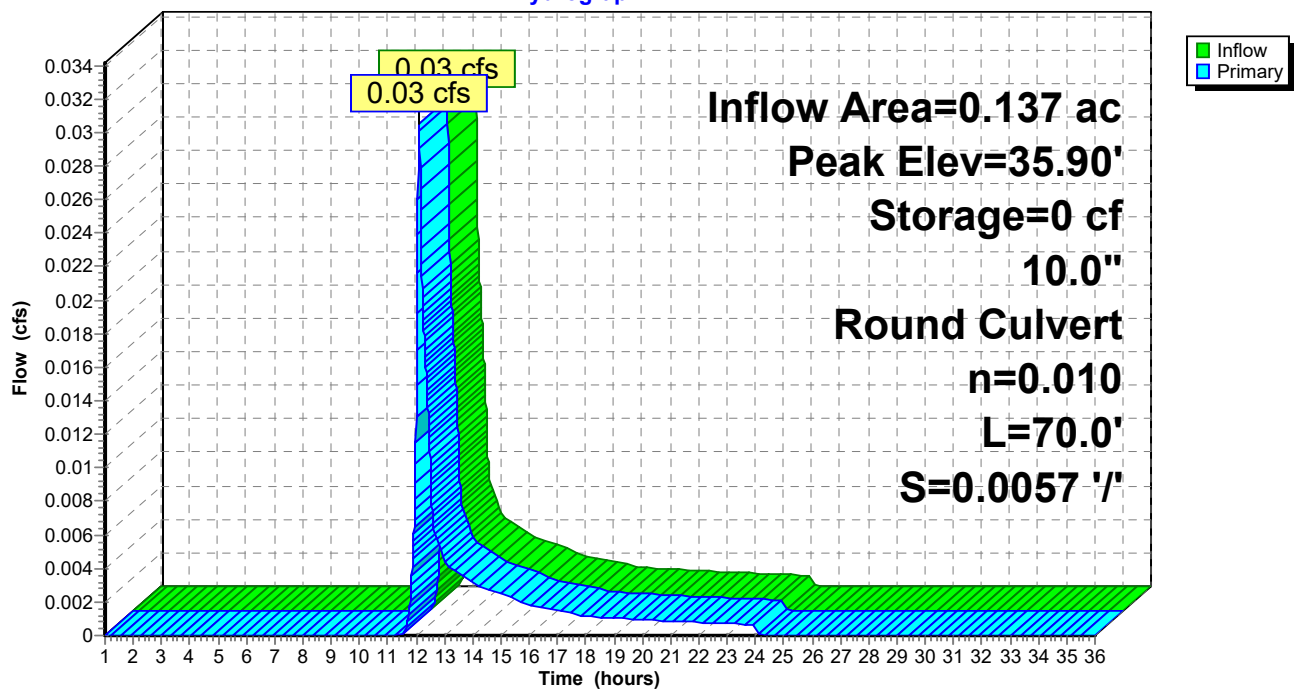
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.90               | 25                   | 0                         | 0                         |
| 36.90               | 64                   | 45                        | 45                        |

| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 31.40' | <b>10.0" Round Culvert</b> L= 70.0' Ke= 1.000<br>Inlet / Outlet Invert= 31.40' / 31.00' S= 0.0057 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.10 hrs HW=35.90' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Passes 0.00 cfs of 3.98 cfs potential flow)

# Pond P4: FP 2

Hydrograph



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**Summary for Pond P5: FP 1**

Inflow Area = 0.086 ac, 84.98% Impervious, Inflow Depth = 0.28" for WQ event  
 Inflow = 0.03 cfs @ 12.10 hrs, Volume= 0.002 af  
 Outflow = 0.03 cfs @ 12.10 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.03 cfs @ 12.10 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs  
 Peak Elev= 35.70' @ 1.00 hrs Surf.Area= 40 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 0.0 min ( 869.9 - 869.9 )

| Volume | Invert | Avail.Storage | Storage Description                                                        |
|--------|--------|---------------|----------------------------------------------------------------------------|
| #1     | 35.70' | 19 cf         | <b>4.00'W x 5.00'L x 4.80'H Media/Stone</b><br>96 cf Overall x 20.0% Voids |
| #2     | 35.70' | 38 cf         | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)                 |
|        |        | 57 cf         | Total Available Storage                                                    |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 35.70               | 20                   | 0                         | 0                         |
| 36.70               | 56                   | 38                        | 38                        |

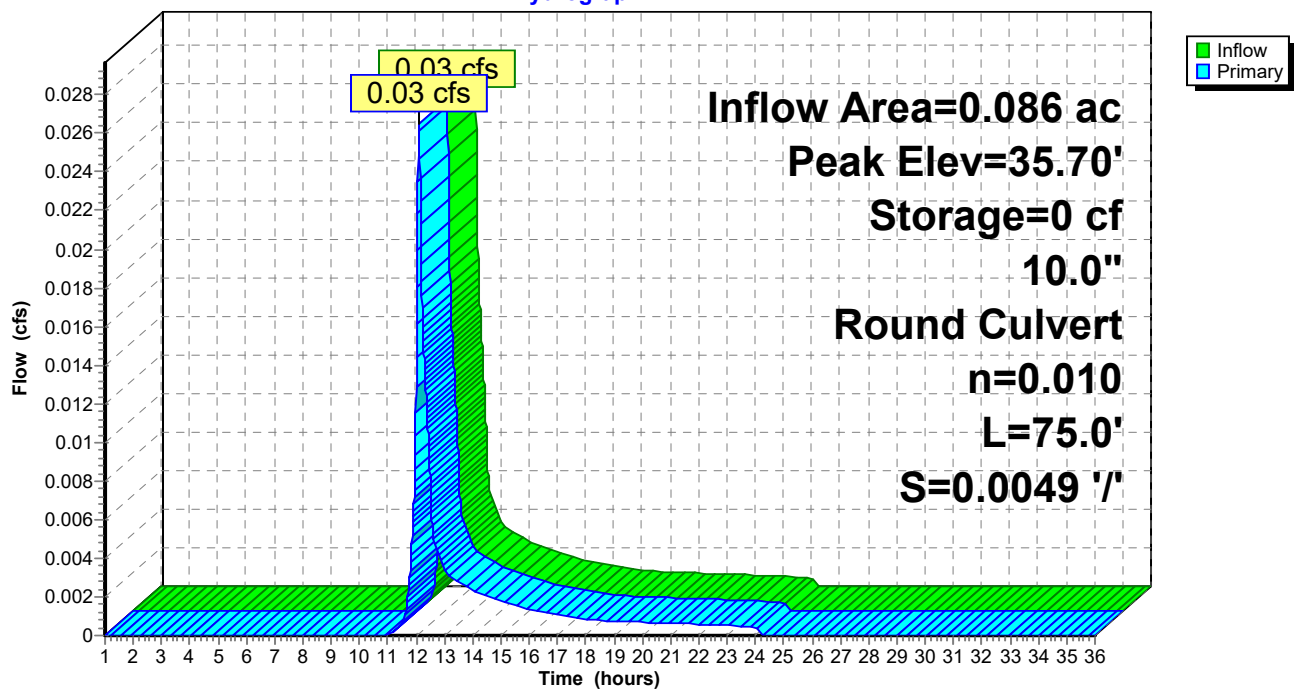
| Device | Routing | Invert | Outlet Devices                                                                                                                                                       |
|--------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 30.90' | <b>10.0" Round Culvert</b> L= 75.0' Ke= 1.000<br>Inlet / Outlet Invert= 30.90' / 30.53' S= 0.0049 '/' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.10 hrs HW=35.70' TW=0.00' (Dynamic Tailwater)  
 ↑**1=Culvert** (Passes 0.00 cfs of 4.12 cfs potential flow)



Pond P5: FP 1

Hydrograph



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**Summary for Pond POI #2: POI #2 (295 Basin)**

Inflow Area = 1.603 ac, 12.70% Impervious, Inflow Depth = 0.00" for WQ event  
 Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min  
 Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af  
 Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

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

Peak Elev= 26.30' @ 1.00 hrs Surf.Area= 100 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

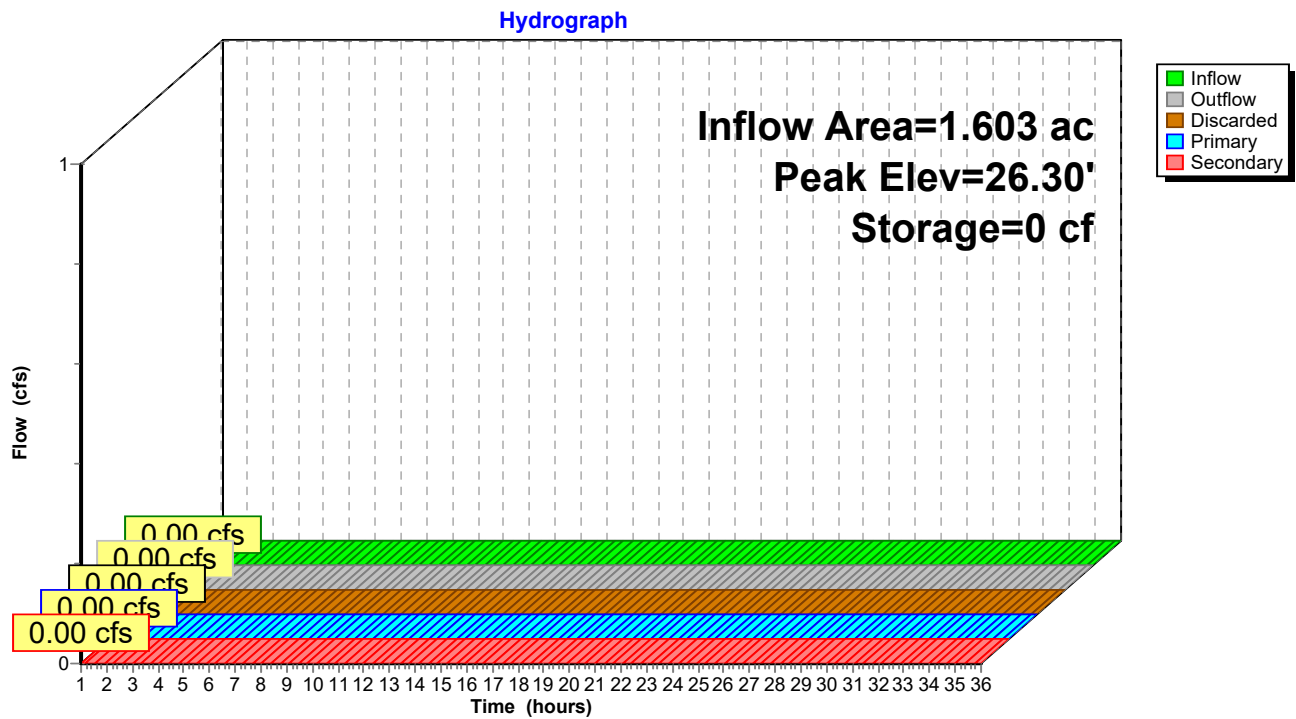
| Volume | Invert | Avail.Storage | Storage Description                                        |
|--------|--------|---------------|------------------------------------------------------------|
| #1     | 26.30' | 105,037 cf    | <b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) |
|---------------------|----------------------|---------------------------|---------------------------|
| 26.30               | 100                  | 0                         | 0                         |
| 27.00               | 4,475                | 1,601                     | 1,601                     |
| 28.00               | 10,120               | 7,298                     | 8,899                     |
| 29.00               | 14,131               | 12,126                    | 21,024                    |
| 30.00               | 17,326               | 15,729                    | 36,753                    |
| 32.00               | 24,023               | 41,349                    | 78,102                    |
| 33.00               | 29,847               | 26,935                    | 105,037                   |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                               |
|--------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 26.60' | <b>12.0" Round Culvert</b> L= 16.0' Ke= 0.600<br>Inlet / Outlet Invert= 26.60' / 26.51' S= 0.0056 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf              |
| #2     | Secondary | 32.40' | <b>20.0' long x 15.0' breadth Overflow</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63 |
| #3     | Discarded | 26.60' | <b>1.000 in/hr Exfiltration over Surface area above 26.60'</b><br>Excluded Surface area = 1,975 sf                                                           |

**Discarded OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**3=Exfiltration** ( Controls 0.00 cfs)**Primary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** ( Controls 0.00 cfs)**Secondary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=26.30' (Free Discharge)↑**2=Overflow** ( Controls 0.00 cfs)

Pond POI #2: POI #2 (295 Basin)



---

# Attachment E

## Soil Survey



# Custom Soil Resource Report Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
Survey Area Data: Version 18, Aug 31, 2021

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

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

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



## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                               | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------------------|--------------|----------------|
| Au                                 | Au Gres loamy sand                                          | 32.1         | 53.4%          |
| BgC2                               | Nicholville very fine sandy loam,<br>8 to 15 percent slopes | 0.1          | 0.2%           |
| DeB                                | Deerfield loamy fine sand, 3 to<br>8 percent slopes         | 16.9         | 28.1%          |
| Wa                                 | Walpole fine sandy loam                                     | 1.3          | 2.2%           |
| WmB                                | Windsor loamy sand, 0 to 8<br>percent slopes                | 9.7          | 16.1%          |
| <b>Totals for Area of Interest</b> |                                                             | <b>60.2</b>  | <b>100.0%</b>  |

## Map Unit Descriptions

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

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

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

# Parking Analysis

## Dougherty Commons Portland, Maine

### Introduction

The project proposes 120 dwelling units within eight buildings at Dougherty Commons, the former West School in the Libbytown neighborhood. With the project triggering a major site plan, the Planning Board shall establish the off-street parking requirement based on a parking study per Table 19-B of the Zoning Ordinance.

### Definitions

The parking generation for the project has been calculated using the Institute of Transportation Engineers (ITE) publication, *Parking Generation*, 5th Edition. The following Land Use Codes (LUC) were used to model the parking generation from the redevelopment:

- The cooperative buildings were modeled as LUC 220 (Multifamily Housing – Low-Rise). This LUC is defined as “Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with one or two levels (floors) of residence.” The setting/location category is considered Dense Multi-Use Urban (less than a half mile to rail transit).
- The 5-story building was modeled as LUC 221 (Multifamily Housing – Mid-Rise). This LUC is defined as “Mid-Rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors).” The setting/location category is considered Dense Multi-Use Urban (less than a half mile to rail transit).
- For the affordable portions of the project, LUC 223 (Affordable Housing – Income Limits) was used to develop a weighted average generation for the 51% of the development that will be deed restricted for affordability based upon the tenants’ income.

### Parking Generation

In accordance with Table 19-B of the City’s Code, a parking analysis has been prepared to project the parking requirement for the site. As such, this analysis estimates the peak parking demand using the industry standard ITE Parking Generation Manual (5<sup>th</sup> Edition).

The number of dwelling units of the development (120) was used to determine the parking rates, with (61) of the dwellings units designated to be priced below market rate.

The following table summarizes the ITE parking generation for the site. Please refer to the attached excerpts from the ITE manual for the peak parking rates.



*ITE Parking Generation Summary – Full Site*

| LUC                                | Units      | Rate | Weekday Peak Hour Average Parking Demand |
|------------------------------------|------------|------|------------------------------------------|
| Mid-Rise Multi-Family              | 25         | 0.71 | 17.8                                     |
| Low-Rise Multi-Family              | 34         | 0.59 | 20.0                                     |
| Affordable Housing – Income Limits | 61         | 0.53 | 32.3                                     |
| <b>Total</b>                       | <b>120</b> |      | <b>70</b>                                |

*ITE Parking Generation Summary – Alternative LUC Analysis*

| LUC                                | Units      | Rate | Weekday Peak Hour Average Parking Demand |
|------------------------------------|------------|------|------------------------------------------|
| Mid-Rise Multi-Family              | 25         | 0.90 | 22.5                                     |
| Low-Rise Multi-Family              | 34         | 0.76 | 25.8                                     |
| Affordable Housing – Income Limits | 61         | 0.53 | 32.3                                     |
| <b>Total</b>                       | <b>120</b> |      | <b>81</b>                                |

As seen in the above table, using the industry standard parking generation rates and based upon the floor plans developed thus far, the project anticipates a total of 70 required parking spaces at the peak hour of parking demand. The plan for the development provides for 78 possible parking spaces with 56 spaces reserved for the apartment building and 22 reserved for the cooperative buildings.

The alternative analysis above was recommended by the City's peer reviewer using a land-use category with higher rates based on his comment that the Portland Transportation Center and the Amtrak service do not qualify for a commuter rail station. While "commuter rail" is not included the definition of the LUC and there are different interpretations when it comes to the application of various LUC's, this alternative calculation effectively provides the upper limit of parking demand. Therefore with a range of 70-81, the proposed 78 parking spaces is sufficient. Furthermore, given the project is surrounded by a plethora of multimodal opportunities and will likely provide many more affordable units than 61, there are a number of conservative measures built into these calculations.



*ITE Parking Generation Summary – Phase I (63 Units)*

| LUC                                | Units | Rate | Weekday Peak Hour Average Parking Demand |
|------------------------------------|-------|------|------------------------------------------|
| Market Rate Mid-Rise Multi-Family  | 17    | 0.71 | 12.1                                     |
| Affordable Housing – Income Limits | 46    | 0.53 | 24.4                                     |
| Total                              |       |      | <b>37</b>                                |

As seen in the above table, using the industry standard parking generation rates and based upon the floor plans developed thus far, the project anticipates a total of 37 required parking spaces at the peak hour of parking demand. The plan for the development provides for 56 possible parking spaces, with the additional spaces provided for guest parking.

*ITE Parking Generation Summary – Phase II (57 Units)*

| LUC                                | Units | Rate | Weekday Peak Hour Average Parking Demand |
|------------------------------------|-------|------|------------------------------------------|
| Low-Rise Multi-Family              | 42    | 0.76 | 31.9                                     |
| Affordable Housing – Income Limits | 15    | 0.53 | 8.0                                      |
| Total                              |       |      | <b>40</b>                                |

As seen in the above table, utilizing the industry standard parking generation rates based upon the floor plans developed thus far, the project anticipates a total of 40 required parking spaces at the peak hour of parking demand. The plan for the development provides for 22 parking spaces.

However, it should be noted that Phase 2 will contain 100% of the units to be income restricted in some capacity. By definition of the land-use code, it could be interpreted that the classification of affordable would be reasonable, which would recommend 30 parking spaces. We believe a range of 30-40 spaces is an acceptable model.

It should also be noted that a specific land use category does not exist for the cooperative housing model. Based on the experience of our clients with similar urban housing projects, parking demand is typically less than what is predicted by the industry standard models. This is reinforced by the Co-Op unbundling parking from ownership and by research conducted at urban “Transit-Oriented Developments” around the country found 44% fewer vehicle trips than ITE estimates.

Source: Cervano, Robert, et all. *“Vehicle Trip Reduction Impacts of Transit-Oriented Housing”* University of South Florida.

<https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1216&context=jpt>

Though a transit-oriented development (TOD) is a specific type of full urban development design, the development team feels that lessons of this study apply to the project and that the proposed parking count is sufficient, in each phase and overall, for the proposed land use and the site’s physical location. The following sections demonstrate why this project is representative of a TOD.

### **Adjacent On Street Parking**

On-street parking is available on Douglass Street except during local sporting events. Although the study above does not rely on on-street parking to supplement the parking count, at most times of the week, on-street parking is generally available for both tenants and guests.

### **Unbundling Rent and Parking Fees**

As an incentive to reduce parking demand, the cooperative housing applicant proposes to unbundle rent and parking. Parking spaces will be rented at competitive market rates, and not discounted significantly for tenants. This strategy has been shown to effectively reduce demand as tenants usually opt for alternative modes of travel or simply choose not to buy parking when parking spaces are charged as a separate fee.

### **Bicycle Parking**

The applicant proposes abundant bicycle parking both internally, in a storage room specifically for bicycles within the apartment building, and externally on a multitude of bike hoops congregated in three locations throughout the development. In total, at least 50 bicycle parking spaces will be provided, far exceeding the 40% of parking required per City Ordinance.

### **METRO Bus Service Access / Portland Transportation Center**

Transit stops for the Route 9 bus are currently located on either side of Congress Street and is located 150 ft. away from the Dougherty Field Path. Information on the METRO’s bus routes and schedule will be posted throughout the buildings and A map of the Route 9A/B transit map has been attached to this report. The Portland Transportation Center is a 0.4 mile walk from the development. This transportation hub features connections to regional and long-distance bus networks as well as the Amtrak Downeaster train. Overall, this site is extremely well-positioned to offer multimodal transportation opportunities to residents.

### **Pedestrian Access**

Dougherty Field Path will connect the development to Congress and St. James St, which leads to the system of well-maintained and accessible public sidewalks. This network connects the site with the many proximate businesses and services in the area. Additional lighting has also been provided as part of the plan to make this segment of the trail a more attractive option for accessing the surrounding options during nighttime.

## Conclusion

Given the project is representative of a TOD, provides 78 off-street parking spaces vs the 120 units, and is slated primarily for affordability, this parking analysis serves to demonstrate the project's parking adequacy. Several transportation demand management (TDM) strategies have been implemented and while the project has not prepared a formal TDM, it should be noted the zoning code specifically allows for transit proximate development to forego parking: *"No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."* Not only do several bus stops exist within a quarter mile of the site, but the Transportation Center is less than a half mile from the site. Given the overall 0.65 parking ratio provided and the many multimodal opportunities, it is our professional opinion that the 78 proposed parking spaces are sufficient for the development.

## ATTACHMENTS

- A. METRO Bus Route #9 and Schedule
- B. Multimodal Transportation Exhibit





METRO ROUTE 9A

Effective Date: November 14, 2021

METRO ROUTE 9B



MONDAY THROUGH FRIDAY  
NORTH DEERING VIA STEVENS AVENUE

| City Hall<br>A | Westgate<br>B | Morrill's Corner<br>C | Washington Auburn<br>D | Summit Allen<br>S | Allen's Corner<br>E | Washington Veranda<br>F | City Hall<br>A |
|----------------|---------------|-----------------------|------------------------|-------------------|---------------------|-------------------------|----------------|
| 5:35           | 5:44          | 5:54                  | 6:10                   | X                 | 6:14                | 6:22                    | 6:30           |
| 6:05           | 6:15          | 6:25                  | 6:40                   | X                 | 6:44                | 6:52                    | 7:00           |
| 6:30           | 6:42          | 6:52                  | 7:08                   | X                 | 7:13                | 7:21                    | 7:30           |
| X              | X             | X                     | X                      | X                 | X                   | 7:30*                   | 7:40*          |
| X              | 7:03*         | 7:13*                 | 7:25*                  | X                 | 7:30*               | 7:40*                   | 7:50*          |
| 7:00           | 7:13          | 7:23                  | 7:35                   | X                 | 7:40                | 7:50                    | 8:00           |
| X              | 7:18*         | 7:29*                 | 7:40*                  | 7:46*             | X                   | 7:56*                   | 8:08*          |
| 7:30           | 7:43          | 7:53                  | 8:08                   | X                 | 8:13                | 8:21                    | 8:30           |
| 7:40*          | 7:53*         | 8:03*                 | 8:18*                  | X                 | 8:23*               | 8:31*                   | 8:40*          |
| 7:50*          | 8:03*         | Trip ends at DHS 8:10 |                        | X                 | X                   | X                       | X              |
| 8:00           | 8:14          | 8:24                  | 8:38                   | X                 | 8:43                | 8:51                    | 9:00           |
| 8:08*          | 8:22*         | Trip ends at DHS 8:29 |                        | X                 | X                   | X                       | X              |
| 8:30           | 8:44          | 8:54                  | 9:08                   | X                 | 9:13                | 9:21                    | 9:30           |
| 9:30           | 9:42          | 9:52                  | 10:08                  | X                 | 10:13               | 10:21                   | 10:30          |
| 10:30          | 10:42         | 10:52                 | 11:08                  | X                 | 11:13               | 11:21                   | 11:28          |
| 11:30          | 11:43         | 11:53                 | 12:12                  | X                 | 12:17               | 12:25                   | 12:35          |
| 12:35          | 12:48         | 12:58                 | 1:15                   | X                 | 1:20                | 1:28                    | 1:35           |
| 1:35           | 1:47          | 1:57                  | 2:17                   | X                 | 2:22                | 2:30                    | 2:40           |
| 2:05           | 2:17          | 2:27                  | 2:47                   | X                 | 2:52                | 3:00                    | 3:10           |
| 2:40           | 2:52          | 3:02                  | 3:21                   | X                 | 3:26                | 3:35                    | 3:45           |
| X              | 2:57*         | 3:07*                 | 3:26*                  | 3:31*             | X                   | 3:40*                   | 3:50*          |
| 3:10           | 3:22          | 3:32                  | 3:51                   | X                 | 3:56                | 4:05                    | 4:15           |
| 3:45           | 3:58          | 4:08                  | 4:26                   | X                 | 4:31                | 4:40                    | 4:50           |
| 4:15           | 4:29          | 4:39                  | 4:57                   | X                 | 5:02                | 5:12                    | 5:25           |
| 4:50           | 5:04          | 5:14                  | 5:31                   | X                 | 5:36                | 5:45                    | 5:55           |
| 5:25           | 5:39          | 5:49                  | 6:06                   | X                 | 6:11                | 6:20                    | 6:30           |
| 5:55           | 6:10          | 6:20                  | 6:35                   | X                 | 6:40                | 6:48                    | 6:55           |
| 6:30           | 6:43          | 6:53                  | 7:10                   | X                 | 7:14                | 7:22                    | 7:30           |
| 7:30           | 7:42          | 7:52                  | 8:08                   | X                 | 8:12                | 8:20                    | 8:30           |
| 8:30           | 8:42          | 8:52                  | 9:08                   | X                 | 9:12                | 9:20                    | 9:30           |
| 9:30           | 9:40          | 9:50                  | 10:08                  | X                 | 10:12               | 10:20                   | 10:25          |

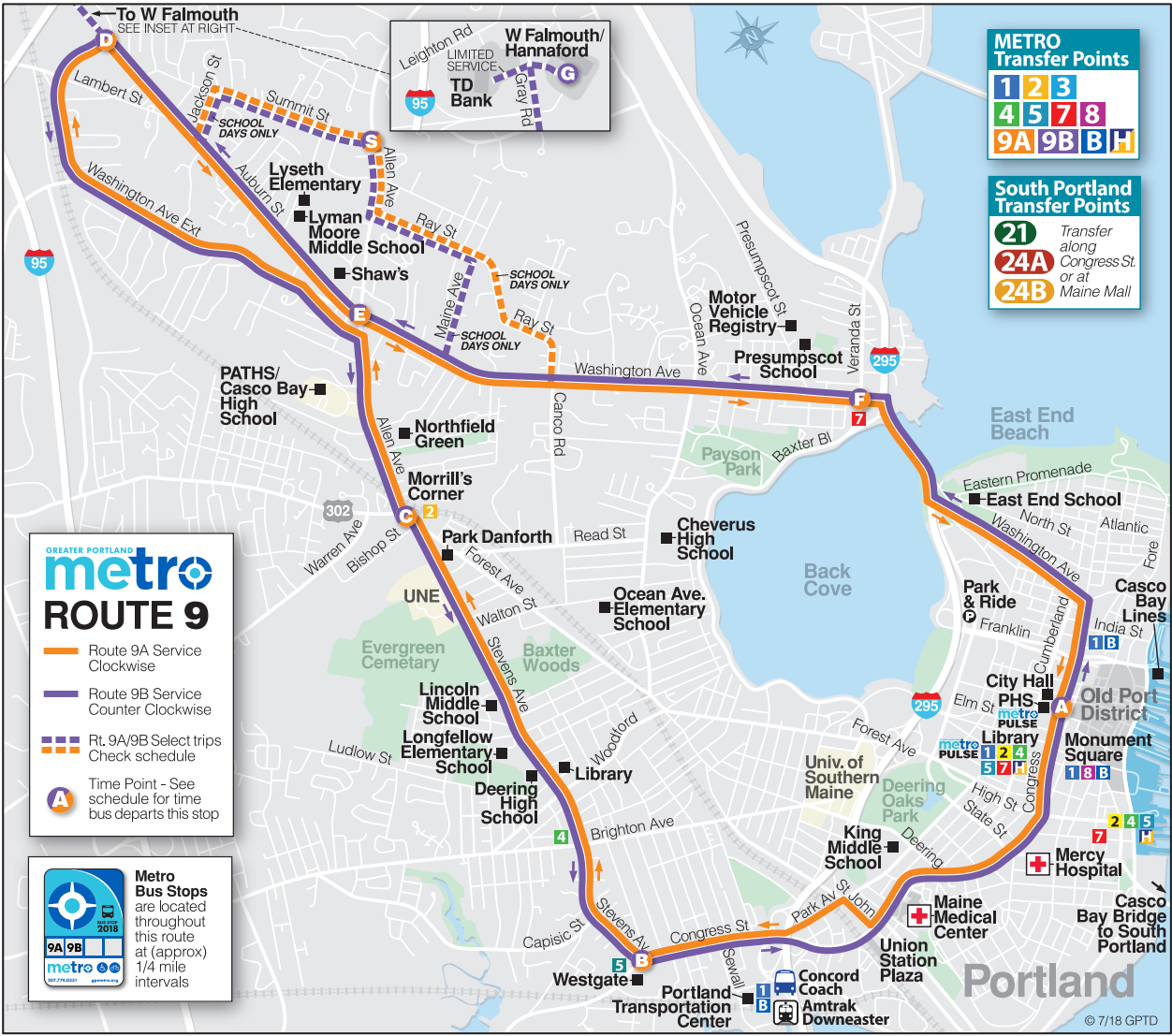
\*Trips operate on school days only. On early release days, trips will operate one hour early

SATURDAY  
NORTH DEERING VIA STEVENS AVENUE

| City Hall<br>A | Westgate<br>B | Morrill's Corner<br>C | Washington Auburn<br>D | Allen's Corner<br>E | Washington Veranda<br>F | City Hall<br>A |
|----------------|---------------|-----------------------|------------------------|---------------------|-------------------------|----------------|
| 7:30           | 7:45          | 7:55                  | 8:10                   | 8:15                | 8:23                    | 8:30           |
| 8:30           | 8:45          | 8:55                  | 9:10                   | 9:15                | 9:23                    | 9:30           |
| 9:30           | 9:45          | 9:55                  | 10:10                  | 10:15               | 10:23                   | 10:30          |
| 10:30          | 10:45         | 10:55                 | 11:10                  | 11:15               | 11:23                   | 11:30          |
| 11:30          | 11:45         | 11:55                 | 12:10                  | 12:15               | 12:23                   | 12:30          |
| 12:30          | 12:45         | 12:55                 | 1:10                   | 1:15                | 1:23                    | 1:30           |
| 1:30           | 1:45          | 1:55                  | 2:10                   | 2:15                | 2:23                    | 2:30           |
| 2:30           | 2:45          | 2:55                  | 3:10                   | 3:15                | 3:23                    | 3:30           |
| 3:30           | 3:45          | 3:55                  | 4:10                   | 4:14                | 4:22                    | 4:30           |
| 4:30           | 4:45          | 4:55                  | 5:10                   | 5:14                | 5:22                    | 5:30           |
| 5:30           | 5:45          | 5:55                  | 6:10                   | 6:14                | 6:22                    | 6:30           |
| 6:30           | 6:45          | 6:55                  | 7:10                   | 7:14                | 7:22                    | 7:30           |
| 7:30           | 7:45          | 7:52                  | 8:08                   | 8:12                | 8:20                    | 8:30           |
| 8:30           | 8:45          | 8:52                  | 9:08                   | 9:12                | 9:20                    | 9:30           |
| 9:30           | 9:45          | 9:53                  | 10:08                  | 10:12               | 10:20                   | 10:25          |

SUNDAY  
NORTH DEERING VIA STEVENS AVENUE

| City Hall<br>A | Westgate<br>B | Morrill's Corner<br>C | Washington Auburn<br>D | Allen's Corner<br>E | Washington Veranda<br>F | City Hall<br>A |
|----------------|---------------|-----------------------|------------------------|---------------------|-------------------------|----------------|
| 8:30           | 8:45          | 8:55                  | 9:10                   | 9:15                | 9:23                    | 9:30           |
| 9:30           | 9:45          | 9:55                  | 10:10                  | 10:15               | 10:23                   | 10:30          |
| 10:30          | 10:45         | 10:55                 | 11:10                  | 11:15               | 11:23                   | 11:30          |
| 11:30          | 11:45         | 11:55                 | 12:10                  | 12:15               | 12:23                   | 12:30          |
| 12:30          | 12:45         | 12:55                 | 1:10                   | 1:15                | 1:23                    | 1:30           |
| 1:30           | 1:45          | 1:55                  | 2:10                   | 2:15                | 2:23                    | 2:30           |
| 2:30           | 2:45          | 2:55                  | 3:10                   | 3:15                | 3:23                    | 3:30           |
| 3:30           | 3:45          | 3:55                  | 4:08                   | 4:12                | 4:20                    | 4:25           |



Routes and schedules subject to change.

SUNDAY  
NORTH DEERING VIA WASHINGTON AVE

| Monument Square<br>A | Washington Veranda<br>F | Allen's Corner<br>E | W. Falmouth Hannaford<br>G | Morrill's Corner<br>C | Westgate<br>B | Monument Square<br>A |
|----------------------|-------------------------|---------------------|----------------------------|-----------------------|---------------|----------------------|
| 9:10                 | 9:18                    | 9:25                | 9:35                       | 9:48                  | 9:57          | 10:10                |
| 10:10                | 10:18                   | 10:25               | 10:35                      | 10:48                 | 10:57         | 11:10                |
| 11:10                | 11:18                   | 11:25               | 11:35                      | 11:48                 | 11:57         | 12:10                |
| 12:10                | 12:18                   | 12:25               | 12:35                      | 12:48                 | 12:57         | 1:10                 |
| 1:10                 | 1:18                    | 1:25                | 1:35                       | 1:48                  | 1:57          | 2:10                 |
| 2:10                 | 2:18                    | 2:25                | 2:35                       | 2:48                  | 2:57          | 3:10                 |
| 3:10                 | 3:18                    | 3:25                | 3:35                       | 3:48                  | 3:57          | 4:10                 |
| 4:10                 | 4:18                    | 4:25                | 4:35                       | 4:48                  | 4:57          | 5:10                 |

MONDAY THROUGH FRIDAY  
NORTH DEERING VIA WASHINGTON AVENUE

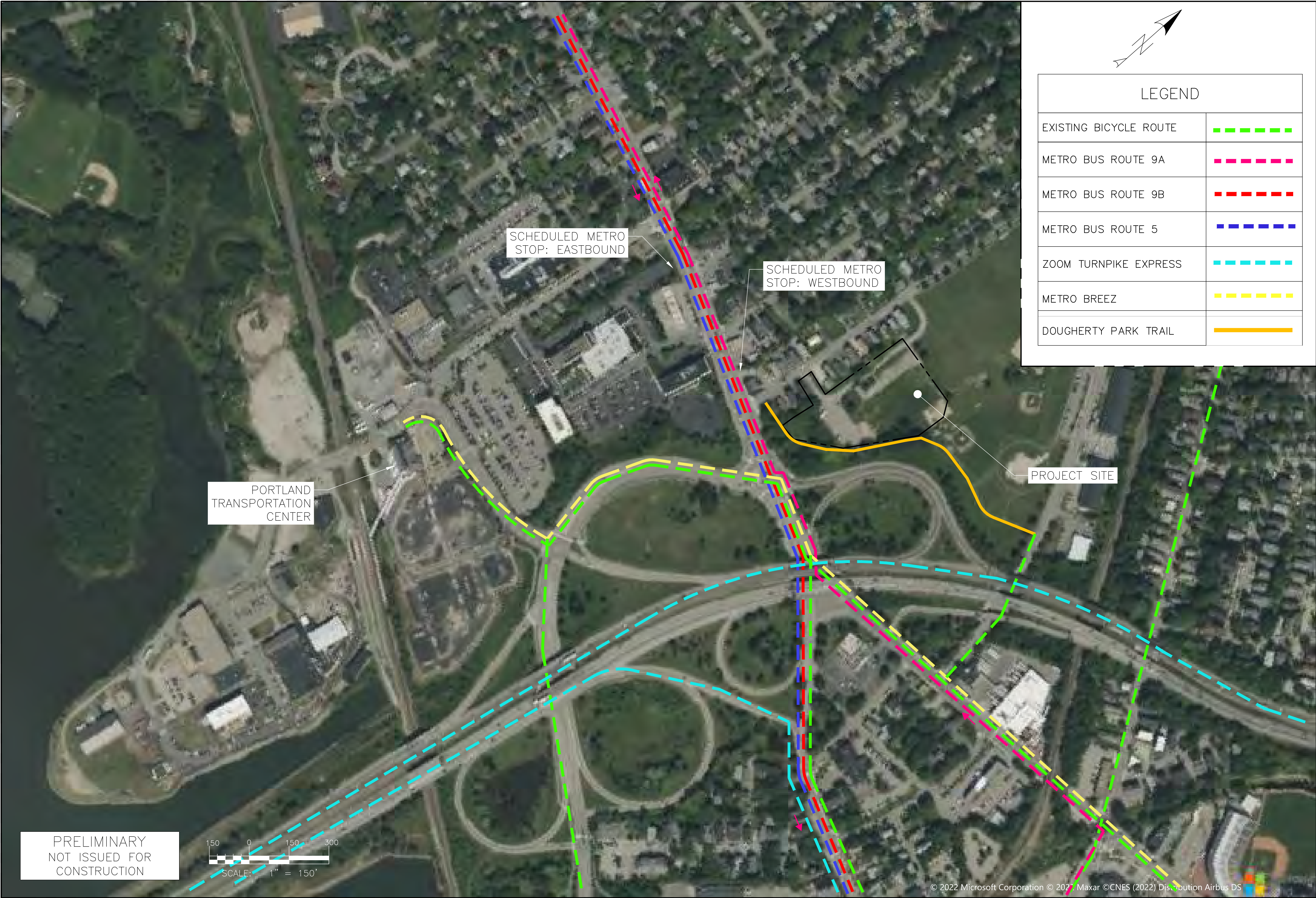
| Monument Square<br>A | Washington Veranda<br>F | Allen's Corner<br>E | Summit Allen<br>S            | W. Falmouth Hannaford<br>G  | Morrill's Corner<br>C | Westgate<br>B | Monument Square<br>A |
|----------------------|-------------------------|---------------------|------------------------------|-----------------------------|-----------------------|---------------|----------------------|
| 5:40                 | 5:48                    | 5:56                | X                            | X                           | 6:17                  | 6:27          | 6:40                 |
| 6:05                 | 6:13                    | 6:20                | X                            | 6:28                        | 6:42                  | 6:52          | 7:05                 |
| 6:40                 | 6:48                    | 6:56                | X                            | X                           | 7:16                  | 7:26          | 7:40                 |
| 7:05                 | 7:13                    | 7:21                | X                            | 7:29                        | 7:44                  | 7:55          | 8:10                 |
| 7:12*                | 7:20*                   | X                   | 7:31*                        | X                           | 7:50*                 | 8:00*         | 8:12*                |
| 7:40                 | 7:48                    | 7:56                | X                            | X                           | 8:16                  | 8:26          | 8:40                 |
| 8:10                 | 8:20                    | 8:27                | X                            | 8:34 TD                     | 8:50                  | 9:00          | 9:15                 |
| 9:15                 | 9:25                    | 9:32                | X                            | 9:39                        | 9:54                  | 10:05         | 10:20                |
| 10:20                | 10:30                   | 10:40               | X                            | X                           | 10:55                 | 11:06         | 11:20                |
| 11:20                | 11:30                   | 11:37               | X                            | 11:44 TD                    | 12:00                 | 12:11         | 12:25                |
| 12:25                | 12:35                   | 12:45               | X                            | X                           | 1:03                  | 1:14          | 1:30                 |
| 12:55                | 1:05                    | 1:12                | X                            | 1:19                        | 1:35                  | 1:46          | 2:00                 |
| 1:30                 | 1:40                    | 1:47                | X                            | 1:54                        | 2:09                  | 2:20          | 2:35                 |
| 2:00                 | 2:10                    | 2:17                | X                            | 2:25                        | 2:40                  | 2:55          | 3:10                 |
| X                    | X                       | X                   | X                            | Trip starts at DHS at 2:55* |                       | 3:00*         | 3:15*                |
| X                    | X                       | X                   | Trip starts at CBHS at 2:55* |                             | 3:00*                 | 3:10*         | 3:25*                |
| 2:35                 | 2:45                    | 2:55                | X                            | X                           | 3:14                  | 3:25          | 3:40                 |
| 2:55*                | 3:05*                   | X                   | 3:16*                        | X                           | 3:35*                 | 3:45*         | 3:57*                |
| 3:10                 | 3:20                    | 3:30                | X                            | X                           | 3:49                  | 4:00          | 4:15                 |
| 3:15*                | 3:23*                   | 3:30*               | X                            | X                           | X                     | X             | X                    |
| 3:25*                | 3:35*                   | X                   | 3:46*                        | X                           | 4:05*                 | 4:15*         | 4:27*                |
| 3:40                 | 3:50                    | 4:00                | X                            | 4:08 TD                     | 4:24                  | 4:35          | 4:50                 |
| 4:15                 | 4:25                    | 4:35                | X                            | X                           | 4:54                  | 5:05          | 5:20                 |
| 4:50                 | 5:02                    | 5:12                | X                            | 5:20 TD                     | 5:35                  | 5:45          | 6:00                 |
| 5:20                 | 5:32                    | 5:42                | X                            | X                           | 6:00                  | 6:10          | 6:25                 |
| 6:00                 | 6:10                    | 6:20                | X                            | 6:28                        | 6:42                  | 6:51          | 7:00                 |
| 6:25                 | 6:34                    | 6:41                | X                            | X                           | 6:58                  | 7:08          | 7:20                 |
| 7:20                 | 7:29                    | 7:36                | X                            | 7:44                        | 7:56                  | 8:03          | 8:15                 |
| 8:15                 | 8:24                    | 8:30                | X                            | X                           | 8:48                  | 8:53          | 9:05                 |

On early release days, trips will operate one hour early TD - Route travels to TD Bank after stopping at Hannaford. \*Trips operate on school days only.

SATURDAY  
NORTH DEERING VIA WASHINGTON AVE

| Monument Square<br>A | Washington Veranda<br>F | Allen's Corner<br>E | W. Falmouth Hannaford<br>G | Morrill's Corner<br>C | Westgate<br>B | Monument Square<br>A |
|----------------------|-------------------------|---------------------|----------------------------|-----------------------|---------------|----------------------|
| 8:10                 | 8:18                    | 8:25                | 8:35                       | 8:48                  | 8:57          | 9:10                 |
| 9:10                 | 9:18                    | 9:25                | 9:35                       | 9:48                  | 9:57          | 10:10                |
| 10:10                | 10:18                   | 10:25               | 10:35                      | 10:48                 | 10:57         | 11:10                |
| 11:10                | 11:18                   | 11:25               | 11:35                      | 11:48                 | 11:57         | 12:10                |
| 12:10                | 12:18                   | 12:25               | 12:35                      | 12:48                 | 12:57         | 1:10                 |
| 1:10                 | 1:18                    | 1:25                | 1:35                       | 1:48                  | 1:57          | 2:10                 |
| 2:10                 | 2:18                    | 2:25                | 2:35                       | 2:48                  | 2:57          | 3:10                 |
| 3:10                 | 3:18                    | 3:25                | 3:35                       | 3:48                  | 3:57          | 4:10                 |
| 4:10                 | 4:18                    | 4:25                | 4:35                       | 4:48                  | 4:57          | 5:10                 |
| 5:10                 | 5:18                    | 5:25                | 5:35                       | 5:48                  | 5:57          | 6:10                 |
| 6:10                 | 6:18                    | 6:25                | 6:35                       | 6:48                  | 6:57          | 7:10                 |
| 7:10                 | 7:18                    | 7:25                | 7:35                       | 7:48                  | 7:57          | 8:10                 |
| 8:10                 | 8:18                    | 8:25                | 8:35                       | 8:42                  | 8:47          | 9:00                 |





| LEGEND                 |       |
|------------------------|-------|
| EXISTING BICYCLE ROUTE | ----- |
| METRO BUS ROUTE 9A     | ----- |
| METRO BUS ROUTE 9B     | ----- |
| METRO BUS ROUTE 5      | ----- |
| ZOOM TURNPIKE EXPRESS  | ----- |
| METRO BREEZ            | ----- |
| DOUGHERTY PARK TRAIL   | ----- |

ISSUED FOR: 

BY: DATE

COMMENT RESPONSE: 

WHS 7/29/22

MULTIMODAL TRANSPORTATION EXHIBIT

DOUGHERTY COMMONS

DOUGLASS COMMONS, LLC. PORTLAND, ME

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DESIGNED BY: WHS

DRAWN BY: SJL

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DRAWING NO.

EX-1

## 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 with one or two levels (floors) of residence. Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

### Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand (1) on a weekday (10 study sites) and a Saturday (11 study sites) in a general urban/suburban setting and (2) on a weekday (three study sites) and a Saturday (three study sites) in a dense multi-use urban setting.

| Hour Beginning  | Percent of Peak Parking Demand |          |                       |          |
|-----------------|--------------------------------|----------|-----------------------|----------|
|                 | General Urban/Suburban         |          | Dense Multi-Use Urban |          |
|                 | Weekday                        | Saturday | Weekday               | Saturday |
| 12:00–4:00 a.m. | 100                            | 93       | 86                    | 100      |
| 5:00 a.m.       | 97                             | 100      | 100                   | 94       |
| 6:00 a.m.       | 90                             | 98       | 94                    | 91       |
| 7:00 a.m.       | 77                             | 96       | 81                    | 85       |
| 8:00 a.m.       | 56                             | 92       | 58                    | 79       |
| 9:00 a.m.       | 45                             | 80       | 56                    | 76       |
| 10:00 a.m.      | 40                             | 78       | 53                    | 71       |
| 11:00 a.m.      | 37                             | 71       | 58                    | 74       |
| 12:00 p.m.      | 36                             | 68       | 56                    | 68       |
| 1:00 p.m.       | 36                             | 66       | 53                    | 68       |
| 2:00 p.m.       | 37                             | 65       | 47                    | 68       |
| 3:00 p.m.       | 43                             | 68       | 56                    | 56       |
| 4:00 p.m.       | 45                             | 70       | 53                    | 59       |
| 5:00 p.m.       | 55                             | 73       | 61                    | 53       |
| 6:00 p.m.       | 66                             | 77       | 81                    | 50       |
| 7:00 p.m.       | 73                             | 81       | 67                    | 56       |
| 8:00 p.m.       | 77                             | 82       | 61                    | 65       |
| 9:00 p.m.       | 86                             | 86       | 64                    | 74       |
| 10:00 p.m.      | 92                             | 87       | 75                    | 85       |
| 11:00 p.m.      | 97                             | 92       | 86                    | 91       |

## Additional Data

In prior editions of *Parking Generation*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

| Setting                | Proximity to Rail Transit           | Parking Supply Ratio |                |
|------------------------|-------------------------------------|----------------------|----------------|
|                        |                                     | Per Dwelling Unit    | Per Bedroom    |
| Dense Multi-Use Urban  | Within 1/4 mile of rail transit     | 0.6 (12 sites)       | 0.4 (10 sites) |
|                        | Not within 1/4 mile of rail transit | 0.9 (18 sites)       | 0.6 (18 sites) |
| General Urban/Suburban | Within 1/4 mile of rail transit     | 1.5 (10 sites)       | 0.9 (10 sites) |
|                        | Not within 1/4 mile of rail transit | 1.7 (52 sites)       | 1.0 (52 sites) |

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, District of Columbia, Maryland, Massachusetts, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

*It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of 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). Future parking studies should also indicate the number of levels contained in the residential building.*

## Source Numbers

72, 124, 152, 154, 209, 215, 216, 216, 219, 255, 257, 314, 414, 419, 432, 437, 505, 512, 533, 535, 536, 537, 544, 545, 577, 578, 579, 580, 584, 585, 587

# Multifamily Housing (Low-Rise) (220)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: Dense Multi-Use Urban (< 1/2 mile to rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.

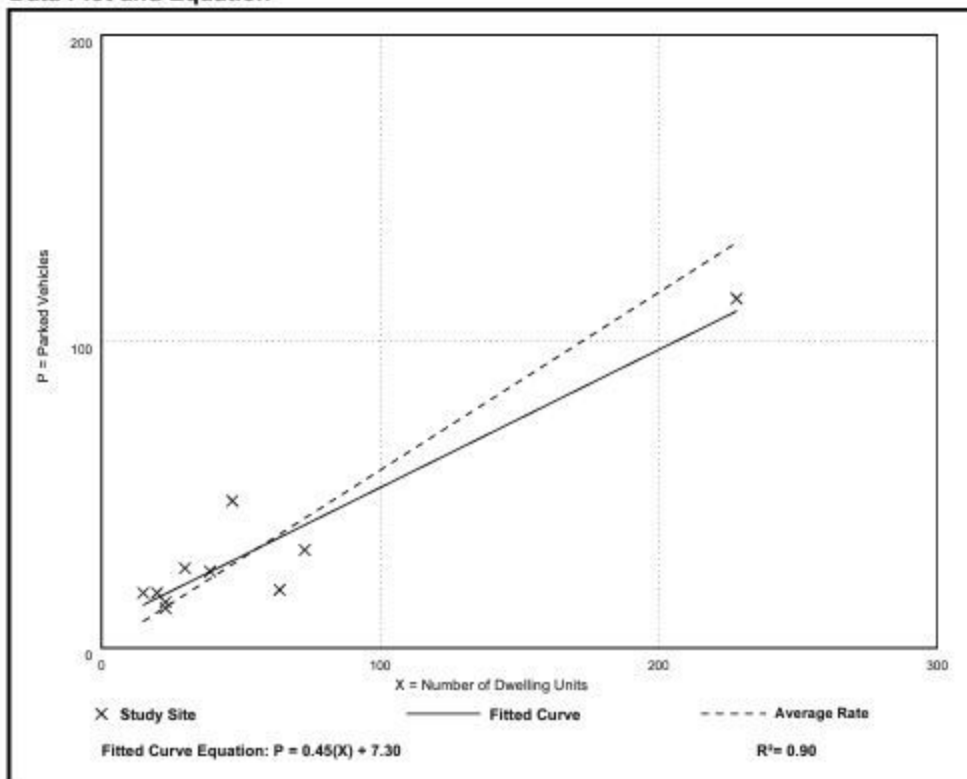
Number of Studies: 10

Avg. Num. of Dwelling Units: 56

## Peak Period Parking Demand per Dwelling Unit

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|------------------------------------------|
| 0.58         | 0.30 - 1.20    | 0.54 / 1.08            | ***                     | 0.23 ( 40% )                             |

## Data Plot and Equation





## Land Use: 221 Multifamily Housing (Mid-Rise)

### Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence. Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

### Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (one general urban/suburban study site), a Saturday (two general urban/suburban study sites), and a Sunday (one dense multi-use urban study site).

| Hour Beginning  | Percent of Peak Parking Demand |          |        |
|-----------------|--------------------------------|----------|--------|
|                 | Weekday                        | Saturday | Sunday |
| 12:00–4:00 a.m. | 100                            | 100      | 100    |
| 5:00 a.m.       | 94                             | 99       | —      |
| 6:00 a.m.       | 83                             | 97       | —      |
| 7:00 a.m.       | 71                             | 95       | —      |
| 8:00 a.m.       | 61                             | 88       | —      |
| 9:00 a.m.       | 55                             | 83       | —      |
| 10:00 a.m.      | 54                             | 75       | —      |
| 11:00 a.m.      | 53                             | 71       | —      |
| 12:00 p.m.      | 50                             | 68       | —      |
| 1:00 p.m.       | 49                             | 66       | 33     |
| 2:00 p.m.       | 49                             | 70       | 40     |
| 3:00 p.m.       | 50                             | 69       | 27     |
| 4:00 p.m.       | 58                             | 72       | 13     |
| 5:00 p.m.       | 64                             | 74       | 33     |
| 6:00 p.m.       | 67                             | 74       | 60     |
| 7:00 p.m.       | 70                             | 73       | 67     |
| 8:00 p.m.       | 76                             | 75       | 47     |
| 9:00 p.m.       | 83                             | 78       | 53     |
| 10:00 p.m.      | 90                             | 82       | 73     |
| 11:00 p.m.      | 93                             | 88       | 93     |



## Additional Data

In prior editions of *Parking Generation*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

|                        |                                   | Parking Supply Ratio |                |
|------------------------|-----------------------------------|----------------------|----------------|
| Setting                | Proximity to Rail Transit         | Per Dwelling Unit    | Per Bedroom    |
| Center City Core       | Within ½ mile of rail transit     | 1.1 (15 sites)       | 1.0 (12 sites) |
| Dense Multi-Use Urban  | Within ½ mile of rail transit     | 1.2 (39 sites)       | 0.9 (34 sites) |
|                        | Not within ½ mile of rail transit | 1.2 (65 sites)       | 0.8 (56 sites) |
| General Urban/Suburban | Within ½ mile of rail transit     | 1.5 (25 sites)       | 0.8 (12 sites) |
|                        | Not within ½ mile of rail transit | 1.7 (62 sites)       | 1.0 (39 sites) |

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Colorado, District of Columbia, Maryland, Massachusetts, New Jersey, New York, Oregon, Virginia, Washington, and Wisconsin.

*It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of 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). Future parking studies should also indicate the number of levels contained in the residential building.*

## Source Numbers

21, 209, 247, 255, 277, 401, 402, 419, 505, 512, 522, 533, 535, 536, 537, 538, 545, 546, 547, 575, 576, 577, 579, 580, 581, 583, 584, 585, 587

# Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: Dense Multi-Use Urban (< 1/2 mile to rail transit)

Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.

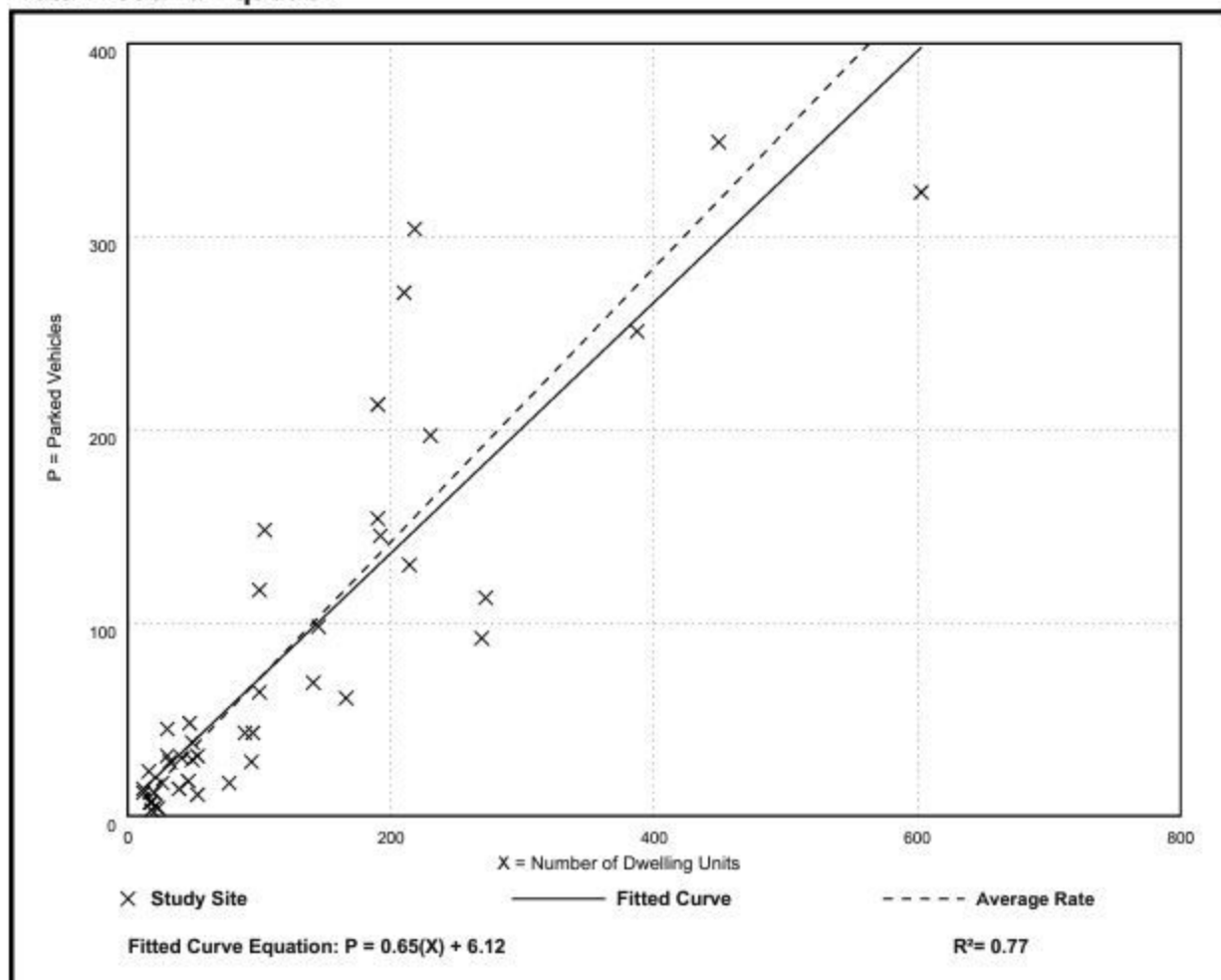
Number of Studies: 43

Avg. Num. of Dwelling Units: 121

## Peak Period Parking Demand per Dwelling Unit

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|------------------------------------------|
| 0.71         | 0.17 - 1.50    | 0.47 / 1.17            | 0.61 - 0.81             | 0.32 ( 45% )                             |

## Data Plot and Equation



## Land Use: 223 Affordable Housing

### Description

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age. Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), and multifamily housing (high-rise) (Land Use 222) are related land uses.

### Additional Data

For the majority of study sites in this land use code, 100 percent of the dwelling units are considered affordable. For residential study sites that provide a mix of market value and affordable units, the study sites with at least 75 percent of the dwelling units designated as affordable are also included in this land use database.

Separate data plots and statistics are presented for subsets of the affordable housing database: sites with income limitations for its tenants, sites with minimum age thresholds for its tenants (i.e., senior housing), and sites comprised entirely of single-room-only units.

The average parking supply ratios for the study sites with parking supply information are as follows:

- In a general urban/suburban setting, 1.3 spaces per dwelling unit (28 sites) and 0.7 spaces per bedroom (9 sites)
- In a dense multi-use urban setting, 0.6 spaces per dwelling unit (28 sites) and 0.3 spaces per bedroom (26 sites)
- In a center city core setting, 0.3 spaces per dwelling unit (6 sites) and 0.3 spaces per bedroom (6 sites)

The sites were surveyed in the 1990s and the 2010s in California, Connecticut, District of Columbia, Maryland, Massachusetts, New Jersey, and Oregon.

*It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of 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). Future parking studies should also indicate the number of levels contained in the residential building.*

### Source Numbers

314, 514, 533, 535, 536, 537, 539, 541, 579, 582, 585, 586

# Affordable Housing - Income Limits (223)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

Setting/Location: Dense Multi-Use Urban

Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.

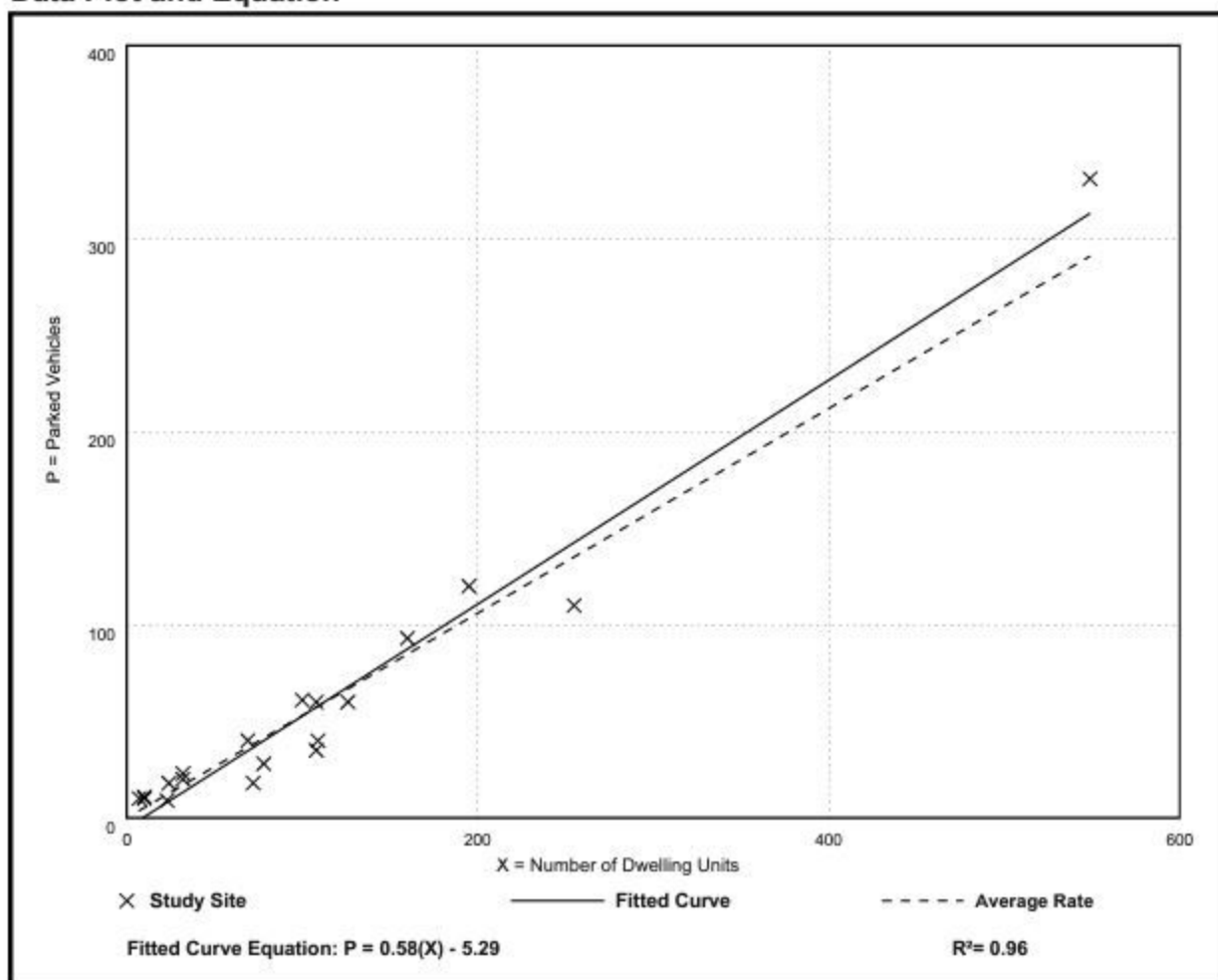
Number of Studies: 19

Avg. Num. of Dwelling Units: 109

## Peak Period Parking Demand per Dwelling Unit

| Average Rate | Range of Rates | 33rd / 85th Percentile | 95% Confidence Interval | Standard Deviation (Coeff. of Variation) |
|--------------|----------------|------------------------|-------------------------|------------------------------------------|
| 0.53         | 0.25 - 1.43    | 0.46 / 1.00            | ***                     | 0.14 ( 26% )                             |

## Data Plot and Equation







# GRASSPAVE<sup>2</sup>

BY INVISIBLE STRUCTURES™



# GRAVELPAVE<sup>2</sup>

BY INVISIBLE STRUCTURES™





Introduction

History of Porous Paving

Pebbles, cobblestones, and wood decking structures have been used since the dawn of civilization to reinforce where we walk and the roads we use. Little did we realize that these methods had benefits over the modern trends of sealing up the ground with asphalt and concrete. Porous, permeable or pervious paving—whatever you prefer—became a method for addressing stormwater issues in the early 20th century. Concrete turfblock for grass paving began in the mid-1940s and plastic versions were invented in the late '70s and early '80s. Great advancements have occurred in pervious concrete, pervious asphalt, and other permeable surfaces. We introduced Grasspave<sup>2</sup> in 1982, improving upon these earlier concepts. In 1993, Gravelpave<sup>2</sup> was unveiled, the only product specifically developed for gravel porous paving. Fast forward to this millennium, and Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are considered by most, the finest porous pavers developed.

Infiltration

Porous paving allows rainwater to percolate through the pavement's surface and back into the ground (infiltrating), where the water is cleaned and returned to ground water supplies. Porous paving improves upon impermeable surfaces, such as concrete or asphalt, which do not allow for this natural filtration. Rain collects airborne and surface pollutants such as sediment, brake dust, chemicals, vehicle exhaust, oil, salts, fertilizers, bacteria, and animal waste. On impermeable surfaces the polluted rainwater runoff (non-point source pollution) is collected, concentrated, and discharged to downstream

waters such as streams, reservoirs, and lakes—our drinking water. This runoff also harms vegetation and wildlife with increased water volumes, velocities, and higher temperatures. The Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> systems protect against this dangerous runoff by processing and cleaning the water, thus safeguarding the natural water cycle.

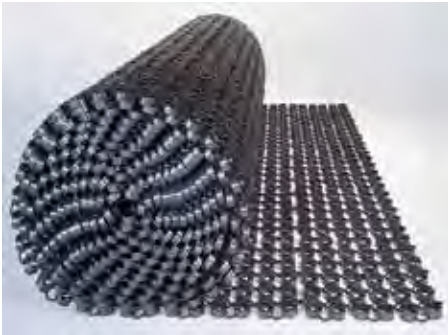
State of the Earth

Invisible Structures, Inc. has developed an entire line of products to address stormwater and environmental concerns. Rainstore<sup>3</sup>, Slopetame<sup>2</sup>, Draincore<sup>2</sup>, and Beachrings<sup>2</sup> can work in addition to, or in conjunction with, Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> to provide your site, home, or office with stormwater and environmental enhancements. Our products can store and collect rain, provide erosion and sediment control, efficiently convey and deliver water, and protect natural areas.

Advanced Technology

The Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> systems are based on a simple, but impressive technology—a series of rings (cylinders) connected on a flexible grid system. The cylinders are engineered to withstand significant structural loads and the grid provides stability, flexibility, and continuity for large areas. The grid system also has the unique ability to be rolled up for easy shipping, handling and installation.

This engineered design allows for any street-legal vehicle (and sometimes larger) to park or drive on our Grasspave<sup>2</sup> or Gravelpave<sup>2</sup> surfaces. The point load pressure is transferred from the top of the ring, through the fill material and cylinders, to the engineered base course.



*Grasspave<sup>2</sup> large rolls and Gravelpave<sup>2</sup> large rolls (not shown) install quickly and conform to the contours of the ground.*



*Wallace Residence, Savannah, GA—Gravelpave<sup>2</sup> creates a wheelchair-accessible surface by stabilizing gravel and supporting tire pressure. 7% dry cement was mixed with gravel before filling rings. Cover photo: Westin Kierland Resort and Spa, Scottsdale, Arizona—Grasspave<sup>2</sup> fire lane and Gravelpave<sup>2</sup> fire lane (concrete widening).*



*Pentagon Remote Delivery Facility, Arlington, VA—Grasspave<sup>2</sup> was selected for the helicopter landing pads (the four grass squares in center) on the largest “green roof” east of the Mississippi.*



The ring and grid structure is 92 percent void space allowing for the healthiest root zone for grass (in Grasspave<sup>2</sup>) and more decorative gravel (in Gravelpave<sup>2</sup>) for some of the most attractive paved surfaces around. Less plastic means more natural looking surfaces. This technology also makes for better runoff coefficients and better percolation rates.

**Exceptional Compressive Strength**

When insalled to specifications, Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> will support 15,940 psi – well over the 120 psi highest truck tire pressure allowed on public highways. This is a safety factor of 132 times.

**15,940 psi Conversions**

- 2.29 million pounds per sq ft
- 109,906 kPa
- 11.2 million kg/m<sup>2</sup>
- 20.6 million pounds per sq yard

**Vehicle Loading Examples:**

- Auto tires: 40 psi
- Truck tires: 110 psi
- DC-10 tires: 250 psi
- F-16 tires: 350 psi
- Fire truck with outriggers: 78psi

(An 85,000 lb. truck distributed to four outrigger pads is equal to 21,250 lbs. for each outrigger pad with 12" × 18" surface contact with Grasspave<sup>2</sup>.)

All these vehicles are well within our 15,940 psi capability. With a sturdy base course design, our rings will easily perform under all conditions. It's also a good design practice to strengthen

concrete sidewalks and curbing that will be mounted by fire trucks.

**CSI 32 12 43 Flexible Porous Pavers**

In 1997 The Construction Specifiers Institute (CSI) came out with a generalized listing (02795) for all porous paving products. However, since performance and application is varied even in the

porous paving industry, the 2004 CSI MasterFormat™ has adopted a new number 32 12 43 *Flexible Porous Paving*, to recognize that Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are in a class by themselves.

**Best Management Practice**

Porous paving is recognized as a Best Management Practice (BMP) by the Environmental Protection Agency, the Center for Watershed Protection, the U.S. Army Corp of Engineers, and countless other federal, state, regional and local authorities. In addition, Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are often mentioned by name, as the product of choice for many of these agencies.

**Applications**

**Stormwater Management**

The Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> systems can easily handle storm water from an intense storm dropping three inches of rain in less than thirty minutes! In one square meter (40" × 40") there are 144 rings, two inches in diameter by one inch high. With one inch of fill in the rings and a standard road base of sandy gravel six inches thick, our porous systems will percolate



*The University of South Alabama, Mobile used Gravelpave<sup>2</sup> in parking aisles and Grasspave<sup>2</sup> in the spaces.*



*Bowditch Point Regional Park, Fort Myers Beach, Florida—Gravelpave<sup>2</sup> parking bays blend in with the natural surroundings.*



*The Lincoln Hills Club, Lincoln, California—This amphitheater's grass is reinforced with Grasspave<sup>2</sup> to prevent compaction, and provide a stable, attractive surface for visitors.*



approximately 1/2 inch of rain per hour! A seven-inch section can store 2.4 inches of water (about 20 percent void after compaction). Alternatively, hard surfaces, such as asphalt and concrete, shed 95 percent of storm water.

**Aesthetics**

As a designer, engineer, contractor, or homeowner, you can be sure Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> can deliver a more beautiful surface and add a unique look to a site. Grass simply looks better than asphalt and decorative gravel has been used for centuries in landscaping. Space constraints can be dealt with by combining the beauty of grass or gravel with the utility of paving.

Trees and other vegetation not only survive, they thrive with Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>. Porous paving has the ability to deliver water, oxygen and carbon dioxide through the cross section—all essential to root survival. Concrete and asphalt suffocate and starve the root zones of water and air. With Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>, you can now design in as many trees and plants as your site will allow. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> prevent compaction while allowing for ample amounts of water and air. Cars can then drive and park below tree canopies. Saving existing, mature trees is also possible with our products—our structures can come within inches of the mature tree trunk without damage. Our mats have the ability to flex with the tree root growth that would otherwise damage and crack hard surfaces.

**Environmental Benefits**

Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> not only protect the environment, they enhance it. All of our products are made from 100 percent recycled plastic—plastic that goes into improving the environment and not into a landfill. Through bioremediation, porous pavers have the ability to clean pollutants (heavy metals, 96–99 percent; suspended solids, 95 percent; phosphorous, 65 percent; nitrogen, 82 percent, hydrocarbons, up to 100 percent) out of stormwater. Our products also reduce erosion and soil migration, reduce site disturbance, and contribute to airborne dust capture and retention.

Cooling the atmosphere and reducing the “urban heat island effect” (cities being up to 10 degrees hotter than undeveloped land) are added benefits of Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>. Both products can mitigate these increased temperatures. In addition, Grasspave<sup>2</sup> promotes the conversion of carbon dioxide (greenhouse gas) into oxygen and has an “air-conditioning effect.”

**Driveways**

Environmental, economic, and aesthetic enhancements are drawing homeowners and designers to use Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> in driveways. Most residential driveways are good candidates for our porous duo because of the reduced speed and limited frequency of traffic. Our products can add beauty to residential and commercial driveways.

**Parking Lots**

Parking for churches and synagogues, stadiums, arenas, and overflow at shopping centers, campuses, parks and more are ideal for Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>. These sites generally support large numbers of vehicles but only on periodic basis. Stormwater management and green space can be combined with parking, reducing maintenance, real estate, and development costs. A great design idea is combining durable Gravelpave<sup>2</sup> drive aisles with attractive Grasspave<sup>2</sup> parking bays.

**Pedestrian, Horse Trails and Bicycle Paths**

Garden paths, greenhouse aisles, sidewalks, park paths, and wilderness trails paved with Grasspave<sup>2</sup>/Gravelpave<sup>2</sup> provide a stable surface for strollers, bicycles, wheelchairs, and horses. There are no puddles or mud and traction is very good. Tree roots break up hard surface sidewalks, but our mats flex to accommodate such shifts and gradient changes. Plus, with the high proportion of air, roots are discouraged from moving upward. Mountain bikers will not be able to tear up paths reinforced with Grasspave<sup>2</sup>/Gravelpave<sup>2</sup>. Our products can resist the destructive forces of mountain bikes, allowing your trails to be reopened to bikes.

**Fire Lanes**

By far, the most common application for Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> installations is for fire lanes. Our long and established history of providing safe, well-constructed fire lanes began in 1982 with our first installation in Snowmass, Colorado, near Aspen Ski Resort. Since then, we have firmly established credibility for this application. Tests have been conducted by several fire departments in Aurora, Colorado and Irvine, California. Nearly every major U.S. metropolitan area has accepted and used Grasspave<sup>2</sup> in a fire lane. You will most likely find a fire lane installation in your area.



*All fire fighting vehicles can safely navigate even a wet Grasspave<sup>2</sup> or Gravelpave<sup>2</sup> surface. In a 1983 test this 100-foot ladder truck was lifted off the Grasspave<sup>2</sup> by rear outriggers, and no ruts were caused by either outriggers or tires. The ladder was extended, rotated, and loaded with no depressions in the road surface.*

*Apartment complex, Concordville, Pennsylvania—Several overflow Gravelpave<sup>2</sup> parking lots encompass the majority of the perimeter area on the west and south sides of the property. Grasspave<sup>2</sup> (not shown) is installed on site in two grass fire lanes.*





# Grasspave<sup>2</sup> Installation—Mats can be rolled out in minutes!

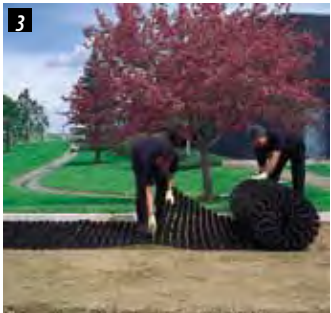
~35m<sup>2</sup> (~400 sf) per man hour! – For all steps shown below.



Place and compact sand and gravel base course.



Apply Hydrogrow mixture.



Roll out Grasspave<sup>2</sup>.



Fill rings with clean sharp concrete sand.



Hydroseed or lay sod.



Roll sod with heavy roller.



Ready for use after two mowing cycles.



Use a regular lawn mower for maintenance. Do not aerate!

The Grasspave<sup>2</sup> porous pavement system is comprised of a sandy gravel base course, Hydrogrow soil amendment/fertilizer mixture, the Grasspave<sup>2</sup> ring and grid structure, sharp concrete sand, and grass seed or sod.

## Grasspave<sup>2</sup> Installation Procedures

*This installation section is only intended as an overview. Please review our Grasspave<sup>2</sup> Technical Specifications (available at [www.invisiblestructures.com](http://www.invisiblestructures.com) or call 800-233-1510) for comprehensive installation instructions.*

Excavate a space for the base course as determined by site soils and loading requirements. Place and compact sandy gravel which should be a mixture of clean sharp sand and gravel varying in size but not exceeding 3/4 of an inch. To check porosity, use a hose to see that water flows into the base and drains away. Add subsurface drainage as necessary to low spots or locations with poor draining soils. Install irrigation lines and sprinkler heads if necessary.

Apply the Hydrogrow mixture that is included free with your order. Hydrogrow is a specialized soil amendment and fertilizer mixture designed exclusively for our Grasspave<sup>2</sup> system.

Roll out Grasspave<sup>2</sup>, aligning the side hole fasteners over the side pegs. The warmth of the sun will relax the plastic so it lays flat. Cut the grid between rings using pruning shears. Incorporate the cut pieces in other areas, as needed, keeping the distance between the rings uniform.

Fill rings with clean sharp concrete sand (AASHTO M6 or ASTM C-33) using large rakes and brooms so that the tops of the rings show when done. USGA Greens mix is also acceptable.

Lay turf over the rings. On warm days, wet the sand first to lower sand temperature and provide moisture for grass roots. Seeding and hydromulching is also an accepted vegetating method at this stage. Repeated hydromulching/seeding may be necessary.

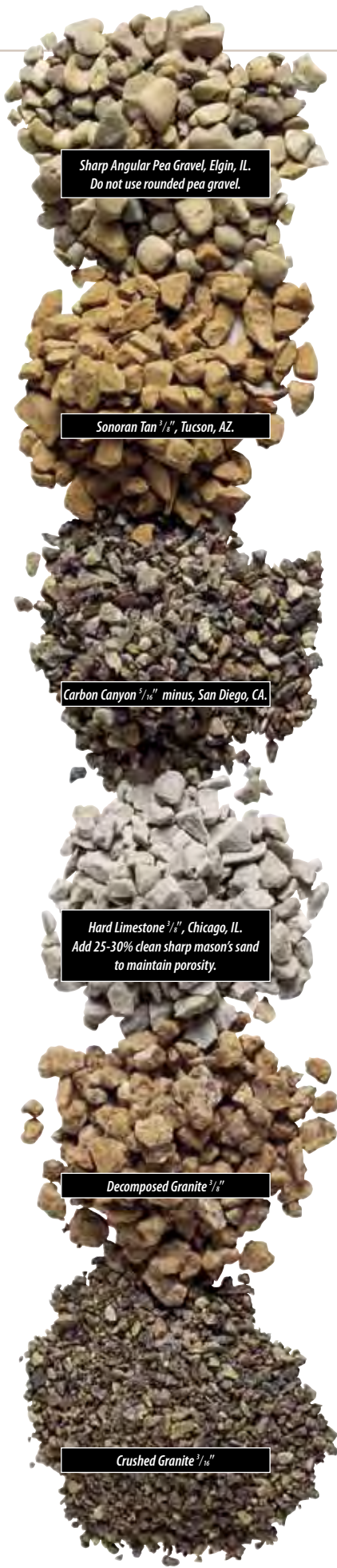
Roll sod with heavy roller to eliminate air pockets and make sure roots are in contact with the sand fill. Water lawn as usual according to climatic requirements.

Whether the area has been seeded or sodded, wait to drive on grass until two mowings have been completed, by which time the root system will be established and the sod pieces locked into place. In an emergency such as the need for fire truck access, grass may be driven on immediately after installation.

Use a regular lawn mower for maintenance. There should be no paver parts protruding through the surface that would damage mowers. Do not aerate!







Place and compact sand and gravel road base.



Roll out Gravelpave<sup>2</sup>, aligning the snap fit fasteners.



Secure mats with anchors provided (size and type may vary).



Fill rings with clean gravel.



Compact gravel with vibrator roller or flat plate compactor (not shown).

# Gravelpave<sup>2</sup> Installation—

## Gravelpave<sup>2</sup> Size/Shape Fill Requirements

You will need 1 1/4" of gravel fill, compacted. Be careful to order enough for the compaction process and choose a gravel size that will nest well into the rings. We have found that 3/8" uniformly sized crushed stone and sometimes 3/8" with limited small sharp screenings (#40 to #100 screen) works well. We DO NOT recommend pea gravel, even though it is often very attractive. Pea gravel will migrate out of the rings. A visit to your local quarry is suggested. We have found that some geological areas of the United States have limited types of sharp gravel available. It has been necessary to import gravel from a neighboring state, but remember the amounts are relatively small—the top one-and-a-quarter inch of the cross section. Gravel should be as free of fines as possible. To maintain porosity, avoid soft stone materials with low durability that will break easily.

## Other Fill Materials for Gravelpave<sup>2</sup>

Please ask our staff for assistance with this category since it is use-specific and often experimental. Ground rubber, crushed glass, crushed brick, and many other materials can be useful as attractive fill materials for various applications. Thermoset (epoxy, polyurethane, etc.) binders may be cost prohibitive for most projects, but offer unique design possibilities, including clarity, color enhancement (wet look), flexibility, and durability.

Our technical support staff will assist with selection of gravel sources. The photographic samples shown on this page will help you narrow your gravel choices. Should you have questions concerning the selection, please submit a small sample for approval prior to specifying or securing the materials.

# Mats can be rolled out in minutes!

## Gravelpave<sup>2</sup> Installation Procedure

*This installation section is only intended as an overview. Please review our Gravelpave<sup>2</sup> Technical Specifications (available at [www.invisiblestructures.com](http://www.invisiblestructures.com) or call 800-233-1510) for comprehensive installation instructions.*

Prepare sandy gravel base course to a depth as determined by a soils engineer. Compact with a vibrating plate compactor or use a heavy motorized roller for large jobs. To test porosity, water with a hose and check to see that water drains readily through the base course before installing the Gravelpave<sup>2</sup> mats.

Roll out mats with the grain (in the same direction) so that the snap fit fasteners can be used with neighboring mats. To fit around boxes and curbs, cut the grid between the rings with pruning shears and scissors or a small portable electric hand saw.

Fasten the mats together using the snap fit fasteners that are molded into the product inserting the prongs into the rectangular openings. Tuck the fabric underneath the fasteners to keep joints closed. A quarter-inch nut driver head (6 mm) fits nicely over the fastener to compress the pieces together. A piece of lumber placed under the Gravelpave<sup>2</sup> mat will provide stability to aid in fastening.

Supplied anchors must be used to secure the mats to the base. Hammer anchors with washers at a rate of one anchor per six rings in both directions. Use extra anchors around the perimeter of the Gravelpave<sup>2</sup> install and in high traffic areas. Reciprocating hammers can be used to speed up the

anchoring process. Anchors should be placed inside the rings as close to the center as possible. Begin anchoring from one corner in a radial pattern.

Gradually place gravel fill (see suggested fill material on facing page) into rings by using a front-end loader and shaking out the fill as the machine drives forward. Carefully lower the bucket when empty and back up while dragging it *above* the rings to smooth out the gravel, finishing with a stiff broom. Wheel barrow and shovel works well for small jobs. Contractor tip—you can store excess material for future maintenance, top dressing as may be necessary. Use rakes and/or push brooms to distribute the gravel fill to a level slightly above rings so that compacting the fill will not uncover the rings.

Use a vibrating plate compactor or large driving roller again to compact the gravel fill. Additional gravel may be necessary to finish filling the rings. Compact again until the material appears solid in the rings. Wetting the gravel may help it to interlock.

Drive on the installation when finished. If car tires make a pattern, there may be too much gravel or it may need additional compaction. It is expected that tops of the rings may be visible. If sides of the rings show, then add more fill material and repeat the compaction process.





Golf Industry

Gravelpave<sup>2</sup> and Grasspave<sup>2</sup> golf cart paths give the look of a natural path through trees, along fairways, and around greens. The flush surface requires no trimming or edging. Traction is excellent with Gravelpave<sup>2</sup> and Grasspave<sup>2</sup> traction is slightly better than grass. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> can enhance your golf cart staging area, pedestrian traffic area, parking lot, road shoulder, and maintenance yard.

Automobile Dealership Displays

Car dealerships have discovered that Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are perfect for automobile display areas. Dealerships now have an option when it comes to adding paved areas for car transport and display. Dealerships like the “soft” attractive look grass and decorative gravel provide.

Utility and Maintenance Vehicle Access

Providing your site with important utilitarian functions without compromising beauty is simple. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> can incorporate a structural road without interrupting your landscaping. No obtrusive concrete or asphalt access roads are necessary to get to window washing areas, pump stations, microwave towers, tanks, or electrical boxes.

Unique Applications

Our mats are installed in some unique and interesting places: Helicopter landing pads, race car display areas, outdoor amphitheater seating, under picnic tables, under concrete pavers (support), airplane display and transport, cemetery marker reinforcement, eave drip lines and more. Installations are not limited to traditional paved areas.

Grasspave<sup>2</sup> Characteristics

Ring and Grid Structure

Grasspave<sup>2</sup> is by most accounts the best flexible grass paver made today. Its unique ring and grid structure allow for flexibility, stability, and exceptional grass growth. With 92 percent void space for healthy roots and 100 percent grass coverage, Grasspave<sup>2</sup> is the industry’s preeminent choice. Our installations are hard to find because they are invisible! With so little plastic near the crown of the grass, the blades of grass are not smashed by product. Root development is not interrupted from spreading laterally. The rings are strong and rigid, keeping grass root systems protected from harm. The roots grow directly downward, deep into the sandy gravel base course.

Large Rolls

Our patented systems have a shipping, handling and installation advantage as well—large rolls. Our standard roll size (model 2020) covers 431 sq. ft. (40 m<sup>2</sup>) and weighs 192 pounds (87 kg). Other roll sizes are available. Installers of our products have

repeatedly commented that they enjoy the easy installation. Rolling out Grasspave<sup>2</sup> is similar to rolling out carpeting and coverage is fast and efficient. The mat system can be easily cut to fit around trees, irrigation, curbing, or other terrain. The rolls have snap-fit connectors to attach to adjacent rolls, making one unified, contiguous system. This unified mat system adds stability and continuity in design. Grasspave<sup>2</sup> can just as easily be snapped to Gravelpave<sup>2</sup> to add stability and product variation.

Hydrogrow

Another reason Grasspave<sup>2</sup> is the industry leader is the addition of Hydrogrow soil amendment, which is supplied with your order. Hydrogrow is engineered to help grass grow in our sand based root zone. The results are amazing and our Grasspave<sup>2</sup> areas often look healthier than surrounding turf. By using this special mixture in the sand, porosity will be maintained, turf will be attractive, and aeration will not be necessary.

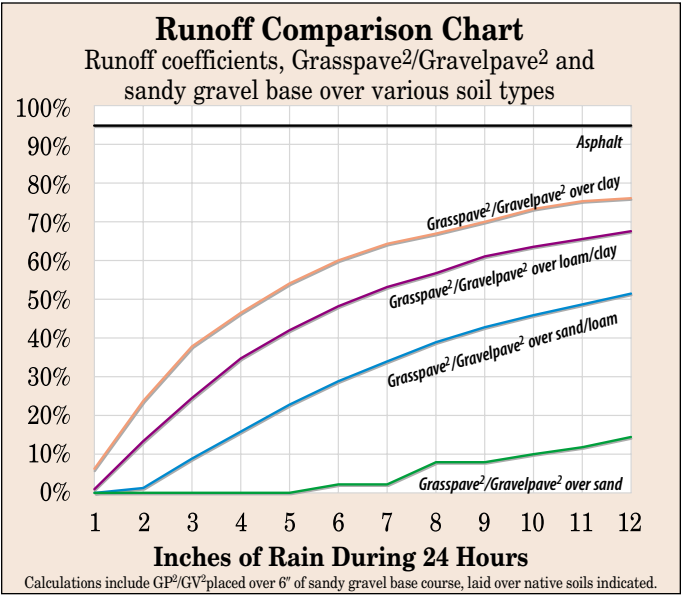
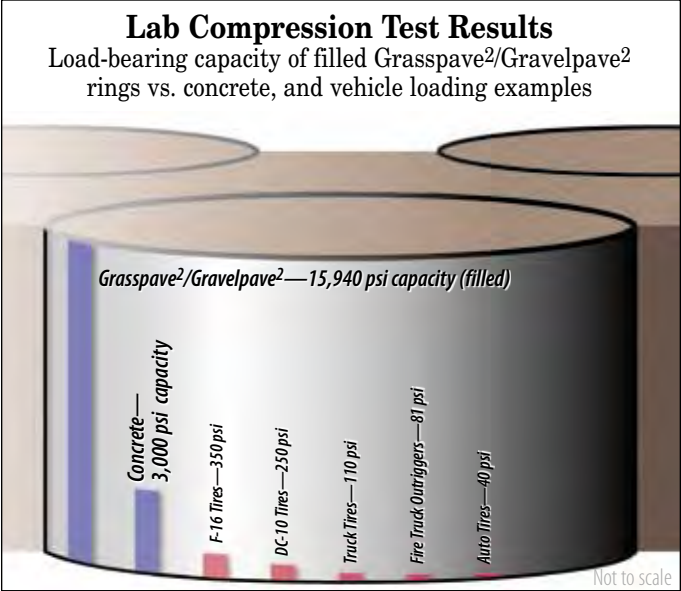
Sand Fill

Grasspave<sup>2</sup> is the only grass paver on the market specifying sand as part of its cross section. Sand is the best medium to provide water and air to the roots and still provide high compressive strength. The United States

Golf Association uses sand for every USGA golf course and nearly every professional and collegiate turf athletic field uses a sand cross section as well. Topsoil (or other organics fill material) in the rings will eventually compact and damage the root zone. Sand negates the need for mechanical aeration, which can damage Grasspave<sup>2</sup> and other grass pavers.

Strength When Installed

When installed over a thick base course and compacted to 95 percent modified Proctor, sand-filled rings can support 5,700 pounds per square inch (psi) without deflection or compromise to safety. The cylinder is the strongest shape to support compressive loads because it has no corners. Supporting heavy loads with the rings allows us to use less plastic in the product creating a 92 percent void area for root development, combined with strength! Less plastic means a lower cost for you.



Fort Shantok State Park, The Mohegan Tribe, Uncasville, CT—Low-maintenance parking lot stable for cars, strollers, and wheelchairs. This lot is plowed in the winter.





Traffic Frequency

Grass as a surface material can withstand from two to six (varies with grass species and environmental conditions) trips daily over the same spot. This suggests that most parking applications we pave with asphalt today could be paved with Grasspave<sup>2</sup> instead. Vehicles can remain parked on grass for extended periods of time, provided some relief can be given for a few days for the grass to recover.

Lifespan

Grasspave<sup>2</sup> has a projected lifespan of 60 years. Compared to asphalt with a lifespan of 15 years; and concrete with a lifespan of 25 years, Grasspave<sup>2</sup> will save you money on replacement costs.

Irrigation

Grass needs water and you may need to have irrigation installed. Grasspave<sup>2</sup> has a sand based root zone which usually requires slightly more water than a normal topsoil or organic root zone. If golf courses in your area use irrigation systems, you probably should in your Grassapave<sup>2</sup> installation.

Gravelpave<sup>2</sup> Characteristics

Fabric, Ring and Grid

When we developed Gravelpave<sup>2</sup> in 1993, our goal was to provide designers a second option for a porous pavement that can tolerate high frequency and low-speed traffic. By molding our ring and grid structure onto a non-woven polyester filter fabric, we were able to create a new product that contains gravel and prevents particle migration and rutting.

Gravelpave<sup>2</sup> is the only system specifically designed for aggregate containment porous paving. The cylinders displace the load onto an engineered base course and hold the decorative gravel in place. The fabric keeps the top-dress gravel from compacting into the road base, acts as a weed and vegetation barrier, and suppresses dust.

Traditional pavements, including gravel roads, are designed to shed water and keep it away from the pavement's cross-section. Gravelpave<sup>2</sup> is designed to do the opposite—welcoming water down through the system. Plus, Gravelpave<sup>2</sup> will not rut, wash-board, or puddle like traditional gravel roads.

Snap-Fit Fasteners

Designed into Gravelpave<sup>2</sup> is a snap-fit fastener, a two-pronged arrow that fits into a rectangular slot. Simply push the slot over the prongs to easily snap together panels of Grasspave<sup>2</sup>. To take them apart, just squeeze the prongs together and lift off the slot.

Should the fasteners of one mat not align over the distance of another mat, then anchor pins (or eight inch ring shank nails and large washers) can be used to secure the mats along the seam. Forcing the alignment can cause the mats to ripple and not lay down evenly.

Traffic Frequency

Gravelpave<sup>2</sup> has no limits on frequency or duration of traffic on the system. Park or drive as often as you like on Gravelpave<sup>2</sup>. However, speeds should be kept at or below about 20 mph (30 km/h).

Durability

Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are made from flexible High Density Polyethylene (HDPE) plastic with UV inhibitors, which withstands repeated freeze-thaw cycles and continuous subzero temperatures without cracking. HDPE resists aggressive chemicals such as road salts, motor oils and fuels.

HDPE is highly abrasion-resistant and is unaffected by extremes in pH. A well-maintained Gravelpave<sup>2</sup> installation will last 25 years in most climates.

Aesthetics

Part of what draws many designers to use Gravelpave<sup>2</sup> is the ability to have an area maintain a natural look. Many times native soils or gravel can be used as fill material, complementing surrounding areas. Gravelpave<sup>2</sup> is available in four standard colors—black, tan, gray, and terra cotta (custom colors are available at additional cost). Ring colors are intended to blend with the gravel color so they will be less visible should some portion of the rings show.

A small amount of excess stone fill should be left above the top of the rings to provide visual cover and additional UV protection. This excess will migrate, but usually not very far.

Size and Shape Requirements for Gravel Fill

You will need one and a quarter inch (3.2 cm) of gravel fill, before compaction. After compaction the gravel should be only be slightly higher than the rings (1/8 inch, 3 mm above). The following criteria for gravel fill will make the most of the systems performance:

- Hard—resistant to breaking, crushing or crumbling
- Sharp and angular (do not use rounded pea gravel)
- Clean, washed (free of fines)
- Size 3/16 to 3/8 inch (5 mm to 1 cm)

Other fill material may be used in certain situations, but may be considered use-specific or experimental. Please consult with our technical support staff regarding fill material not meeting the above criteria or for installations requiring “binders.”



| Invisible Structures—Standard Product Roll Sizes                                                                                                                            |  |       |     |        |      |          |     |                |                 |        |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------|-----|--------|------|----------|-----|----------------|-----------------|--------|-----|
|                                                                                                                                                                             |  | Width |     | Length |      | Diameter |     | Area           |                 | Weight |     |
| Model                                                                                                                                                                       |  | m     | ft  | m      | ft   | m        | ft  | m <sup>2</sup> | ft <sup>2</sup> | kg     | lbs |
| 1010                                                                                                                                                                        |  | 1     | 3.3 | 10     | 32.8 | 0.5      | 1.7 | 10             | 108             | 22     | 48  |
| 2020                                                                                                                                                                        |  | 2     | 6.6 | 20     | 65.6 | 0.8      | 2.7 | 40             | 430             | 87     | 192 |
| Rolls can be installed manually (2 people advised). Rolls apply to Grasspave <sup>2</sup> , Gravelpave <sup>2</sup> , Draincore <sup>2</sup> , and Slopetime <sup>2</sup> . |  |       |     |        |      |          |     |                |                 |        |     |

Denver Tech Center Corporate Client, CO—Curving Grasspave<sup>2</sup> firelanes around both buildings lends opportunity for private outdoor lounge area for employees who can also enjoy the garden view from their office windows.





Dust Suppression

Dirt and gravel roads have the potential to kick up dust and dirt when traversed. Many communities have regulations limiting or eliminating gravel surfaces from new construction. Rest assured, if you design a Gravelpave<sup>2</sup> surface you will be getting a virtually dust-free surface. The clean and washed fill material required to fill the rings will not have any more dust than an asphalt-paved surface. Gravelpave<sup>2</sup>'s geotextile fabric will prevent the dust-sized particles contained within the base material (existing gravel surface or dirt), from being displaced by moving tire or wind forces.

Industry Advantages

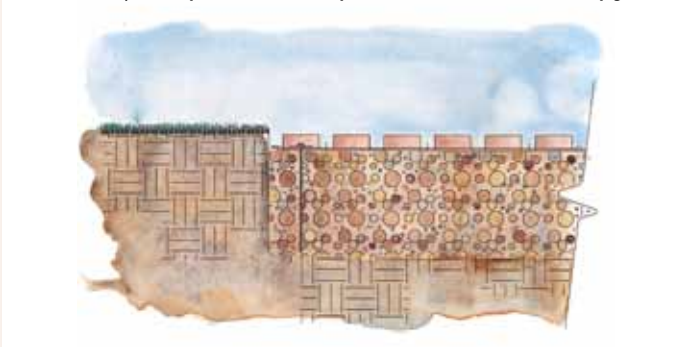
Economic Advantages

Whether you are an engineer, architect, landscape architect, contractor or homeowner you will be concerned with the cost of your project. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> will save you money. Our products will save on design costs, installation costs, component materials, maintenance/operations expenses and lifecycle costs. We can find a way to reduce your site expenses with our porous pavers.

When designing, you may be able to eliminate or reduce stormwater filters, detention basins, conveyance lines, modifying grading requirements, or many other "necessities" associated with asphalt or concrete. A great deal of your stormwater mitigation plan can be built into Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>.

Installers have been astounded by the speed and efficiency for which large areas can be accommodated by our large rolls. Unrolling our mats, snap fitting, and cutting is easy and requires no special machinery. Please view our technical specifications (from [www.invisiblestructures.com](http://www.invisiblestructures.com), call 800-233-1510, or available through our partner network) for the installation procedure. A brief installation overview is also on pages 8 and 10).

Compacted sandy gravel road base placed above compacted subgrade, 95% modified Proctor density. Gravelpave<sup>2</sup> rolls are laid, pinned, and filled with clean, sharp gravel.



In addition to cost savings in the design phase, you may be able to eliminate other components during installation such as root protection for trees, grates, manholes, curbing, and tree and vegetation removal costs.



Oakdale Nature Preserve, Freeport, Illinois—Gravelpave<sup>2</sup> reduces erosion and rutting in this ADA accessible trail.

Maintenance and operations costs are significantly reduced over asphalt and concrete surfaces. A. (Andy) E. Lindsey, Director of Grounds Maintenance, University of South Alabama, in his written analysis dated February 18, 1999, compared the cost of our porous systems to asphalt pavement using historical data from university records. The conclusion was a \$56,000 savings over 20 years, by using Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>.

Our products can save you the most money by combining your surfaces' uses into one area. Multiple surface use means savings on real estate, design costs, maintenance, insurance and more. You can have a fire lane that doubles as "green space" for employees or visitors, combine a parking lot with a bio-swale and stormwater mitigation system, and expand your lawn into the driveway. The Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> installations at NRG Stadium, Houston, Texas, pull quadruple

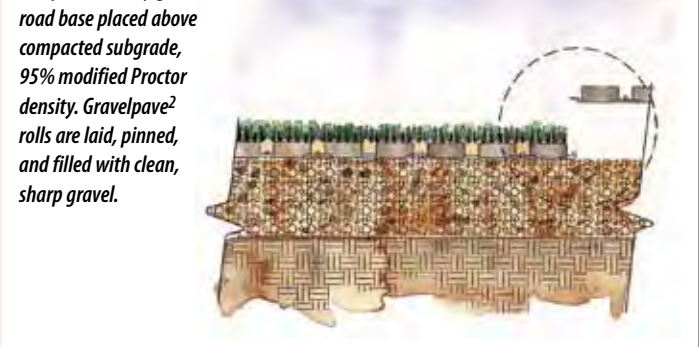
duty, providing over seven acres of parking, stormwater mitigation, required "green space," and an outdoor festival site which generate additional income.

As mentioned above, Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> have a longer lifespan than asphalt. Compound the above savings with the longer lifespan, and you can have a lifecycle cost which can save thousand of dollars on even moderately sized installations.

Competitive Advantages

Our porous pavers have advantages over impervious surfaces, but we are proud to compete with any other plastic porous pavers manufactured. Our products are the strongest on the market—15,940 psi installed to specification (2.29 million lbs./ft<sup>2</sup>; 109,906 kPa; 11.2 million kg/m<sup>2</sup>; 20.6 million lbs./yd<sup>2</sup>). Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> have

For Grasspave<sup>2</sup>:  
Compacted sandy gravel road base placed above compacted subgrade, 95% modified Proctor density. Grasspave<sup>2</sup> rolls are laid, pinned, and filled with clean, sharp gravel.



NRG Stadium (formerly Reliant Stadium / The Astrodome), Houston, TX—30,800 m<sup>2</sup> (317,000 sq ft) of grass porous paving. Provides parking, stormwater management, and a cool-multipurpose surface for festivals and events.



92 percent void space for the best root development and grass coverage (Grasspave<sup>2</sup>) and the most volume available for desired fill (Gravelpave<sup>2</sup>). Most other plastic pavers come in rigid unit blocks, which are cumbersome to install and difficult to cut and shape. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> rolls are considered the favorite to work with by installers, for the flexibility, continuity, and speed of installations. Grasspave<sup>2</sup> is the only product on the market specifying sand infill for the grass roots. Sand is recommended as the infill of choice for grass pavers by Professor Bruce K. Ferguson, Univ. of Georgia, author of the book, “Porous Pavements.”

**Competing Technologies**

Porous paving technology has made great strides not only in flexible plastic pavers but in other areas as well. Permeable asphalt, permeable concrete, interlocking unit blocks, reinforcement mats, and concrete grid pavements, have all improved and advanced to meet the growing demand for environmentally friendly technologies. It is Invisible Structures’ firm belief that you should use porous paving, even if it is not our product line, whenever possible. The more you use these technologies, the better accepted they become: If you have to pave, porous pave!

Invisible Structures also contends that while these competing technologies have their place, in most instances, our Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> systems outperform, last longer, require less maintenance, look better, and are easier to install. Check with our technical specialists at 800-233-1510 for the latest data.

**Designing for Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>**

**Design for Use**

There is an area in your development, site, or home that will most likely benefit from Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>. We advise that you take a look at proper use patterns, site conditions, and other specifications to get full advantage and long life out of our products. *Invisible Structures, 800-233-1510, is available for preliminary design assistance and consultation. Please note that other porous paving systems are NOT interchangeable with Grasspave<sup>2</sup> or Gravelpave<sup>2</sup>, consult our technical specifications for full installation instructions.*

**Considerations for Design:**

- High use, low speed, and unlimited traffic volume is optimal for Gravelpave<sup>2</sup>
- Low to moderate use, low speed, with recovery time is perfect for Grasspave<sup>2</sup> or Gravelpave<sup>2</sup>



*Vancouver City Works Yard, Vancouver, British Columbia—main staff parking lot, done in Gravelpave<sup>2</sup>.*



*Fire lane, San Mateo, CA—Many native grasses and other attractive vegetation can be grown in Grasspave<sup>2</sup>.*

- Keep the porous paving area free of sediment and erosion from adjacent areas as they can cause drainage and aesthetic issues. Extra care should be taking for use in swales or berms.
- Slope should be considered. Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> perform the best for all vehicles when the slope is no greater than 8 percent. Light vehicles (golf carts), bicycles, and pedestrian areas can have up to a 20 percent slope. Grasspave<sup>2</sup> in fire lanes should not exceed five percent (consult your local fire departments).
- Check the permeability of existing underlying soils. Percolation rates should be .64 cm to 1.3 cm of water per hour (EPA guidelines).
- The water table should be about three feet (approx. 1 m) below base course in most instances.
- Bedrock should not be closer than two feet (0.6 m) below base course.
- Avoid use of Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> in areas where high speed acceleration or braking and turning occur. Examples are entrances and exits to parking lots that connect to higher speed roads.

*If your site varies from these conditions, please consult ISI directly, 800-233-1510, as some conditions can be overcome with design and component adjustments.*

**Base Course Design**

Calculating the depth and composition of materials for the base course incorporates the same design criteria as for other pavements:

- Load-bearing capacity of native (or fill) subsoil,
- Plasticity or impact of moisture on strength and longevity,
- Frostheave potential, and
- Traffic load, frequency and/or duration.

**Sample Base Course Depths**

Please consult with a soils engineer for site-specific base requirements. Generally, the depth that is used under asphalt will be the requirement under

Grasspave<sup>2</sup>/Gravelpave<sup>2</sup>. Golf carts and pedestrian traffic may require nothing over sandy gravel soils, and just two to four inches of base course (5–10 cm) over very weak soils. Cars usually need a six- to eight-inch base course (15–20 cm). Buses, trucks, and fire engines can easily require eight to 12 inches (20–30 cm) or more. The use of geotextiles, below the base is not required, but will prevent integration with subsoils and is strongly advised in areas of clay or silt soils and frost heave. *Do not use 100 percent limestone base as limestone will compact and become impervious—If limestone must be used, mix with 25–30 percent sand (AASHTO M6 or equal).*



*Garden of the Gods Park, Colorado Springs, CO—Horse and pedestrian trail stabilization to prevent ruts previously as deep as three feet. Horse traffic contributes to loose soil erosion without Gravelpave<sup>2</sup>. Terra Cotta rings were used to match existing sandstone soils.*



**Bedding Sand Not Necessary**

Do not use a sand setting base with our products. Unlike concrete pavers, bricks, and other rigid pavers—our Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are flexible and do not require sand to level.

**Edge Protection**

For aesthetic and maintenance considerations, you may want to design in a durable edging material to separate our porous pavers from adjacent areas of turf or to simply delineate a fire lane or path. With Gravelpave<sup>2</sup>, an edging can prevent vegetation from encroaching onto the system and can prevent the gravel fill from migrating at the edge. Steel, aluminum, wood, brick, or concrete are all acceptable edging materials. Keep the edging flush or slightly higher than the porous paver grade.

**Maintenance and Operation**

**Grasspave<sup>2</sup> Maintenance**

Irrigation is required in dry climates. Any popular pop-up system can be used. Simply cut out rings to reveal the irrigation head. If golf courses in your area use irrigation systems, you probably should in your Grasspave<sup>2</sup> installation. Be careful not to over-water as this will encourage shallow root development.

Fertilize once a year with an NPK slow-release fertilizer that contains trace elements. There are many brands on the market. Do not aerate! You'll end up with product damage. When installed using sand in the rings, there will not be a compaction problem. Be careful not to use clay-based sods in pedestrian or vehicular traffic

areas—use sandy soil sod, or seed and mulch. There seems to be no problem with sod selection for fire lanes. If the Grasspave<sup>2</sup> area has just been seeded or sodded, drive on it only in an emergency.

**Gravelpave<sup>2</sup> Maintenance**

Potholes will only appear if the base course has not been compacted properly before laying the rings or if the base material is allowed to mix into clay soils below (use nonwoven fabric to keep separate). Should this occur, remove a section by vacuuming the gravel from the rings, unfasten the snap fit fastener, bring the base course to the proper grade and compaction, put the Gravelpave<sup>2</sup> square back in place, anchor, and fill to the top of the rings. Seasonally check the rings in high-traffic areas and entrance lanes for lower levels of fill and replace by sweeping gravel from other areas to bring it level again. Leaves should be raked or vacuumed and not allowed to decay. Organic matter will stimulate weed growth and reduce porosity. To attack any occasional weeds that may locate within the Gravelpave<sup>2</sup> installation, simply spray them with a weed killer (such as Roundup™) and remove them when dead.

**Cold Climates Concerns**

Porous pavement thaws faster than conventional pavements because it allows melted water to flow directly through the pavement, increasing the temperature in the cross-section

Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> are made from flexible High Density Polyethylene (HDPE) plastic with UV inhibitors, which withstands repeated freeze-thaw cycles and continuous subzero temperatures without cracking.



Private Residence, Houston, TX—Grasspave<sup>2</sup> supported grass sections in this custom home driveway.



Grand Canyon Trust, Flagstaff, AZ—Thirty-car employee parking lot after several years of snow removal and excellent maintenance. Spaces are defined with concrete bumpers.



Fire departments usually require you to plow snow that is over three inches deep. (7.5 cm). Consult with your local fire department for their guidelines.

Educate your snow removal crew to take care not to have the plow blade make contact with the Grasspave<sup>2</sup> or Gravelpave<sup>2</sup> systems. Experienced snowplow drivers can leave a thin layer of snow on the systems or they can attach skids (¾ inch—2 cm) to the bottom of the blades.

Sales and Technical Support Partners

Invisible Structures, Inc. welcomes the opportunity to review designs and answer technical questions. Design details, technical specifications, white papers, and other support material may be downloaded from our web site. See a comprehensive list of project profiles and case studies at [www.invisiblestructures.com](http://www.invisiblestructures.com)

In addition to the high-quality, professional, experienced staff at our main headquarters in Colorado, we have excellent partners representing their geographical areas. They are prepared to assist you locally, at all levels, with your project needs. Please contact us or check our web site for your partner name and information.

Contact Information

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email: [sales@invisiblestructures.com](mailto:sales@invisiblestructures.com)

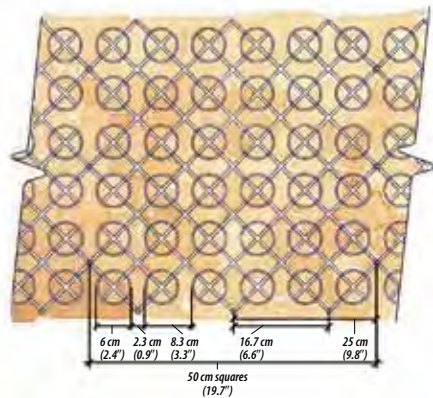
Grasspave<sup>2</sup> and Gravelpave<sup>2</sup> Patent No. 5,250,340  
Held by William Bohnhoff, ASLA.  
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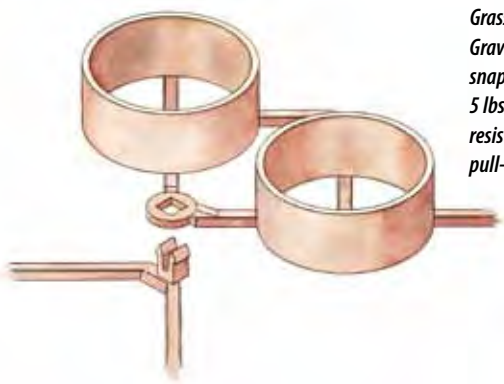
Grasspave<sup>2</sup> is used as a cool, stable surface for picnic tables at a community pool.



City of White Rock Operations , White Rock, British Columbia—Gravelpave<sup>2</sup> is used in the main drive aisle of the works yard and Grasspave<sup>2</sup> is used for the parking bays.



Gravelpave<sup>2</sup>: Available in several roll sizes.  
Squares weigh 1.97 kg (4.34 lb) each.  
Colors: Cashew Brown, Black, Pewter Grey, Terra Cotta.  
Resin: HDPE.  
Strength: 1120 kg/cm<sup>2</sup> (15,940 psi)



Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>: Reusable snap connector requires 5 lbs to connect and resists 70 lbs of pull-apart force.



Glendale Community College, Glendale, Arizona—The Gravelpave<sup>2</sup> fire lane (foreground) and Grasspave<sup>2</sup> fire lane (background) complement the surroundings at the Glendale campus.



### Quick Reference Guide for Grasspave<sup>2</sup> and Gravelpave<sup>2</sup>

|                                               |  <b>GRASSPAVE<sup>2</sup></b><br><small>BY INVISIBLE STRUCTURES™</small> |  <b>GRAVELPAVE<sup>2</sup></b><br><small>BY INVISIBLE STRUCTURES™</small> |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                                   | Connectable ring and grid system                                                                                                                          | Connectable ring, grid, and integrated fabric                                                                                                                |
| Also Included                                 | Hydrogrow polymer—exclusively for Grasspave <sup>2</sup>                                                                                                  | Geotextile fabric molded to grid (exclusive to Gravelpave <sup>2</sup> ) and anchors                                                                         |
| Available in Large, Flexible Rolls            | Yes, various sizes—see roll chart page 14                                                                                                                 | Yes, various sizes—see roll chart page 14                                                                                                                    |
| Colors                                        | Black                                                                                                                                                     | Black, gray, tan, terra cotta, custom colors extra                                                                                                           |
| Components Needed for System                  | Base course, sand, labor, sod or seed (irrigation is recommended)                                                                                         | Base course, 1 1/4" (3.2cm) of 3/16" to 3/8" decorative gravel, and labor                                                                                    |
| Traffic                                       | Low speed, light to moderate                                                                                                                              | Low speed, unlimited use                                                                                                                                     |
| Compressive System Strength                   | Filled: 15,940 psi (2.29 million per sq ft / 109,906 kPa)                                                                                                 | Filled: 15,940 psi (2.29 million pounds per sq ft / 109,906 kPa)                                                                                             |
| Life Span                                     | 60 years                                                                                                                                                  | 25 years                                                                                                                                                     |
| Recommended Maximum Slope                     | 5% fire lanes, 8% car/light truck, 15-20% golf carts, pedestrian use, and trails                                                                          | 5% fire lanes, 8% car/light truck, 15-20% golf carts, pedestrian use, and trails                                                                             |
| Stormwater Storage                            | Yes                                                                                                                                                       | Yes                                                                                                                                                          |
| Clean Pollutants through Bioremediation       | Excellent                                                                                                                                                 | Good                                                                                                                                                         |
| Air-Conditioning Effect                       | Yes                                                                                                                                                       | No                                                                                                                                                           |
| Heat Island Mitigation                        | Yes—Albedo Number .40                                                                                                                                     | Yes, with light colored gravel fill—Albedo .16                                                                                                               |
| Reduces Runoff and Non-Point Source Pollution | Yes                                                                                                                                                       | Yes                                                                                                                                                          |
| Recycled Content                              | 100% recycled HDPE plastic                                                                                                                                | 100% recycled HDPE plastic with recycled remnant fabric                                                                                                      |
| Erosion Control                               | Yes                                                                                                                                                       | Yes                                                                                                                                                          |
| Airborne Dust Capture and Retention           | Excellent                                                                                                                                                 | Good                                                                                                                                                         |
| Promotes and Retains Tree Growth              | Yes                                                                                                                                                       | Yes                                                                                                                                                          |
| Recharges Groundwater                         | Yes                                                                                                                                                       | Yes                                                                                                                                                          |



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Gravelpave<sup>2</sup> and Grasspave<sup>2</sup> Patent No. 5,250,340  
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# **Grasspave2** **Maintenance Guide** for Owners and Maintenance Staff

by

**Invisible**  
**Structures, Inc.**

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Golden, Colorado 80401  
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[www.invisiblestructures.com](http://www.invisiblestructures.com)

# Grasspave<sup>2</sup> - Maintenance Guide

Regular maintenance is required to maximize traffic on grass paved areas with minimum wear and tear problems. The following maintenance and repair information, compiled from more than a decade of client experience with Grassrings and Grasspave<sup>2</sup>, will enable staff to keep your grass paved areas healthy and beautiful all year long.

*For more information about basic maintenance, or for answers to questions about a unique site, call Invisible Structures, Inc., toll free, at 1-800-233-1510.*

## Normal Maintenance

Grasspave<sup>2</sup> paved areas require basically the same care as other turf areas. Mow, irrigate, and fertilize as necessary for selected grass species for a healthy turf. As levels and frequency of traffic increase, greater stress is placed on the turf, which requires careful observation and response by maintenance staff. Recommended fertilizers and micronutrients:

- **N,P,K Fertilizers** - for other fertilizer applications, use fertilizers best for grass species used. As traffic frequency increases, the need for additional nitrogen increase in order to make the grass GROW faster and replace damaged blades quickly. Take care to use fertilizers that do not have poor materials such as clay as "fillers." The best fertilizers are:

- slow release (temperature activated)
- liquid concentrates (through irrigation system)

- **Micronutrients** - apply fertilizer supplemented with micronutrients, such as Humate, once a year. Or, apply the micronutrient in a separate application.
- **Other Chemicals** - apply water, herbicide, and insecticides as needed in response to site specific needs/problems.

## Aeration

**IMPORTANT!! DO NOT AERATE**

**GRASSPAVE<sup>2</sup> INSTALLATIONS!**

Aeration is a treatment for compaction problems, associated with poor percolation.

Grasspave<sup>2</sup> paved areas do not need aeration because, if properly installed, compaction will not occur. Aeration equipment will damage the Grasspave<sup>2</sup> structure and could prevent its long term function.

If compaction and poor water penetration problems arise, they can be due to filling rings with organic soils. (Many sod farms grow sod in high organic soils, such as peat.) When these soils dry out, there can be severe shrinking. The use of dry fertilizers with clay as a "filler" material (sometimes as much as 70% of the bag contents) can also contribute to compaction and poor water penetration. Organics (silt, clay, peat) can effectively seal off the surface of the grass paved areas, preventing entry of air and water to the roots.

Poor percolation can also be a result of chemical change to soils of ionic charges that might increase water repellency of soils. Solutions include treatment with products or chemicals such as wetting agents (diluted detergents), gypsum, etc. Your local County Extension agent can be an excellent source for advice on local conditions.

## Antifreeze Spills - See Oil/Antifreeze Spills

# Grasspave<sup>2</sup> - Maintenance Guide

## Bare Spots - Causes and Solutions

It is important to determine the cause of bare spots in order to select the most appropriate solution. Some possible causes and solutions:

(Cause / Solution)

- *Incorrect sod (sod grown in peat, silt, or clay) for high traffic areas*

Totally replace with sand grown sod and rings, for low traffic areas; amend soil with chemicals such as detergents and gypsum and add sand to cracks for low traffic areas, and reseed as needed.

- *Poor quality seed*  
Reseed with fresh source.
- *Erosion*  
Intercept source of water and redirect to reduce impact.
- *Lack of nutrient*  
Increase water and fertilizer.
- *Shade*  
Reduce shade cover or change grass to more shade tolerant species.
- *High traffic*  
Increase fertilization and water, and / or reduce traffic frequency by limiting or alternating zones of access.

## Bare Spots--Repair

1. Fill rings uniformly with clean sand (concrete sand is preferable) to the top of all rings. When seeding, lightly rake to disturb and loosen surface.
2. Moisten area with a diluted detergent solution to break the soil's surface tension.
3. Topdress small bare areas with a mixture of sand and grass seed that either matches the installed grass species or changes the species for an environmental response (such as a shade mix).
4. Mulch with a layer of cellulose (paper)

placed over the topdressing mix to speed germination and prevent surface erosion by irrigation or rainfall. Commercial mulch materials should have a fine texture, such as those used for hydromulching. If visually acceptable, thin strips of newspaper (per office shredders) can be used very effectively as mulch.

5. Inject Hydrogrow. Hydrogrow's advantage is that it is able to store moisture and dissolved nutrients within the root zone, making them directly available to plant roots. Check local dealers or equipment rental sources for machines (such as Olathe) to inject dry polymers by compressed air into existing installations.

## Irrigation

Regular irrigation is necessary for grass subjected to the stress of daily traffic, even in areas with "historically high average rainfall." The combination of daily traffic and even a week of without rainfall can quickly destroy a quality grass paved area. Repaired areas also usually require supplemental water to establish grass.

The irrigation system can be a hose and sprinkler, a simple manual valve system, or an automatic pop-up system as appropriate for the owner's maintenance program and budget. Automatic irrigation systems are low in labor costs, provide quick response to usage, conserve water, and allow for easy and rapid fertilizer applications. Standard large diameter spray heads will keep the irrigation cost per square foot to a minimum. Manual systems have higher labor and water costs, and variable response to water needs.

Buried low-pressure porous pipe irrigation systems have also been used with success. This type of irrigation can work during daylight hours without wasteful spray damaging people or objects above the ground. However, grass leaves do not receive cleansing from water falling from above.

# Grasspave<sup>2</sup> - Maintenance Guide

## Oil/Antifreeze Spills

**Small Spills** - Naturally occurring micro-organisms in turf can break down oil and "clean" spills prior to their reaching the water table below. Thus, turf is capable of accepting oil drippings without harm to grass plants. Small amounts of diluted detergent (dishwashing concentrates) applied to minor spills will also help to reduce oil particles to manageable size and speed recovery.

**Large Spills** - Large oil or antifreeze spills will effectively sterilize affected soils for years and prevent growth of most vegetation. Thus, affected soil, base course, rings, and grass should be replaced and soil disposed of according to local codes relating to hazardous materials.

To create a uniform edge for repair, use a sod cutter or circular saw with masonry blade to cut the upper 2" of soil and Grasspave<sup>2</sup> structure. Be sure to wear appropriate eye and body protection when cutting into rings, soil, and gravel. The disturbed base can be dug by shovel or backhoe depending on the size of the area. Replace materials per Grasspave<sup>2</sup> Installation Guide .

## Rings--Repair When Exposed

When properly installed, Grasspave<sup>2</sup> units are protected from damaging ultraviolet (UV) rays, which make plastics brittle, because they lie just below the soil surface. When impressions of the rings are visible as creases in grass blades (during the growing season), or when actual rings are visible to the eye, immediately cover the exposed rings with sand topdressing to a depth of between 1/8" to 1/4" above the top of the rings. This is easily done by spreader equipment or with a shovel and rake.

## Ruts

The appearance of ruts in grass paving is a sign of improper installation. Possible errors

include:

1. Improper depth of base, or inadequate compaction
2. "Topsoil" placed between base and Grasspave<sup>2</sup>
3. More than 1/2" of soil above top of rings

Contact the original contractor to repair and re-install to specifications.

## Shade

As trees mature in the landscape, grass paved areas (especially those carrying daily traffic) can experience a loss of grass vigor due to increased levels of shade. Some grasses are more tolerant of shade than others and may have to be seeded into the affected area.

This can be done without removing the existing grass because a shade tolerant mix will overcome a weaker grass. For a more rapid and complete conversion, however, an application of a short-term herbicide such as Roundup can be applied according to manufacturer's recommendations in preparation for reseeding. Use reseeding steps in "Bare Spots--Repair" described on Page 3.

Grass paved areas not subject to daily traffic (such as firelanes) will probably not show any stress from shading.

## Snow Removal

Grasspave<sup>2</sup> paved areas can be easily plowed of snow using standard truck-mounted snow plow blades with small skids on the corners to keep the bottom of the blade off grass surface by approximately 1". This minimizes surface skinning. This apparatus should be used regardless of the pavement surface type.

The Grasspave<sup>2</sup> paved area surface should be at, or slightly below, that of adjacent hard surfaces to avoid gouging. Grass plants are dormant in the winter and damage to grass blades will be replaced with new growth in the spring. Damage to grass crowns can be

# Grasspave<sup>2</sup> - Maintenance Guide

repaired by topdressing as described in "Bare Spot--Repair" on Page 3.

Avoid long-term pileup of snow on grass paved surfaces to minimize possible damage from snow mold and other related diseases. Snow melts from grass areas at about the same rate as that of asphalt.

## Thatch Removal

Over time, most grass installations, including Grasspave<sup>2</sup> areas, will develop layers of thatch--usually defined as old leafless stems of grass, or layers of grass clipping in various state of decomposition. Thatch is a problem because it can prevent percolation and, if allowed to build layers over 1/2" in depth above rings, can allow compaction to take place above the Grasspave<sup>2</sup> structure. This layer of thatch must be removed for the long-term health of turf.

Different grasses require different techniques for thatch removal. The two most common methods are:

- Use of spring tines on rotary mower blades (best for buildup from clippings)
- Use of sod cutter, set to shallow depth to skim tops of rings (best for air/ waterborne soil deposits over long term)

Depending on the depth of thatch removed and the condition of grass crowns remaining, it may be necessary to topdress and reseed. (See "Bare Spots--Repair," page 3.)

## Utilities--Subsurface Access

Subsurface utilities can be installed or repaired by cutting the Grasspave<sup>2</sup> structure and turf with a sod cutter (set to depth below the Grasspave<sup>2</sup>), pulling/rolling up the section, and setting it aside. To reinstall Grasspave<sup>2</sup>, rebuild the base as in a new installation (See Grasspave<sup>2</sup> Installation Guide) and replace the Grasspave<sup>2</sup> and turf. Be sure to compact the base course material to 95% Proctor (3 to 4 passes with vibrating roller).

In the case of a broken water or gas line below Grasspave<sup>2</sup> paved areas, use a standard backhoe for rapid and easy emergency access. Reinstall following instructions for a new installation. If necessary, new Grasspave<sup>2</sup> units can be delivered by UPS Next Day anywhere in the country. The finish grade of base course (usually Finish Grade Less 1 Inch) can be used for temporary access until Grasspave<sup>2</sup> and grass are ready to complete the finish surface.



# Grasspave<sup>2</sup> - Maintenance Guide

## Grasspave<sup>2</sup> Normal Maintenance Checklist

### Function

### Frequency

#### **Aeration**

NEVER AERATE GRASSPAVE<sup>2</sup> PAVED AREA

#### **Fertilizing**

As appropriate for selected grass species.

#### **Herbicides/Insecticides**

As needed, following manufacturer's instructions.

#### **Irrigation**

As appropriate for selected grass species and rainfall amounts in area.

#### **Micronutrients**

Apply 1 time year (or every 6 month growing season in warm climate areas).

#### **Mowing**

As appropriate for selected grass species.

#### **Thatch Removal**

Remove when reaches 1/2" in depth above rings.

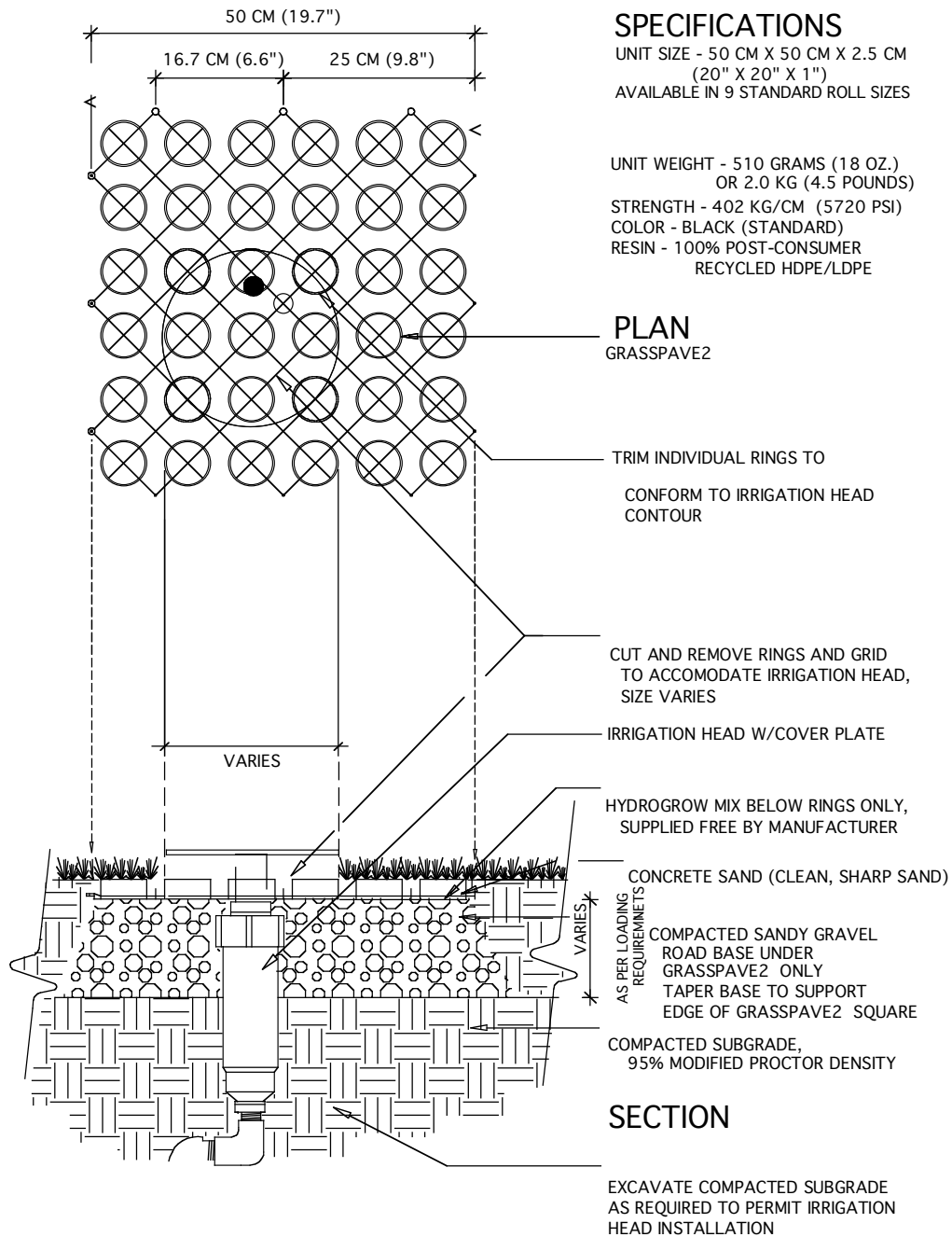
1. Ensure that sandy gravel base is porous.
  - Run hose on base to make sure water flows into base.
  - If area has a low spot which collects water, provide subsurface drainage to remove excess water.
2. Apply Hydrogrow Soil Polymer to base.
  - Apply Hydrogrow Soil Polymer over the area by hand, or small fertilizer spreader, at a rate of 10 lbs per 1000 sf for use with sod, or seeding.

**Warning** - do not place any form of topsoil between sandy gravel base and Grasspave<sup>2</sup> unit!
3. Place Grasspave<sup>2</sup> units over base, use posts and rings to interlock. Cut with pruning shears or knife if needed.
  - Place Grasspave<sup>2</sup> units (with rings up) directly over the sandy gravel base. Use the posts and rings provided to connect the units.
  - If required, use pruning shears or sharp knife to cut web between rings to shape units. "U" shaped pins are not required, but can be used to secure unit to base if there is a slope or rapid speed and stopping involved.
4. Fill Grasspave<sup>2</sup> units with grass -
  - If seeding - fill mat area with clean sharp sand (washed concrete sand) to top of rings, broom to barely expose top of ring. Do not use "topsoil" to fill rings. Apply seed and mulch via hydroseeder, or similar. Topdress with concrete sand to depth of 1/4" thick max., 4 to 6 weeks after seeding, to cover tops of rings.
  - If sodding use thin (.5 inch, or 13 mm) sod - fill mat area with clean sharp sand (washed concrete sand) to top of rings (1 inch, or 25 mm), then place thin sod over sand with tight joints per normal installation. Do not use "topsoil" to fill rings.
  - If sodding with thin sod, fill rings with sand to allow sod soil to cover top of rings by 0.25"-0.5" (6 - 13 mm).
5. Irrigate, fertilize and maintain turf per normal lawn. Protect from traffic until turf root system is well established.

## Grasspave<sup>2</sup> Installation Procedure

# GRASSPAVE2 W/ IRRIGATION HEADS

CHOOSE THIS PRODUCT FOR REINFORCING IRRIGATION HEADS



1

1 OF 1



Invisible Structures, Inc.  
 GP2Irrig04.dwg



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## Cold Weather Performance of Grasspave2 and Gravelpave2

Grasspave2 and Gravelpave2 have many advantages for use in cold climates over hard surface impermeable pavements, such as asphalt and concrete.

Porous Paving is more resistant to freezing. Damp underlying soils hold heat beneath the paved surface (Backstrom 2000). Porous pavement exhibits increased speed in thawing compared to conventional pavements, due to the ability of melted water to flow directly through the pavement, increasing the temperature in the cross-section (2003, "N.E.M.O.").

Grasspave2 and Gravelpave2 are made from flexible, High Density Polyethylene (HDPE) plastic with UV inhibitors, which withstands repeated freeze-thaw cycles and continuous subzero temperatures without cracking. HDPE resists aggressive chemicals such as road salts, motor oils and fuels. HDPE is highly abrasion-resistant and is unaffected by extremes in pH (Eastpoint Oltean Co & Plastic Pipe Institute).

The expansion and contraction of the HDPE in Grasspave2 and Gravelpave2 caused by temperature variations will not affect the performance of the systems. Flexibility in the snap fitting connectors and in the connecting grid, absorb the thermal expansion/contraction due to temperature fluctuations. Since, Grasspave2 and Gravelpave2 are only 6% plastic per volume (of the top 1.25" section), with a coefficient of expansion of 0.00007 [HDPE] (Eastpoint Oltean Co.), these products will not experience any noticeable expansion.

A proper base course material, 3/4 inch minus sandy gravel (25 to 35% void space), will also absorb much of the expansion due to temperature fluctuations, relieving most upward forces. Unlike concrete and asphalt, Grasspave2 and Gravelpave2 can flex and move with the remaining vertical forces imposed by expanding base course and subsoils. The flexible ring and grid structures were engineered to conform to natural undulations and variation in the site contours. This property also applies to shifting in the subsoils and base course due to freeze-thaw cycles.

Quicker thaw times and resistance to freezing, via porous paving, result in less de-icing chemicals and less plowing compared to impermeable hard surfaces. All season maintenance is also reduced with Grasspave2 and Gravelpave2.

In cold climates, Grasspave2 and Gravelpave2 have lifespans of 60 and 25 years, respectively, whereas impermeable asphalt and concrete have projected lifespans of 8 to 15 and 18 to 25 years, respectively.

Backstrom M. 2000. "Ground Temperature in Porous Pavement during Freezing and Thawing." *Journal of Transportation Engineering* – ASCE 126(5) (September – October): 375-381.

Backstrom M, and Viklander M. 2000. "Integrated Stormwater Management in Cold Climates." *Journal of Environmental Science and Health Part A Toxic/Hazardous Substances & Environmental Engineering* 35(8): 1237-1249.

Moser, Emily 2002, "Porous Pavements A Review of Literature," published by Penn State University

"Thermal Expansion and Contraction in Plastics Piping Systems, PPI TR-21/2001" Plastic Pipe Institute.

<http://www.plasticsusa.com/hdpe.html>, plasticsusa.com is published by Eastpoint Oltean Co  
[http://nemo.uconn.edu/reducing\\_runoff/questions.htm](http://nemo.uconn.edu/reducing_runoff/questions.htm) is published by the University of Connecticut

## **Snow Removal from Grasspave<sup>2</sup>**

Since 1982, most of our product sales have been to projects with secondary firelanes that cities required be kept free from depths of snow (usually 2 to 3" max) for emergency access. Over 1000 firelanes have been installed with our grass paver products - with at least half in regions subject to snowfall.

We have given all of the clients, contractors, and city agencies the same guidelines for removal of snow from our surfaces - use skids on the corners of snowplow blades.

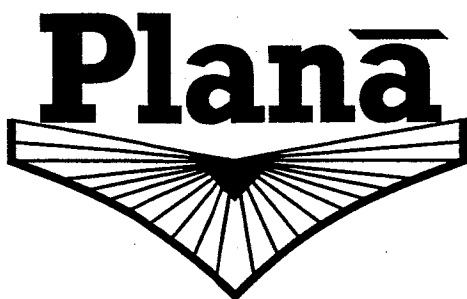
Westfarms Mall in Farmington, Connecticut installed 6 acres of our Grasspave<sup>2</sup> system for parking purposes, primarily used during the Christmas season. The grass looks beautiful after the first 3 years of use. They use skid rollers on dump truck mounted plows and have sustained no substantial damage due to plowing.

The idea to use skid plates was given to us by our very first client - the Snowmass Club, in Snowmass Colorado after they plowed snow 95 days during their first winter of 1982-83. Installed in October, days before snow fell, the 6,000 sf of 6 foot wide grass paved shoulders of the asphalt firelane / cart and pedestrian path had both horizontal and vertical curves in abundance.

Only 4% of the grass pavement was lost the first winter - and the plow did not have skids! They told us how to avoid damage in the future and suggest the skids to all future clients - which we have done. We never had additional requests for replacement product from the Snowmass Club again. Most of the pavement remains in place today except for areas lost to new tennis courts and pathways.

Another means to remove snow is the snowblower - most of which have a height adjustment capability to avoid direct blade contact with the surface. Tractor mounted brooms could be used with extreme care, but are not recommended as the potential for severe damage to the grass plant's crown is too high.

Please call us with any specific questions or concerns. Thank you.



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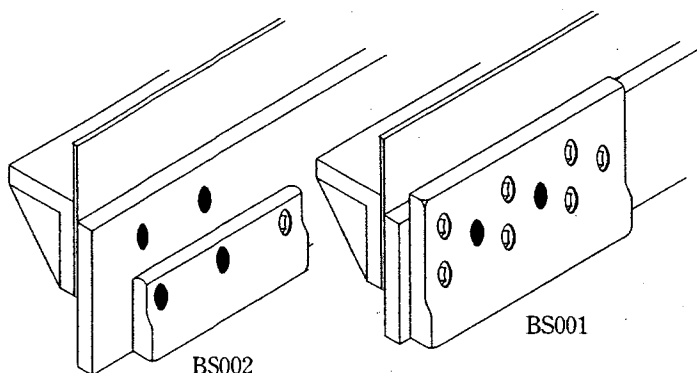
## DESIGNED FOR MILES OF HASSLE FREE PLOWING!

Your complete line of **TUNGSTEN CARBIDE** enhanced wear parts for every make and model of snow plow. When TUNGSTEN CARBIDE is properly fitted to your specific requirements it is **"THE HARDEST STUFF ON EARTH"**

**!!We put the WEAR in WEAR PARTS!!**

**!!WE DON'T MAKE BLADES, WE MAKE YOUR BLADES LAST LONGER!!**

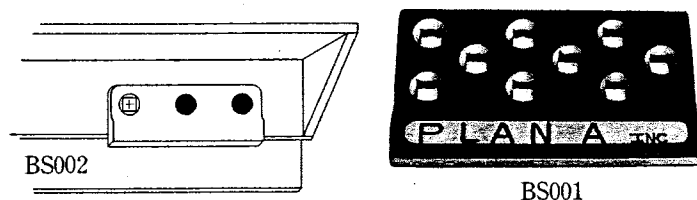
### BOLT ON BLADE PROTECTORS



The discharge end of a snowplow takes a much larger load than does the rest of the plow. Therefore, blades almost always wear out there first. With a little **help** at the discharge end, your blades can go many miles farther.

- Double row of tungsten carbide inserts permanently brazed in the bottom.
- As much carbide as 2 feet of carbide inserted blade.
- Cast work hardening manganese steel frame.
- 2 Sizes: 9-1/2" x 5-1/2" and 8" x 3".
- Bolt pattern fits Standard. Hwy Punched 7/8" x 5" or 3/4" x 6" blades.

### ALSO GREAT FOR PROTECTING YOUR MOLDBOARD



**CARBIDE OUTLASTS STEEL 20  
TO 30 TIMES LONGER!!**

### SNOW PLOW SHOES

Plana, Inc. manufactures tungsten carbide tough shoes for virtually every make and model of snowplow.

- Increase blade life up to 30%.
- Improve plow frame weight distribution.
- Protect moldboards when blades are worn.

For miles of hassle free plowing, use Plana's carbide tough mushroom, sled, and rollover type snowplow shoes.

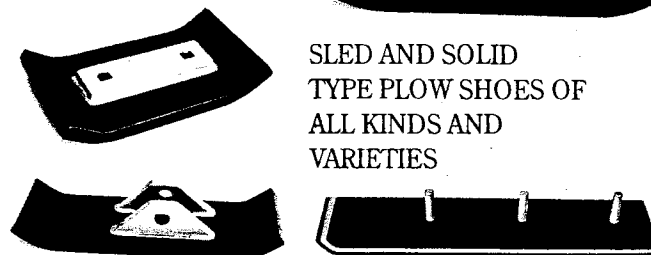
#### FRINK ROLLOVER: FR001



#### MUSHROOM SHOE: MS001



#### SLED AND SOLID TYPE PLOW SHOES OF ALL KINDS AND VARIETIES



To insure proper fit, please have the following information available when you order:

1. Hole size
2. Bracket thickness
3. Distance from top of shoe to hole center
4. Bracket spacing

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**FAX: 909-386-5850** *Sign*



## INVISIBLE STRUCTURES JOB REFERENCES

### **GRASSPAVE2 PROJECTS**

#### **Massachusetts:**

**Parcel 6 Taunton Housing**, CWC Builders, Xquisite Landscaping **Fire Lane**  
**Applewood Condos**, 120 Russett Lane, Boxborough, MA—Parking—2003  
**Bass Pro Shop** Patriot Place, Foxboro, MA 7,000 SF 2007  
**Belmont High School**, 350 Prospect St., Belmont, MA—Payton Constr. Co—2004  
**Black Rock Golf Course** Clubhouse, 99 Old Ward St/Hingham, MA 781.740.1292—J. Read Corp.,Hingham/Harvey—781.740.9225—Parking—2004  
**Chatham Light house**, 31 Main St., Chatham, MA— Parking—2003  
**French Wing Addition to Conservation Center**, Concord, NH—Parking—2003  
**Hampton Inn**, Route 24 & 44, Raynham, MA— Parking—2004  
**Harvard Univ., Cambridge, MA**—Various locations for Emergency & **Fire Lane**—2002  
**Hillside School**, 402 Robin St., Marlboro, MA— Parking—2003  
**Northside Senior Housing**, 17 Antonelli Circle, Dennis, MA—9K SF—**Fire Lane**-Hydroseed —2005 (GC: Austin Ross Corp/Fall River, MA—Brandon Scott 401.474.5177, Installer: Central Nursery, Johnston, RI—401.942.7511  
**Sisters of St Joseph College**, 637 Cambridge St., Brighton, MA—Patriot Site, Inc—2003  
**U.S. EPA New England Regional Office**, Chelmsford, MA— Walkways—2003  
**Weston Elementary School**, Alphabet Lane, Weston, MA—Alexandra Constr—2003  
**Wychmere Harbor Beach& Tennis Club**, 23 Snow Inn Rd, Harwichport, MA/508.432.1000 ValetParking—2003 + 2005 (25K sf ) Owner: Snow Inn, Thompson Corp, Cambridge, MA—Dee Campbell, 617.876.8800—Installer for Snow Inn-Wayne (508.221.0906)  
**Xavierian High School**, Clapboard St.,Westwood, MA—Maverick Constr. Mgt—2004

#### **Rhode Island:**

**Bradley School Sidewalk & Parking**, S. Kingston, RI—2003  
**Village at Mt. Hope Parking** area, Johnston, RI—2003  
**St. George's School**, 372 Purgatory Rd, Middletown. **Fire lane**.  
**Jenks Woods Apartments**, 25 Flat St., Cumberland. **Fire lane**  
**Providence VA Medical Center**, 830 Chalkstone Ave, Providence. **Fire lane**  
**Westview Nursing Home**, 239 Legrif Ave, West Warwick, Access road  
**Swan Point Cemetery**, 585 Blackstone Blvd, Providence, Access road  
**Cox Cable hub station**, 1081 Douglas Ave, Providence, **Fire lane**  
**URI** football stadium under the sideline bench area

#### **New Jersey:**

**Super Walmart**, 1300 US Highway 22, Phillipsburg, NJ  
**Deutch Bank**, 40 Kingsbridge Rd., Piscataway, NJ  
**NJ Public Health Lab**, 28 West State St., Trenton, NJ  
**Kennedy Health Care Rehab Center**, 535 Egg Harbor Rd., Sewell Township, NJ  
**Montclair State University**, 25 East Normal Ave., Montclair, NJ  
**Harrison State Park**, 1 Monument Dr., Princeton, NJ  
**Centenary College**, 400 Jefferson St., Hackettstown, NJ

#### **New York:**

**Pratt Institute**, 200 Willoughby Ave., Brooklyn, NY  
**Renaissance Technologies**, 600 Route 25A, Setauket, NY  
**Glimmerglass State Park**, Cooperstown NY 80,000 SF parking lot 2013

#### **New Hampshire**

**Super Walmart North Conway** 26,000 SF On Outside of Parking Lot

## **STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT**

**IN CONSIDERATION OF** the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed Dougherty Commons development located on Douglass Street in Portland, Maine and contains the following parcels as identified on the City's Tax Assessor's Map: (Map, Block, Lot, 78-C-2, 78-B-7). The site shown on the Subdivision Plat yet to be recorded in the Cumberland County Registry of Deeds. Douglass Commons, LLC, a Maine Limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 10 Free Street, Portland, Maine 04101, the owner of the Premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

### Maintenance Agreement

Owner, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the underdrained subsurface soil filter, catch basins, storm drain pipes, and underdrain pipes (hereinafter collectively referred to as the "stormwater system") as shown on the Grading & Drainage Plan attached hereto as Exhibit B and in strict compliance with the approved Stormwater Inspection & Maintenance Plan and Stormwater Maintenance and Inspection Log, dated April, 2021, copies attached as Exhibit A and C respectively and the annual inspection and reporting requirements of Chapter 32 of the Portland City Code.

Owner further agrees, at its own cost, to keep a Stormwater Maintenance and Inspection Log in the forms attached as Exhibit C. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

This agreement is for the benefit of the City of Portland and all persons in lawful possession of the Premises and abutters thereto. The 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, including but not limited to the porous pavement, catch basins, storm drain pipes, underdrain pipes, and other drainage structures thereon in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall not confer upon the City of Portland or any other person the right to utilize said stormwater system for public use or for the development of any other property. Except as may be required to comply with the terms of this Agreement, Owner shall bear no financial responsibility by virtue of this Agreement for enlarging the capacity of said system.

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 shall 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 Works and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings or residential units and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax rolls on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

[SIGNATURES ON FOLLOWING PAGE]

Dated at Portland, Maine this \_\_\_\_ day of \_\_\_\_\_, 2021.

---

Douglass Commons, LLC

STATE OF MAINE  
CUMBERLAND, ss.

Carl Szanton, Owner

Date: \_\_\_\_\_

Personally appeared the above-named \_\_\_\_\_, \_\_\_\_\_ of \_\_\_\_\_ and  
acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

Print name: \_\_\_\_\_

Exhibit 1: Stormwater Inspection & Maintenance Plan

Exhibit 2: Stormwater Infrastructure Exhibit

Exhibit 3: Form 4 Maintenance and Inspection Log

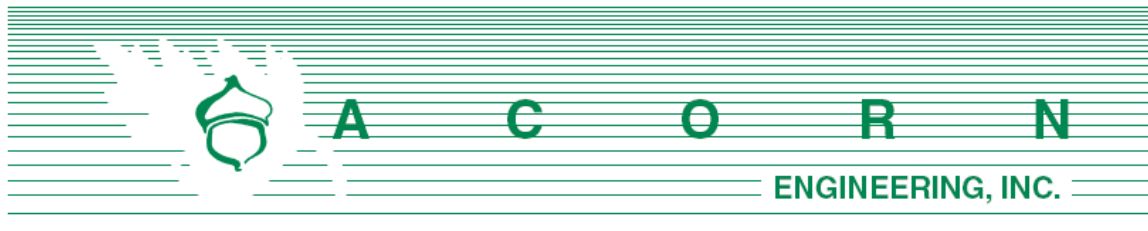
Exhibit 4: FocalPoint Operations & Maintenance Document

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# **Exhibit 1**

## **Stormwater Inspection & Maintenance Plan**





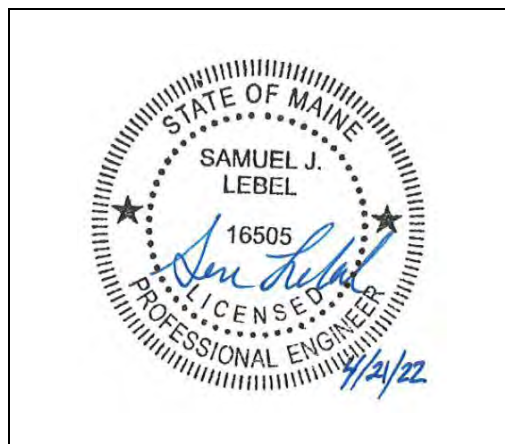
## **POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN**

**Prepared For:**

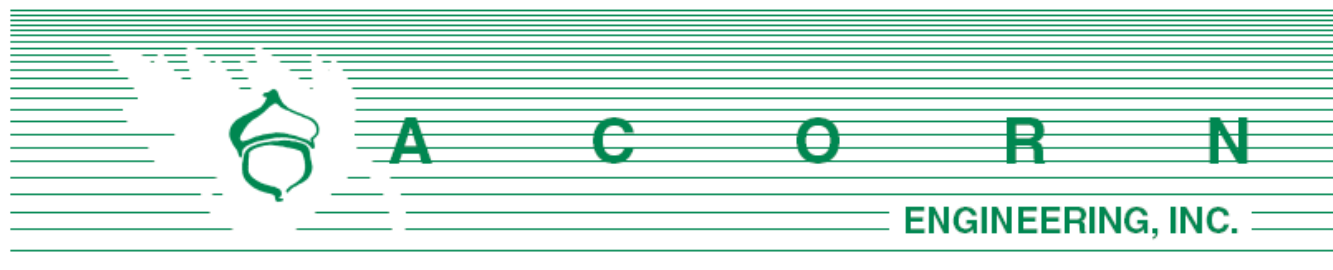
**Douglass Commons, LLC.  
57 Douglass Street  
Portland, Maine 04101**

**Prepared By:**

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



**April 2021**



## **RESPONSIBLE PARTY**

The owner, Douglass Commons, LLC. and/or their successor shall be responsible for contracting with a qualified stormwater professional to implement the Inspection and Maintenance Plan. The qualified stormwater professional shall maintain a stormwater log (report) summarizing inspections, maintenance, and corrective action taken. The Qualified Stormwater Professional shall annually submit the Stormwater Log to the Department of Public Services prior to June 30<sup>th</sup>.

The following is an example of a qualified stormwater professional that the owner may contract through.

Organization: Will Savage, PE  
Acorn Engineering, Inc  
Portland, Maine

Phone: (207) 775-2655

### **Qualifications:**

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

The inspection and maintenance criteria is based upon the Maine DEP - Stormwater Management for Maine, Volume III: BMPs Technical Design Manual. Refer to the Grading and Drainage Plan for the location of the BMPs

## **PURPOSE**

This Inspection and Maintenance Plan has been individually tailored to this parcel's stormwater infrastructure, site characteristics, and their respective opportunities and limitations related to reducing the pollutant load on the receiving watershed. The maintenance of a parcel's impervious surfaces and stormwater infrastructure is critical to extending the long-term performance and effectiveness of Best Management Practices (BMPs). The Inspection and Maintenance Plan represents the parcel's minimum activities to meet the permit requirements. The parcel shall still be subject to any applicable Civil Site Plans, Permit Applications, Erosion and Sedimentation Control Plans Reports, Stormwater Management Plans, Inspection and Maintenance Manuals, and all Municipal, State, and Federal rules.

The applicant shall be responsible for retaining post construction and maintenance documents for at least 5 years. The Department of Environmental Protection's 5-year recertification will apply to this permit.

## **OPERATION AND MAINTENANCE ACTIVITY**

### **Sweeping:**

Annual sweeping of the driveways and parking areas following the snow melt for accumulated winter sand, if necessary. Appropriately dispose of all collected material.

### **Catch Basins:**

Catch basins shall be inspected to confirm that the structure is operating properly.

- Inspect the presence of accumulated sediment or debris any sediment shall be removed. The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Sediment shall be removed when accumulation is within 6 inches of the outfall pipe invert. Legally dispose of accumulated sediment and debris from the bottom of the basin, inlet grates, and inflow channels to the basin.
- If the basin outlet is designed with a hood to trap floatable materials (e.g. Snout), check to ensure watertight seal is working.
- Appropriately dispose of all collected material.

### **Vegetated Underdrained Soil Filter (VUSF):**

The maintenance of the VUSF shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 7.1 – Grassed Underdrained Soil Filters.

- The soil filter shall be inspected after every major storm within the first year to ensure the filter area is draining within a 48-hour period and no less than a 24-hour period, and that the grass is establishing. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within a 48-hour period following a one-inch storm or greater.
- Soil filter modification shall occur if the filter bed is draining in less than 24 hours. The top six inches of the filter shall be replaced with six inches of loam, per the most recent Maine DEP specification. Soil filter replacement shall be replaced with fresh material on a yearly basis.
- The filter area shall not be fertilized unless it is absolutely necessary to facilitate vegetative growth.
- Weeding to limit growth of plants besides the grass will likely be necessary.
- If desired, mowing shall only occur by a handheld weed-wacker or push mower and should be mowed no more than two times per growing season to maintain grass heights of no less than six inches. Riding lawnmowers will not be permitted or accessible.
- Maintaining a healthy cover of grass will minimize clogging with fine sediments. If ponding exceeds 48 hours, the top of the filter bed should be rototilled to reestablish the soil's filtration capacity.
- The top several inches of the filter can be replaced with fresh material if water is ponding for more than 72 hours, or the basin can be rototilled, seeded and mulched. Once the filter is mature, adding new material (a 1-inch to 2-inch cover of mature compost) can compensate for subsidence.



- Ensure that all inlets and outlets within the flow splitter drain manhole are clear and functioning
- The sediment forebays should be inspected to ensure that the entire surface area is covered by riprap. Sediment may need be removed annually depending on sand application and the upstream catch basin's effectiveness at trapping sediment in the deep sumps.
- Snow storage shall not occur over the Vegetated Underdrained Soil Filter.

#### Filterras:

The maintenance for the Filterra's shall be in accordance with the attached "Filterra Maintenance Steps". Additionally, the downstream catch basins and drainage manholes shall be inspected to confirm the structures are operation properly.

- Inspect the presence of accumulated sediment or debris any sediment shall be removed. The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Sediment shall be removed when accumulation is within 6 inches of the outfall pipe invert. Legally dispose of accumulated sediment and debris from the bottom of the basin, inlet grates, and inflow channels to the basin.
- If the basin outlet is designed with a hood to trap floatable materials (e.g. Snout), check to ensure watertight seal is working.

#### Focal Points:

The maintenance for the FocalPoints shall be in accordance with the attached "FocalPoint Operations & Maintenance" document. Additionally, the downstream catch basins and drainage manholes shall be inspected to confirm the structures are operation properly.

- Dig out silt (if any) and mulch and remove trash and foreign items.
- After removal of mulch and debris, measure distance from the top of the FocalPoint HPMBS engineered media soil to the flow line elevation of the adjacent overflow conveyance. If this distance is greater than that specified on the plans (typ. 6") add media (not topsoil or other) to recharge to the distance specified.
- Mulch should be replaced with aged, double shredded hardwood mulch with fines removed.
- The plant should be replaced if dead or dying. If the plant is alive, prune as necessary to encourage growth in the correct directions.
- Overflow rim should be checked after each plowing season to ensure the device is intact and in and full functional. The grate should remain clear of debris at all times.
- Any signs of rill erosion should be corrected and potentially stabilized with river stone if necessary.
- Snow storage shall not occur over the Focal Points.

#### Vegetated Areas and Embankments:

Inspect all landscaped and or vegetated slopes and embankments on an annual basis. Vegetated areas with bare areas or sparse growth (<90% coverage) shall be revegetated. Mulch shall be applied to landscaped areas, as necessary. Dead or decaying landscaping (ground cover, shrubs,

trees etc.) shall be replanted in accordance with the approved Landscape Plan by Aceto Landscape Architects.

### **INSPECTION AND MAINTENANCE TABLE**

| <b>Inspection and Maintenance Frequency</b> | <b>Spring or Yearly</b> | <b>Summer</b> | <b>Fall</b> |
|---------------------------------------------|-------------------------|---------------|-------------|
| Sweeping/Sand Removal                       | X                       |               |             |
| Catch Basins                                | X                       |               | X           |
| Vegetated Areas & Slopes                    | X                       | X             |             |
| Focal Points                                | X                       | X             |             |
| Vegetated Underdrained Soil Filters         | X                       | X             |             |

In the above chart, it is assumed the certified stormwater professional will inspect each item in the spring. Inspections outside of the spring visits can likely be conducted by the property manager.

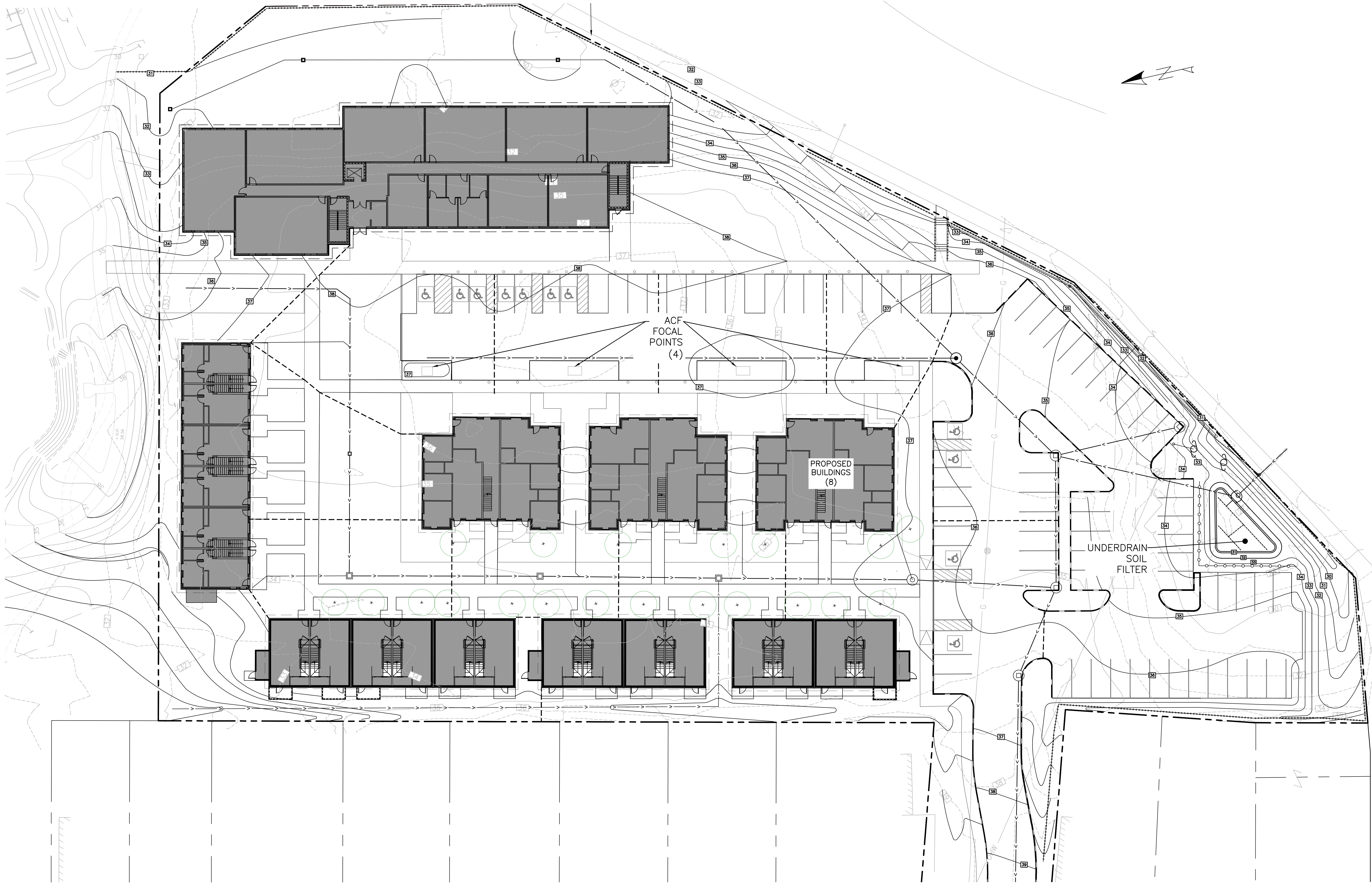




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# Exhibit 2

## Stormwater Infrastructure Plan



PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

|                                                                                    |  |         |
|------------------------------------------------------------------------------------|--|---------|
| ISSUED FOR                                                                         |  | BY      |
| SITE PLAN APP                                                                      |  | DATE    |
|                                                                                    |  | 1/11/23 |
| DRAWING NAME:<br><b>STORMWATER MAINTENANCE DRAINAGE EXHIBIT</b>                    |  |         |
| PROJECT NAME/<br><b>DOUGLASS STREET COMMONS</b>                                    |  |         |
| ADDRESS:<br><b>DOUGLASS COMMONS, LLC</b>                                           |  |         |
| CLIENT/TOWNER OF RECORD:<br><b>10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101</b> |  |         |
| ENGINEERING, INC.                                                                  |  |         |
| PO BOX 3372, PORTLAND MAINE 04101                                                  |  |         |
| (207) 775-2555                                                                     |  |         |
| FILE: 1154_CIVIL                                                                   |  |         |
| JN: 1154                                                                           |  |         |
| SCALE: AS NOTED                                                                    |  |         |
| DESIGNED BY: SJL                                                                   |  |         |
| DRAWN BY: AWG                                                                      |  |         |
| CHECKED BY: SJL/WH5                                                                |  |         |
|                                                                                    |  |         |
| DRAWING NO.<br><b>EXH</b>                                                          |  |         |

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# Exhibit 3

BMP Inspection Logs



**FORM 4****Non-Residential Stormwater Credits: Annual Inspection of BMPs and  
structural stormwater controls**

| Site Information                              |                                  |                                              |
|-----------------------------------------------|----------------------------------|----------------------------------------------|
| Address:                                      | 57 Douglass Street, Portland, ME | 04101                                        |
|                                               | Street Address                   | Zip Code                                     |
| Parcel ID (Chart, Block, Lot # + 3-digit ID): | 78-C-2 & 78-B-7                  |                                              |
| Contact Information                           |                                  |                                              |
| <b>Owner (must be owner, lessee or buyer)</b> |                                  |                                              |
| Name:                                         | Carl Szanton                     |                                              |
|                                               | Last                             | First M.I.                                   |
| Business Name (if Applicable):                | Douglass Commons, LLC.           |                                              |
| Mailing Address:                              | 10 Free Street                   |                                              |
|                                               | Street Address                   | Apartment/Unit #                             |
|                                               | Portland, ME 04101               |                                              |
|                                               | City                             | State Zip Code                               |
| Phone #:                                      | ( ) -                            | E-mail Address: cszanton@szantoncompany.com  |
| <b>Agent/Representative</b>                   |                                  |                                              |
| Name:                                         | Sam Lebel                        |                                              |
|                                               | Last                             | First M.I.                                   |
| Mailing Address:                              | 65 Hanover Street, P.O. Box 3372 |                                              |
|                                               | Street Address                   | Apartment/Unit #                             |
|                                               | Portland ME 04101                |                                              |
|                                               | City                             | State Zip Code                               |
| Phone #:                                      | 207) 478 4327                    | E-mail Address: slebel@acorn-engineering.com |
| <b>Inspector</b>                              |                                  |                                              |
| Name:                                         |                                  |                                              |
|                                               | Last                             | First M.I.                                   |
| Business Name (if Applicable):                |                                  |                                              |
| Mailing Address:                              |                                  |                                              |
|                                               | Street Address                   | Apartment/Unit #                             |
|                                               | City                             | State Zip Code                               |
| Phone #:                                      | ( ) -                            | E-mail Address:                              |

### Certifying Statements (to be completed by credit holder or representative)

By checking the boxes below, the owner (or the applicant on behalf of the owner) certifies that the following statements regarding the maintenance of the property's stormwater management system, as well as the adherence to the approved maintenance and inspection plan, are true.

- ☐ Stormwater facilities and the features of the site that contribute to their efficacy (such as drainage swales, culverts, site grade, etc.) have not been altered since approval of the most recent credit application.
- ☐ Stormwater facilities have been maintained in accordance with the approved maintenance and inspection plan (if applicable)

### Applicant Signature

I hereby certify that I am the owner of record of the named property, or that the owner of record has authorized me to submit this application on his or her behalf. I agree to conform to all applicable laws of the City of Portland. In addition, I understand that the City of Portland Department of Public Services has the authority to enter and inspect all areas that pertain to this application at any reasonable hour to verify that the information contained in this form is accurate.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Inspection Results (to be completed by the Inspector)

- ☐ **FAIL** (Select if any one item on the attached Inspection Report is coded "No")

Note: if a failing inspection is submitted by June 30, the owner will have until the following July 31 to submit a passing inspection report in order to continue credits. If a subsequent failing inspection report or no inspection report is submitted by July 31, credits will be discontinued.

- ☐ **PASS**

### Professional Certification and Signature (to be completed by Inspector)

As a duly qualified third party inspector, I attest that a thorough inspection has been completed for all applicable BMPs and structural stormwater controls associated with this site. I further certify that all of the information contained in this inspection report has been completed truthfully.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Professional Identification (License #, if applicable):



| INSPECTION REPORT                                                                                        |                                            |                                |                                        |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|----------------------------------------|
| General Information                                                                                      |                                            |                                |                                        |
| Inspection Date: _____                                                                                   | Days since last precipitation: _____       |                                |                                        |
| Inspection duration: _____                                                                               | Quantity of last precipitation (in): _____ |                                |                                        |
| Weather: _____                                                                                           | Storm event: _____                         |                                |                                        |
| Nearby natural resources                                                                                 | <input type="checkbox"/> Yes               | <input type="checkbox"/> No    | <input checked="" type="checkbox"/> NA |
| Copy of ESC plan                                                                                         | <input type="checkbox"/> Yes               | <input type="checkbox"/> No    | <input checked="" type="checkbox"/> NA |
| MEDEP Permit # (if applicable)                                                                           |                                            |                                |                                        |
| <b>Notes:</b>                                                                                            |                                            |                                |                                        |
|                                                                                                          |                                            |                                |                                        |
| BMP's/Structural Controls                                                                                |                                            |                                |                                        |
| <b>Type</b>                                                                                              | <b># On Site</b>                           | <b>Type</b>                    | <b># On Site</b>                       |
| Vegetated Area                                                                                           | _____                                      | Detention & Retention Facility | _____                                  |
| Stormwater Channel                                                                                       | _____                                      | Runoff Infiltration Facility   | _____                                  |
| Culvert                                                                                                  | _____                                      | Other: Underdrain Soil Filter  | 1                                      |
| Catch Basin System                                                                                       | 1                                          | Other: Focal Points/Filterra   | 4                                      |
| Roadway/Surface Parking                                                                                  | _____                                      | Other: _____                   | _____                                  |
| Buffer                                                                                                   | _____                                      | Other: _____                   | _____                                  |
| <b>Notes:</b>                                                                                            |                                            |                                |                                        |
|                                                                                                          |                                            |                                |                                        |
| Vegetated Areas                                                                                          |                                            |                                |                                        |
| Condition of slopes and embankment is good                                                               | <input type="checkbox"/> Yes               | <input type="checkbox"/> No    | <input type="checkbox"/> NA            |
| No bare areas (< 90% covered) with sparse growth                                                         | <input type="checkbox"/> Yes               | <input type="checkbox"/> No    | <input type="checkbox"/> NA            |
| Armored areas have no rill erosion or the flow diverted to onsite areas can withstand concentrated flows | <input type="checkbox"/> Yes               | <input type="checkbox"/> No    | <input type="checkbox"/> NA            |
| <b>Notes:</b>                                                                                            |                                            |                                |                                        |
|                                                                                                          |                                            |                                |                                        |

| Stormwater Channels                                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Condition of ditches, swales, & other stormwater channels good                                                         | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| No obstructions, accumulated sediments or debris                                                                       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Vegetated growth and woody vegetation controlled                                                                       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Erosion of any ditch lining repaired                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Vegetated ditches have been mowed                                                                                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Woody vegetation growing through riprap has been removed                                                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Riprap has been replaced where underlying filter fabric or underdrain gravel is showing or where stones have dislodged | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                          |                                                                                      |
| Culverts                                                                                                               |                                                                                      |
| Accumulated sediments and debris at the inlet, outlet, and within the conduit have been removed                        | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Erosion damage at the inlet and outlet have been repaired                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                          |                                                                                      |
| Catch Basin Systems                                                                                                    |                                                                                      |
| Accumulated sediments from inflow channels and pipes between basins have been removed and legally disposed of          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Debris and/or oils have been removed from any baffle or grease trap                                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                          |                                                                                      |
| Roadway and Parking Surfaces                                                                                           |                                                                                      |
| Accumulated sand in parking lots and along roadways has been cleared                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Pavement is swept to help remove sediment                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Road shoulders and excess sand have been graded                                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Gravel roads and road shoulders have been graded                                                                       | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Stormwater is not impeded by accumulations of material or false ditches                                                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                          |                                                                                      |

| Buffers                                                                                                                                                                                                      |                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Treatment buffers have been inspected for evidence of erosion, concentrated flow, or encroachment by development                                                                                             | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Buffer vegetation has been managed per requirements of all deed restrictions and/or maintenance agreements                                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Vegetation in all non-wooded buffers has been mowed no shorter than 6 inches and less than three times per year                                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| The sown-slope of all spreaders and turn-outs for erosion have been inspected and repaired                                                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Sediment has been cleaned from all spreader bays or turnout pools                                                                                                                                            | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                                                                                                                |                                                                                      |
| Stormwater Detention and Retention Facilities                                                                                                                                                                |                                                                                      |
| Embankments have been inspected for settlement, slope erosion, internal piping, and downstream swamping                                                                                                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Embankments have been mowed to control woody vegetation                                                                                                                                                      | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| The outlet control structure has been inspected for broken seals, obstructed orifices, and plugged trash racks                                                                                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Sediment and debris within the control structure have been removed and legally disposed of                                                                                                                   | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Any damage to the trash racks or debris guards has been repaired                                                                                                                                             | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Vegetated spillways have been mowed to control woody vegetation and replace any dislodged stone in riprap spillways                                                                                          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Accumulated sediments within the impoundment and forebay have been removed and legally disposed of                                                                                                           | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                                                                                                                |                                                                                      |
| Proprietary Treatment Devices                                                                                                                                                                                |                                                                                      |
| A third party has been contracted with for the removal of accumulated sediments, oils, and debris within the device and replacement of any absorptive filters, or work is scheduled to be performed in-house | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Maintenance has been performed in accordance with manufacturer's specifications and guidelines                                                                                                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                                                                                                                |                                                                                      |

| Runoff Infiltration Facilities                                                                                                                                        |                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Any pretreatment measures that collected sediment and hydrocarbons entering an infiltration system have been inspected and cleaned out                                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Accumulated sediments within the infiltration area have been removed and legally disposed of                                                                          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| The infiltration system has been renewed if it fails to drain within 72 hours after a rainfall of one-half inch or more                                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| The soil of vegetated infiltration basins has been tilled and replanted                                                                                               | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Rock-lined basins or stone-filled trenches have been reconstructed by removing stones, replacing underlying filter fabric, and tiling or removing the underlying wall | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| <b>Notes:</b>                                                                                                                                                         |                                                                                      |
|                                                                                                                                                                       |                                                                                      |
| Photos                                                                                                                                                                |                                                                                      |
| Comprehensive photos with captions, as applicable, must be submitted in conjunction with this form.                                                                   |                                                                                      |
| Other Inspection Notes                                                                                                                                                |                                                                                      |
| Corrective action needed not specified above                                                                                                                          | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Follow up required                                                                                                                                                    | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Verbal notification provided to responsible party                                                                                                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA |
| Verbal notification contact: _____                                                                                                                                    |                                                                                      |
| <b>Notes:</b>                                                                                                                                                         |                                                                                      |
|                                                                                                                                                                       |                                                                                      |

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# Exhibit 4

FocalPoint Operations & Maintenance Document





# FocalPoint

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## BIOFILTRATION SYSTEMS

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HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM (HPMBS)

Operations & Maintenance





## GENERAL DESCRIPTION

The following general specifications describe the general operations and maintenance requirements for the FocalPoint® High Performance Modular Biofiltration System (HPMBS). The system utilizes physical, chemical and biological mechanisms of a soil, plant and microbe complex to remove pollutants typically found in urban stormwater runoff. The treatment system is a fully equipped, modular, constructed in place system designed to treat contaminated runoff.

Stormwater enters the FocalPoint® HPMBS, is filtered by the High Flow Biofiltration Media and passes through to the underdrain/storage system where the treated water is detained, retained or infiltrated to sub-soils, prior to discharge to the storm sewer system of any remaining flow.

Higher flows bypass the FocalPoint® HPMBS via a downstream inlet or other overflow conveyance. Maintenance is a simple, inexpensive and safe operation that does not require confined space entry, pumping or vacuum equipment, or specialized tools. Properly trained landscape personnel can effectively maintain FocalPoint® HPMBS by following instructions in this manual.



## BASIC OPERATIONS

FocalPoint® is a modular, high performance biofiltration system that often works in tandem with other integrated management practices (IMP). Contaminated stormwater runoff enters the biofiltration bed through a conveyance swale, planter box, or directly through a curb cut or false inlet. Energy is dissipated by a rock or vegetative dissipation device and is absorbed by a 3-inch layer of aged, double shredded hardwood mulch, with fines removed, (when specified) on the surface of the biofiltration media.

As the water passes through the mulch layer, most of the larger sediment particles and heavy metals are removed through sedimentation and chemical reactions with the organic material in the mulch. Water passes through the biofiltration media where the finer particles are removed and numerous chemical reactions take place to immobilize and capture pollutants in the soil media.

The cleansed water passes into the underdrain/storage system and remaining flows are directed to a storm sewer system or other appropriate discharge point. Once the pollutants are in the soil, bacteria begin to break down and metabolize the materials and the plants begin to uptake and metabolize the pollutants. Some pollutants such as heavy metals, which are chemically bound to organic particles in the mulch, are released over time as the organic matter decomposes to release the metals to the feeder roots of the plants and the cells of the bacteria in the soil where they remain and are recycled. Other pollutants such as phosphorus are chemically bound to the soil particles and released slowly back to the plants and bacteria and used in their metabolic processes. Nitrogen goes through a variety of very complex biochemical processes where it can ultimately end up in the plant/bacteria biomass, turned to nitrogen gas or dissolves back into the water column as nitrates depending on soil temperature, pH and the availability of oxygen. The pollutants ultimately are retained in the mulch, soil and biomass with some passing out of the system into the air or back into the water.

## DESIGN AND INSTALLATION

Each project presents different scopes for the use of FocalPoint® HPMBS. To ensure the safe and specified function of this stormwater BMP, Convergent Water Technologies and/or its Value Added Resellers (VAR) review each application before supply. Information and design assistance is available to the design engineer during the planning process. Correct FocalPoint® sizing is essential to optimum performance. The engineer shall submit calculations for approval by the local jurisdiction when required. The contractor and/or VAR is responsible for the correct installation of FocalPoint® HPMBS units as described in approved plans. A comprehensive installation manual is available at [www.convergentwater.com](http://www.convergentwater.com).





## MAINTENANCE

### *Why Maintain?*

All stormwater treatment systems require maintenance for effective operation. This necessity is often incorporated in your property's permitting process as a legally binding BMP maintenance agreement. Other reasons for maintenance include:

- Avoid legal challenges from your jurisdiction's maintenance enforcement program.
- Prolong the lifespan of your FocalPoint® HPMBS.
- Avoid costly repairs.
- Help reduce pollutant loads leaving your property.

Simple maintenance of the FocalPoint® HPMBS is required to continue effective pollutant removal from stormwater runoff before any discharge into downstream waters. This procedure will also extend the longevity of the living biofiltration system. The unit will recycle and accumulate pollutants within the biomass, but may also be subjected to other materials entering the surface of the system. This may include trash, silt and leaves etc. which will be contained above the mulch and/or biofiltration media layer. Too much silt may inhibit the FocalPoint's® HPMBS flow rate, which is a primary reason for system maintenance. Removal of accumulated silt/sediment and/or replacement of the mulch layer (when specified), is an important activity that prevents over accumulation of such silt/sediment.

### *When to Maintain?*

Convergent Water Technologies and/or its VAR includes a 1-year maintenance plan with each system purchased. Annual included maintenance consists of two (2) scheduled maintenance visits. Additional maintenance may be necessary depending on sediment and trash loading (by Owner or at additional cost). The start of the maintenance plan begins when the system is activated for full operation. Full operation is defined as when the site is appropriately stabilized, the unit is installed and activated (by VAR), i.e., when mulch (if specified) and plantings are added.

Activation should be avoided until the site is fully stabilized (full landscaping, grass cover, final paving and street sweeping completed). Maintenance visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.

A first inspection to determine if maintenance is necessary should be performed at least twice annually after storm events of greater than (1) one inch total depth (subject to regional climate). Please refer to the maintenance checklist for specific conditions that indicate if maintenance is necessary.

It has been found that in regions which receive between 30-50 inches of annual rainfall, (2) two visits are generally required. Regions with less rainfall often only require (1) one visit per annum. Varying land uses can affect maintenance frequency.





Some sites may be subjected to extreme sediment or trash loads, requiring more frequent maintenance visits. This is the reason for detailed notes of maintenance actions per unit, helping the VAR/Maintenance contractor and Owner predict future maintenance frequencies, reflecting individual site conditions.

Owners must promptly notify the VAR/Maintenance contractor of any damage to the plant(s), which constitute(s) an integral part of the biofiltration technology. Owners should also advise other landscape or maintenance contractors to leave all maintenance of the FocalPoint® HPMBs to the VAR/Maintenance contractor (i.e. no pruning or fertilizing).

## EXCLUSION OF SERVICES

It is the responsibility of the owner to provide adequate irrigation when necessary to the plant(s) in the FocalPoint® HPMBs.

Clean up due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the VAR/Maintenance contractor maintenance contract. Should a major contamination event occur, the Owner must block off the outlet pipe of the FocalPoint® (where the cleaned runoff drains to, such as drop-inlet) and block off the point where water enters of the FocalPoint® HPMBs. The VAR/Maintenance contractor should be informed immediately.

## MAINTENANCE VISIT SUMMARY

Each maintenance visit consists of the following simple tasks (detailed instructions below).

1. Inspection of FocalPoint® HPMBs and surrounding area
2. Removal of debris, trash and mulch
3. Mulch replacement
4. Plant health evaluation (including measurements) and pruning or replacement as necessary
5. Clean area around FocalPoint® HPMBs
6. Complete paperwork, including date stamped photos of the tasks listed above.

## MAINTENANCE TOOLS, SAFETY EQUIPMENT AND SUPPLIES

Ideal tools include: camera, bucket, shovel, broom, pruners, hoe/rake, and tape measure. Appropriate Personal Protective Equipment (PPE) should be used in accordance with local or company procedures. This may include impervious gloves where the type of trash is unknown, high visibility clothing and barricades when working in close proximity to traffic and also safety hats and shoes.





### Inspection of FocalPoint® HPMBS and surrounding area

Record individual unit before maintenance with photograph (numbered). Record on Maintenance Report (see example in this document) the following:

|                                                 |          |                                                                        |          |
|-------------------------------------------------|----------|------------------------------------------------------------------------|----------|
| <input type="checkbox"/> Standing Water         | yes   no | <input type="checkbox"/> Damage to HPMBS System to Overflow conveyance | yes   no |
| <input type="checkbox"/> Is Bypass Inlet Clear? | yes   no |                                                                        | yes   no |

### Removal of Silt / Sediment / Clay

Dig out silt (if any) and mulch and remove trash & foreign items.

|                                             |          |                                                           |                    |
|---------------------------------------------|----------|-----------------------------------------------------------|--------------------|
| <input type="checkbox"/> Silt / Clay Found? | yes   no | <input type="checkbox"/> Leaves?                          | yes   no           |
| <input type="checkbox"/> Cups / Bags Found? | yes   no | <input type="checkbox"/> Volume of material removed _____ | (volume or weight) |

### Removal of debris, trash and mulch

After removal of mulch and debris, measure distance from the top of the FocalPoint® HPMBS engineered media soil to the flow line elevation of the adjacent overflow conveyance. If this distance is greater than that specified on the plans (typ. 6" - 12"), add media (not top soil or other) to recharge to the distance specified.

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Distance to media surface to flow line of overflow conveyance (inches) _____ |
| <input type="checkbox"/> # of Buckets of Media Added _____                                            |

### Mulch Replacement

Most maintenance visits require only replacement mulch (if utilized) which must be, aged, double shredded hardwood mulch with fines removed. For smaller projects, one cubic foot of mulch will cover four square feet of biofiltration bed, and for larger projects, one cubic yard of mulch will cover 108 square feet of biofiltration bed. Some visits may require additional FocalPoint® HPMBS engineered soil media available from the VAR/Contractor.

|                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Add double shredded, aged hardwood mulch which has been screened to remove fines, evenly across the entire biofiltration media bed to a depth of 3". |
| <input type="checkbox"/> Clean accumulated sediment from energy dissipation system at the inlet to the FocalPoint® HPMBS to allow for entry of trash during a storm event.    |

### Plant health evaluation and pruning or replacement as necessary

Examine the plant's health and replace if dead or dying.  
Prune as necessary to encourage growth in the correct directions

|                                                             |                                          |              |
|-------------------------------------------------------------|------------------------------------------|--------------|
| <input type="checkbox"/> Height above Grate (feet) _____    | <input type="checkbox"/> Health          | alive   dead |
| <input type="checkbox"/> Width at Widest point (feet) _____ | <input type="checkbox"/> Damage to Plant | yes   no     |

### Clean area around FocalPoint® HPMBS

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Clean area around unit and remove all refuse to be disposed of appropriately. |
|--------------------------------------------------------------------------------------------------------|

### Complete paperwork

|                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Deliver Maintenance Report and photographs as appropriate.                                     |
| <input type="checkbox"/> Some jurisdictions may require submission of maintenance reports in accordance with approvals. |
| <input type="checkbox"/> It is the responsibility of the Owner to comply with local regulations.                        |



## FocalPoint Warranty

Seller warrants goods sold hereunder against defects in materials and workmanship only, for a period of (1) year from date the Seller activates the system into service. Seller makes no other warranties, express or implied.

Seller's liability hereunder shall be conditioned upon the Buyer's installation, maintenance, and service of the goods in strict compliance with the written instructions and specifications provided by the Seller. Any deviation from Seller's instructions and specifications or any abuse or neglect shall void warranties.

In the event of any claim upon Seller's warranty, the burden shall be upon the Buyer to prove strict compliance with all instructions and specifications provided by the Seller.

Seller's liability hereunder shall be limited only to the cost or replacement of the goods. Buyer agrees that Seller shall not be liable for any consequential losses arising from the purchase, installation, and/or use of the goods.



## Maintenance Checklist

| <i><b>Element</b></i> | <i><b>Problem</b></i>                    | <i><b>What To Check</b></i>                                                                                            | <i><b>Should Exist</b></i>                                           | <i><b>Action</b></i>                                                                    |
|-----------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Inlet</b>          | Excessive sediment or trash accumulation | Accumulation of sediment or trash impair free flow of water into FocalPoint                                            | Inlet free of obstructions allowing free flow into FocalPoint System | Sediments or trash should be removed                                                    |
| <b>Mulch Cover</b>    | Trash and floatable debris accumulation  | Excessive trash or debris accumulation.                                                                                | Minimal trash or other debris on mulch cover                         | Trash and debris should be removed and mulch cover raked level. Ensure that bark nugget |
| <b>Mulch Cover</b>    | Ponding of water on mulch cover          | Ponding in unit could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils | Stormwater should drain freely and evenly over mulch cover.          | Contact VAR for advice.                                                                 |
| <b>Plants</b>         | Plants not growing, or in poor condition | Soil/mulch too wet, evidence of spill. Pest infestation. Vandalism to plants.                                          | Plants should be healthy and pest free.                              | Contact VAR for advice.                                                                 |
| <b>Plants</b>         | Plant growth excessive                   | Plants should be appropriate to the species and location of FocalPoint                                                 |                                                                      | Trim/prune plants in accordance with typical landscaping and                            |

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# Exhibit 5

Filtterra Operations & Maintenance Document

## Filterra® Maintenance Steps



1. Inspection of Filterra and surrounding area



2. Removal of tree grate and erosion control stones



3. Removal of debris, trash and mulch



4. Mulch replacement



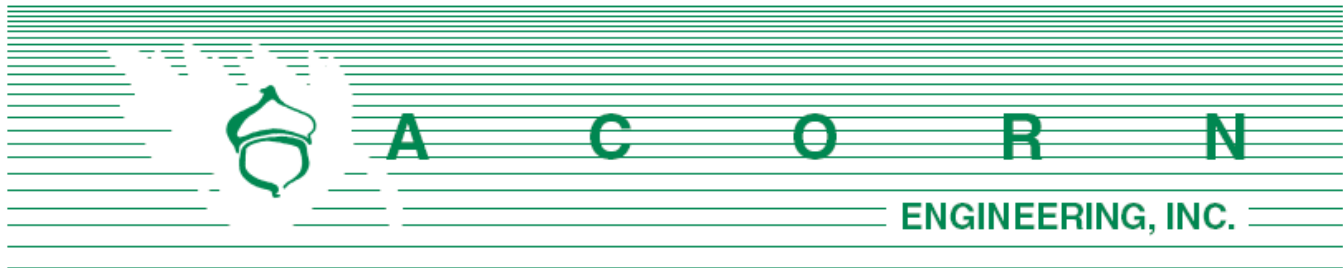
5. Clean area around Filterra



6. Complete paperwork and record plant height and width

Contech has created a network of Certified Maintenance Providers (CCMP's) to provide maintenance on Filterra systems. To find a CCMP in your area please visit [www.conteches.com/maintenance](http://www.conteches.com/maintenance)





Department of Planning & Development  
 Attn: Jimmy Dealaman  
 City of Portland, Maine  
 389 Congress Street, 4th Floor  
 Portland, ME 04101

April 27, 2022

Subject: Comment Response Letter  
 Dougherty Commons Redevelopment

On behalf of Douglass Commons, LLC, we are pleased to respond to the comments that we received dated April 1<sup>st</sup>, 2022. To facilitate the review, comments are provided below in italics followed by each team's responder in a designated color.

**Acorn Engineering** (Sam Lebel, PE) *Civil Engineer*  
**Aceto Landscape Architects** (Seth Kimball, RLA) *Landscape Architect*  
**Development Team** (Szanton Co. & MCDP)

### **General**

**Comment** – *Show building footprints of adjacent buildings on Douglass Street. Show full extent of trail on site plan that connects to Douglass Street. Retitle 'Master Site Plan' to 'Overall Site Plan'. Please submit a construction management plan/drawing for each phase, which can be amended by staff once a contractor is selected. The applicant shall demarcate site improvements for each phase and clearly identify which party is responsible.*

**Response** – Please refer to updated plans for the adjacent property building footprints, the full extent of the trail, relabeled plan title blocks, and a construction management plan for each phase of development on Sheets C-05, 06. On these plans, the site improvements and assigned responsibilities for each phase are demarcated.

### **Access & Circulation**

**Comment** – *Planning Board members supported improving transit options around the site, and that a parking reduction could be more supported if providing better quality of transit options.*

**Response** – There are several transit lines within a half mile of the site already. The 5, 9A, and 9B buses all have stops within a block on Congress. Within a half mile on Brighton is the 4-line. These services run every half hour at peak times and every hour off-peak. Additionally, the Portland Transportation Center, a regional transit hub, is less than a half mile away. From this location there is service on METRO's Breeze and 1-line, as well as regional connections via the Downeaster and Concord Coach Lines. The development team agrees that transit service could be improved on the lines throughout the region; METRO is a far cry from the 15-minute headway

times modern transit service needs to deliver to communities. In addition to alerting METRO of the coming development, the team has asked to have the service increased. METRO has indicated this is a high-priority corridor for service.

**Comment** – *To support the applicant’s reduced parking request and effort to encourage residents and guests to utilize alternative modes of transportation to and from the site, Public Works recommends that the applicant ensure the route to nearest METRO stops is accessible and safe. Public works finds the sidewalk & ramp conditions are acceptable but recommends the applicant add street lighting at two locations: 1) the corner of Douglass and Congress (nearest the trail entrance) and 2) in front of 1189 Congress, at the bus stop. Public Works recommends the applicant add a pole-mounted cobra head light at each of these locations, consistent with the City’s lighting standards and existing street lighting.*

**Response** – Both of the recommended locations for additional offsite lighting improvements are not along the project frontage. Furthermore, the development team reached out to Portland Trails to ask about site lighting along the Dougherty path location, and the response from Portland Trails’ Jaime Parker was that “.....there is a lot of ambient light already, and the lack of lighting is not the weak link in that trail....”.

In addition to this feedback, the development team conducted a site visit and documented the existing lighting near the Congress Street intersection and the path. There appears to be adequate lighting at the intersection and in the vicinity of the METRO stop, but the path itself is nearly pitch black. Because of this, the development team has committed to better illuminating this pathway and as such, the plans have been adjusted to add lighting opposite of two proposed light poles along with an additional light pole behind the 5-story building to further light the trail. Please refer to the attached pictures demonstrating the adequate lighting along the public sidewalks and the lack of lighting along the path.

**Comment** – *Staff recommend exploring a pedestrian ramp connection instead of a stair connection (see rough mock-up in blue below) to the multi-use trail in order to accommodate bicyclists and handicapped users accessing the trail to/from the site. A stone dust or gravel path may be possible instead of hardscape surface.*

**Response** – A sloped walkway has been added to the plan. The walkway is less than a 5% slope to provide universal accessibility.

**Comment** – *Please incorporate the attached concrete sidewalk and driveway details for improvements at the site’s entrance*

**Response** – We have incorporated these details. As allowed in the residential driveway detail, Note 3, we are electing to utilize 7’ tipdowns and flares in lieu of “bugs” given the proposal for 78 parking spaces.

**Comment** – *What is the frequency of trash pick-up and when does this occur?*

**Response** – Based on our experience operating other similar projects, solid waste collection will be required 2 to 4 times weekly. Our solid waste contractors will adjust its collection schedule as needed.



**Comment** – Clarify if bollards are proposed at both ends of the emergency vehicle access lane. Bollards are shown in rendering (see orange arrow below), but not shown on the plan. As indicated by Fire Marshal during preliminary review of the project, any bollards proposed restricting vehicle access should be removable and not susceptible to icing issues during the wintertime. Please clarify what is proposed to restrict vehicle access down emergency vehicle lane, add to plan and provide detail accordingly.

**Response** – There are no bollards located at the end of the woonerf. Renderings by Archetype have been updated to properly portray the site elements. The end of the travelled way will be demarcated by a change of materials.

**Comment** – Clarify how the area (shown with blue arrow below) functions exactly. If intended for loading and drop-off, how is that being managed (e.g. special signage, etc.)

**Response** – The area shown in blue is a flexible, non-parking area that residents can use as gathering space. It may also be utilized as a 5-minute unloading zone for drop-offs by mail carriers or groceries by residents. Signage will reflect that.

**Comment** – To justify waiving the 24 feet parking aisle, staff are requesting clarification on what elements necessitate modifying the city standard. Provide additional narrative to justify the design decisions and benefits for narrower parking aisle at each of the following locations: a) shared street drive aisle and b) parking areas drive aisle. In addition, staff request that the applicant provide turning templates for vehicles circulating into these areas to show there are no conflicts.

**Response** – In our experience a 22-foot-wide parking aisle in the lot is sufficient in residential settings where the users have familiarity with the layout of the parking lot, coupled with minimal turnover. We do not believe that parking standards should be a “one-size-fits-all approach”. 24’ drive aisles are much more appropriate in commercial settings where there are unfamiliar drivers and high turnover. Additionally, reduction of the drive aisle to 22’ allows for less impervious area and less of an overall sense of pavement-to-pavement opening prompting motorists to drive slower. The same principles apply to the “woonerf”.

Furthermore, specific constraints include existing gas and electrical infrastructure, elevation challenges when matching back into the abutting land, and the desire to incorporate landscape islands and vegetation within the parking field to break up parking and providing shading. Please refer to the turning templates, submitted with this response letter, that demonstrate the design vehicle, comparable to a 2020 Chevrolet Tahoe, can adequately maneuver throughout the site and parking field.

**Comment** – The applicant must provide additional justification (e.g. site constraints, etc.) explaining why additional number of compact parking spaces are needed and why the city standard should be modified in this case

**Response** – The number of compact spaces has been reduced to 11 spaces, or 14% of the total parking spaces. A waiver is no longer be requested for this standard.

## **Parking**



**Comment** – *Planning Board members raised questions about the site providing guest parking onsite. Staff recommend that the proposal include the future 10 additional parking spaces as part of the proposed parking. Phase I and Phase II developers should coordinate on the inclusion of the additional parking spaces but staff recommend the proposal consider providing this area as guest parking.*

**Response** – For the full buildout, we have incorporated the additional 10 parking spaces as a permanent condition for a total of 78 spaces. Guests may park on the street or in a parking space assigned to a resident associated with the person they're visiting, consistent with other similar multifamily projects.

**Comment** – *Per Table 19-B “Categorical Exceptions to Off-Street Parking Minimums”, the applicant must submit a parking study/analysis, which justifies the amount/adequacy of parking supply proposed for the development. The parking analysis should take into account each phase of development specifically and should include the 10 additional spaces as part of the full parking supply proposed.*

**Response** – Please refer to the Parking Analysis submitted with this response letter which utilizes ITE 5<sup>th</sup> Generation Rates for their respective land use codes.

**Comment** – *Label respective co-op parking spaces/areas and apartment parking spaces/areas, respectively.*

**Response** – Labels have been added to parking spaces on C-10, C-11, and C-12 to show usage of the separate developments and guest parking accordingly.

**Comment** – *Clarify how many compact spaces and EV spaces are proposed for each phase of development? When each phase is built out how many compact and EV spaces are proposed in each portion's respective parking area? On each phased plan (as well as overall site plan), show parking areas providing the required Level 2 EV charging to 20 percent of parking spaces as well as future EV readiness (served by sufficient conduit, etc.)*

**Response** – Refer to Site Plans C-10, C-11, and C-12 for an overall and phased breakdown of compact and EV designated parking spaces. The EV layout and allocation will be subject to change as the project moves towards construction and final electrical design is carried out.

**Comment** – *Staff note that bicycle racks are shown on landscaping plan, please also show on each phased site plan and overall site plan.*

**Response** – See Site Plans C-10, C-11, and C-12 for bicycle rack locations and notes.

**Comment** – *Please confirm that landscaping located within the north snow storage area can withstand snow pile that's proposed. Staff recommend adding note to plan that “Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.” to show the plan complying with standard.*

**Response** – Native plant material has been selected for salt tolerance and durability. A note has been added accordingly to Site Plans C-10, C-11, and C-12 that “owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary”.



## **Preservation of Significant Natural Features**

**Comment** – *Please confirm that there are no significant natural features on site*

**Response** – There are no significant natural features on site.

## **Landscape Preservation**

**Comment** – *Show on plan where 13 existing trees will be removed from site, noting if under/over 10 DBH*

**Response** – See Sheet C-03 for the locations of trees on site to be removed. There are approximately five trees on site to be removed with greater than 10 DBH, none of which are in the structure setbacks subject to preservation standards.

**Comment** – *Detail for erosion control berm was provided but berm is not shown on plan. Please show erosion control measure for each phase on construction management plan or grading plan.*

**Response** – Please refer to the construction management plans for erosion control measures called out downgradient of any soil disturbance. The berm is typically an option along with silt fence or silt sock as an erosion control perimeter barrier.

## **Site Landscaping & Buffers**

**Comment** – *Per Site Plan standards screen existing transformer at driveway entrance (from view from public sidewalks, streets and adjacent properties) by dense evergreen landscaping, fencing, architectural screening products, masonry walls, building walls, or a combination thereof.*

**Response** – Screening of the natural gas regulator will be provided using plant material. ALA has updated plantings plans to reflect this request.

**Comment** – *Staff counted 72 trees planted that provide a public benefit and count towards meeting the street tree requirement. Please propose a street tree alternative (Per Section 4.6.4. of the City's Technical Manual) for the remaining 48 trees required. The City Arborist is supportive of a contribution into tree fund given the amount of trees and other landscaping planted onsite. If seeking a contribution to the City's Tree Fund please submit a written request.*

**Response** – Ownership will be contributing to the tree fund for the remaining required trees.

**Comment** – *Please provide a landscape plan for each of the phases, so each phase can be reviewed with the landscaping standards. Each phase should clearly mark the extent of landscaping they are required to provide at time of construction.*

**Response** – Landscape plans have been provided for each phase that clearly mark the extent of the landscaping required at time of construction.

**Comment** – *Given that landscape is a key component of the project; please confirm that plant*





*material will survive and be durable/protected during the winter season (i.e. able to endure resulting snow banks from plowing, icing salt, etc) including the following areas:*

*How will landscape paver areas be maintained during winter conditions? How durable is the material dealing with snowplows crossing the common area? Please provide case studies, cut sheet, as available, to show the common green space area will survive.*

**Response** – Native plant material will be selected for salt tolerance and durability. Additionally, the owner will conduct an annual site walk to discuss winter operations with the maintenance contractor, including discussion of equipment proposed for use such as brine applicator to make a pre-storm application of a brine solution, which has been shown to minimize the overall amount of salt needed. We have included with this submission a document outlining the grass paver specifications and maintenance.

**Comment** – *Per Section 4.5.5 of the City's Technical Manual landscaping that abuts vehicular use shall be adequately protected and separated from vehicles. The planting/rain garden areas along the woonerf do not appear to provide landscape protection. Please show protection in the form of curb stops, continuous curbing, etc., which should be designed with adequate visibility and durability to withstand normal snow plowing operations. (Ex. City Arborist suggests molded concrete or other curbing type) If the proposal can sufficiently demonstrate that snow and ice removal operations will not adversely impact landscaping a written waiver request may be submitted to staff for review.*

**Response** – The flush condition allows for snowplows to completely remove snow from this area, rather than stacking dirty, salty snow around the trees. Plowing stakes will be provided to indicate tree and planting locations during winter months and be removed in the spring. Proper native plant material will be selected for salt tolerance and durability.

Additionally, the owners will conduct an annual site walk to discuss winter operations with the maintenance contractor, including discussion of equipment proposed for use such as brine applicator to make a pre-storm application of a brine solution, which has been shown to minimize the overall amount of salt needed.

Regular inspection of cutting edges on plows and equipment will be conducted to make sure they are sharp, which has also been shown to reduce the overall need for salt.

Maintenance crews will be instructed to use chemical deicing products judiciously, applying it only where and when needed for safety to protect the trees and the woonerf materials.

**Comment** – *Clarify materials. Landscape materials plans shows the main driving route as asphalt and rendering shows stone cobble. Please reconcile materials proposed are consistent throughout plans set.*

**Response** – We have adjusted the renderings to correctly depict the drive lane as pavement, while the parking spaces are pavers.

**Comment** – *At the last Planning Board meeting one of the public comments described an old memorial plaque from the previous school, which staff suggest could be incorporated as a place making feature if able to preserve. Please clarify if plaque is on the site.*



**Response** – The boulder & plaque will be relocated at the base of the proposed steps at the Dougherty Trail trailhead as an element that introduces and memorializes the history of the site.

## **Water Quality, Stormwater Management, & Erosion Control**

**Comment** – Consider adding permeable paver for walkways areas too. Permeable will allow for more infiltration (using less salt to clear walkways)

**Response** – Thank you for the feedback, we will continue to consider opportunities for this condition; however given the walkways' proximity to buildings and basements, it is generally not ideal to infiltrate water without a robust base/underdrain system. At this time, we are meeting the stormwater standards as shown.

**Comment** – Confirm that the plastic grid system used for grassed common area is capable of withstanding emergency vehicles without damaging underlying irrigation system, etc. Please also provide spec or cutsheet

**Response** – Documentation and case studies demonstrating the plastic grid system used for grassed common areas can withstand emergency vehicles without damaging the underlying irrigation system.

**Comment** – Submit a draft stormwater maintenance agreement which should clarify that snow storage will not occur over any stormwater systems, and sand or salt application will not impact paver system, etc.

**Response** – A stormwater maintenance agreement has been included in this package that clarifies snow storage will not occur over the stormwater systems and that sand or salt will not impact the paver system.

## **Public safety and fire prevention**

**Comment** – Please contact Portland Trails (Contact: Jaime Parker [jaime@trails.org](mailto:jaime@trails.org)) and obtain a recommendation for necessary improvements to address the Crime Prevention Through Environmental Design (CPTED) standards along adjacent trail. At this time, staff believe the applicant should consider integrating lampposts or lighted bollards to enhance safety and promote usage of the trail system as it is expedited to be heavily traveled to access public transit. Given that the proposal is proposing less parking and is being presented as a transit-oriented development, the trail should be integrated to the extent possible as a primary transit route for the development. Improvements along the trail should incorporate Portland Trail's feedback. Below is an approximate distance that staff recommend for adding trail lighting (see image). Given that a waiver will be needed for lighting trespass past property line, please submit written request. In general, staff are supportive of a lighting trespass waiver to promote public safety





**Response** – As noted previously, the development team reached out to Portland Trails to ask about site lighting along the Dougherty path location, and the response from Portland Trails’ Jaime Parker was that “.....there is a lot of ambient light already, and the lack of lighting is not the weak link in that trail....”. Based upon an independent site visit, the development team has committed to better illuminating this pathway and as such, the plans have been adjusted to add lighting opposite of two proposed light poles along with an additional light pole behind the 5-story building to further light the trail.

**Comment** – *Please provide more information about how emergency access lane will be keep it clear during winter.*

**Response** – The emergency lane will be plowed and kept clear during winter months. ALA has provided additional information regarding the plowing logistics and required skid plates needed for plows to remove snow from grass pavers and walkway. In addition, a maintenance plan will be provided to the selected maintenance crew to assure proper snow removal techniques.

### **Public Utilities**

**Comment** – *Please confirm how waste/dumpster will be managed between the two sites and that the one shared area will accommodate both developments and sized correctly.*

**Response** – One area will accommodate the trash and recycling areas for both developments. The trash enclosure will include dumpsters are used by both the co-op housing and the apartment housing. One company will service this joint account. Sizing and pickup frequency will be determined by the solid removal company and adjusted according to demand.

**Comment** – *Please confirm that storage containers for recyclable materials shall be separated from trash containers*

**Response** – Correct, separate bins will be demarcated for recycling.

**Comment** – *Does Unitil have any work scheduled at the site. Please check with Until that there aren’t any improvements as part of their multiyear improvement plan for the site.*

**Response** – Until does not have any improvements scheduled at the site or on Douglass Street as part of their multi-year improvement plans.



## **Site Design**

**Comment** – *Please describe any proposed HVAC system or mechanicals on site. Staff continue to look into the question raised at the last Planning Board meeting regarding the topic of window mounted air conditioning units. More information will be shared soon.*

**Response** – As developers of affordable housing, we feel that our residents should have the right to cool their homes, despite the fact that Maine Housing neither requires nor provides additional financing for built-in air conditioning. With construction costs skyrocketing, we are not able to include central air conditioning in our construction plan for the apartment building. If window units were to be disallowed, residents, many of whom are already on fixed incomes, would be forced to purchase more-expensive, less-effective floor units. We feel a responsibility to advocate on behalf of our future tenants to ensure that we prioritize the physical comfort of low-income residents over the aesthetic comfort of onlookers in the summer months. At our existing properties with window units, we mandate the window units are removed from mid-October to mid-May.

**Comment** – *Section 11 of the Technical Manual requires a preliminary shadow analysis for Building E's proximity to the adjacent park, future playground and basketball court. Per Section 11.3 of the Technical Manual the applicant is required to submit a preliminary shadow analysis in order to determine if additional shadow analysis is required.*

**Response** – A shadow study has been provided with submission of this response letter.

**Comment** – *At the recent workshop, the Board questioned if there was sufficient storage area provided in the residential units. Please provide any additional information regarding the areas of storage available to tenants/owners.*

**Response** – Both the apartment and co-op housing are creating the Maine Housing-required amount of storage. This includes ample storage in units, but not separate storage lockers.

**Comment** – *One of the Board members expressed concerns with the cornice on the apartment building, having concerns the cornice didn't line up with the detailing on the rest of the building or tie well to other buildings. In addition, the board expressed a desire to see modifications to the stair tower of Building E. Please incorporate this feedback as your team revisits the design materials, and consider making the cornice smaller and taking a closer look at the fenestration on the stair tower and material choices.*

**Response** – The architects have corrected these issues. Please see new renderings.

**Comment** – *One Board member expressed interest in seeing more variety in windows. Please consider this feedback as your team revisits the design materials.*

**Response** – The architects have corrected these issues. Please see new renderings.

**Comment** – *At the recent workshop, during the discussion on the roof line of the co-op buildings, it was mentioned that the project may install solar in the future which influenced the current design. If solar systems are anticipated for building rooftops please show on plans (ensuring it complies*



with Section 6.4.16 of the City's Land Use Code).

**Response** – Solar has been added to the plans co-op building rooftops and will comply with Section 6.4.16.

**Comment** – As part of feedback heard from the Planning Board at the last workshop, staff remind the applicant to explore additional outdoor communal space for the apartment building.

**Response** – We are not planning outdoor communal space outside the apartment building due to the ample amount of indoor and outdoor communal space planned on site already and existing in the surrounding Dougherty Fields, playground, skate park, pool, and Libbytown Community Garden adjacent to the site. We feel this area would better be served as an informal, passive green space.

## **Exterior Lighting**

**Comment** – Please confirm that pole lighting fixtures (K41 & K42) provided are full cutoff. Section 12.3.6 of the City's Technical Manual requires fixtures to be full cutoff or shielded. The proposed pole lighting cutsheets appears as though they may emit light above a horizontal plane. Please revisit.

**Response** – The Luminaire schedule on the Photometrics plan shows the BUG rating for the fixtures. All of the fixtures have a rating of U=0 or no uplight. BUG (BUG = Back-Uplight-Glare) is the rating system that has replaced the terms “full cutoff” and “cutoff”.

**Comment** – It appears that a potential stone dust path is proposed on the site plan. Please eliminate from plan if not proposed or provide site lighting at this location (see red highlight in image below)

**Response** – The pathway has been removed from the plan as the majority of foot traffic will occur near the center of the site where a link between the development and the center of the new park is proposed.



**Comment** – Below areas (see image) at the center are main areas integrated into the site. To promote natural surveillance/visibility/safety please revisit by providing 0.2fc of minimal site lighting at these locations. The area indicated below to the right may also require site lighting if it (or another location) becomes used for outdoor communal space for Building E.





**Response** – Adjacent these areas are residential bedrooms and spillover lighting into bedrooms is a concern. Motion lights will be provided for safety at these locations.



**Comment** – Provide at least 0.2fc of lighting in parking areas highlighted below

**Response** – The lighting plan has been adjusted to provide .02fc in parking areas.



## **Zoning**

**Comment** – Once submitted, add note to Phase 1 and Phase 2 landscape plans that grass will be provided, should the other phase not be constructed, so that each plan clearly reflect the total open space being provided.

**Response** – Please refer to the various Site Plans (C-10, 11, 12) which note that should either Phase seek an occupancy permit prior to the opposing phase applying for a building permit, the disturbed area shall be loamed and seeded.



## **Engineering Review**

**Comment** – *The Applicant is coordinating with utilities and will provide ability to serve confirmation upon receipt.*

**Response** – Ability to serve letters received thus far have been provided with this submission. Any remaining letters will be forwarded upon receipt.

**Comment** – *The proposed grading plan includes work that will be located off of the property. The Construction Management Plan that shows the location of sediment barrier and other erosion control measures does not include these off-site areas. The plan should reflect the entire construction area, and it is also suggested that erosion control be shown on the grading plan to ensure that the entire site will be protected.*

**Response** – The Construction Management Plans have been revised to reflect the entire construction area and provide for erosion control measures to be extended into the park where construction and soil disturbance will be occurring.

**Comment** – *The project design for rain gardens is based around the Focal Point proprietary system that is an approved Maine DEP stormwater BMP. The stormwater management plan includes a note that this system may be substituted at the time of construction for an “approved equal such as a Filterra.” If the Applicant chooses to change the type of stormwater management system, that change will need to be resubmitted to the City of Portland. Design calculations, maintenance requirements, and the associated Stormwater Maintenance Agreement would need to be changed to reflect the final selected stormwater treatment system.*

**Response** – The design for the rain gardens are the ACF Focal Point proprietary systems; however, subsurface tanks are not proposed below the systems because they are not necessary to meet the Flooding standard. Furthermore, the infiltration rate of 100 in/hour does not limit flow-thru, therefore, the HydroCAD will be unaffected should the Contractor decide to proceed with an approved equal (Filterra bioswale).

Although the approved equal will inherently have very similar qualities including operations and maintenance, should an approved equal be selected, the pertinent documents will be updated and resubmitted to the City.

**Comment** – *Per the Maine DEP proprietary stormwater BMP requirements, the Applicant should provide confirmation from the manufacturer that the system has been designed per their standards.*

**Response** – We will provide confirmation from the manufacturer of Focal Points that they have been designed per the standards required on this site once received. The design features their typical section detail which has been used on several sites around the City.

**Comment** – *A stormwater maintenance agreement will be required.*

**Response** – A stormwater maintenance agreement has been provided with this submission package.



**Comment** – *I would suggest showing their proposed tree plantings on a plan with their proposed utilities to ensure that there are no conflicts. This has fairly detailed plans for both, and it appears that there may be some overlap.*

**Response** – We have overlayed the landscaping plan on the utility plan and have coordinated with the landscape architect to ensure that there will be no conflict between plantings and utility runs, resulting in removal of two trees.

**Comment** – *The Applicant should confirm whether below-grade vaults may be necessary near their underground electric connections at the utility poles. It may not be required with the proposed configuration, but just wanted to mention based on my own experience lately where we have had to fit some fairly large vaults in to make the above to below-grade transition.*

**Response** – We will continue to coordinate with CMP; however, because the primary run to the 3-phase padmount transformer is less than 300', vaults are likely not necessary. The Co-Op housing will be serviced by single-phase power in which junction boxes are shown.

## **Design Review**

**Comment** – *Applicant to provide additional 3-dimensional views from outside the property from Dougherty Field, Congress Street and Douglass Street.*

**Response** – Additional 3-D views have been developed by ALA and submitted with this letter.

**Comment** – *Applicant to address potential future parking expansion with an interim solution to include additional tree plantings or other screen planting to help buffer property from State of Maine Interstate 295 adjacent use.*

**Response** – The additional parking has now been altered to permanent parking.

**Comment** – *Applicant to consider additional opportunities for communal open space at Apartment building, potentially at basement level with door access from shared Laundry Room to an outdoor amenity (ie patio, trellis, seating, planting etc.) that is easily accessible for residents.*

**Response** – This has been considered; however, the grading does not allow for door access at the back level. Furthermore, there is desire to keep that space somewhat private for the tenants since their only windows look out to this space.

**Comment** – *Applicant to consider addition of site lighting to distinguish all property entry points, specifically at proposed pedestrian walkways & stairs connections to Dougherty Field and Path.*

**Response** – Additional lighting has been implemented into the site and building designs as requested.

**Comment** – *Applicant to consider additional opportunities for private open space for residents (ie. balconies) at Apartment building.*

**Response** – While balconies are desirable amenities, in order to finance this affordable housing



project, the construction budget does not allow for this specific amenity. However, given the location of the site and its adjacency to a public park, we are pleased to offer a multitude of open space opportunities to the future residents.

Please refer to the attached letters from the project architects for remaining responses to the design review comments. Please let us know if you have any additional questions or comments.

Sincerely,



Sam Lebel, P.E.  
Project Manager  
Acorn Engineering, Inc.



April 26<sup>th</sup>, 2022

Department of Planning & Development  
Attn: James Rather, Development Review Manager  
City of Portland, Maine  
389 Congress Street, 4th Floor  
Portland, ME 04101

Re: Comment Response Letter  
Dougherty Commons Redevelopment  
57 Douglass Street

On behalf of Douglass Commons, LLC, we are pleased to respond to the comments that we received dated April 1st, 2022. This letter focuses on the architectural components of the project which were designed by Kaplan Thompson Architects, specifically the Townhouses, Rowhouses, and Community Flats.

**Comment: Architectural character:** Applicant to provide clarification on materiality of lap siding, cornice and trim detailing for all housing types. Physical materials are encouraged to understand durability of proposed exterior finishes. To promote a strong cohesive identity of the proposed neighborhood character, a reduction in material types is recommended as well as color scheme continuity between Phase 1 & Complete Master Plan build-out buildings. Applicant to increase window fenestrations that face open space and parking lots to allow for greater visibility and natural light, specifically at Apartment building south façade at interior stairwell, Courtyard Flats A.1 & A.3, Townhouses B.2 & C.1, Rowhouses D.

**Response:** The siding materials of the Rowhouses, Townhouses, and Community Flats include vertical cedar shiplap, reverse board-and-batten, and a traditional lap siding that varies in exposure from 4"/6"/8", the largest of which approximates the adjacent 5-story building in width and color. The siding on the Rowhouses increases in scale as it rises, to add character and vibrancy. In all, there will be 3 different tones of siding, plus the natural cedar at select locations, primarily at the Community Flats and Townhouse entries.

**Comment: Height, scale, and massing:** Because the building contains more than 2 units, the project must provide variation in roof and façade character through changes in façade setback, roof configuration, and projecting or recessed building elements. Applicant shall provide additional variation (ie. vestibule / shared porch recessed, façade projections, or cable roof configurations) in façade and/or roof form for building lengths greater than forty (40) feet, specifically the Apartments west façade, Rowhouse D.1 south façade, Townhouse B.1, B.2 & C.1 east façade.

**Response:** Roof eave and fascia trim will include consist of 2 boards in a roughly 2:1 proportion, with the smaller board above and proud of the larger. It will match the more saturated siding tone, and approximate the roof color.





Sloped canopies introduce and protect entry doors throughout the development. The primary entry to the 5-story building echoes that of the Community Flats building across the woonerf, which engages the Common.

Units within the Townhouse and Rowhouse buildings are individually distinguished by siding color, and separated by a vertical trim element. Each grouping of adjacent entry doors is set off by columns of varying width at regular intervals to further vary the rhythm of the facades. The underside of each canopy is accentuated by cedar boards.

The roof forms are kept largely continuous and simple due to the intent of providing solar panels on all buildings in the most efficient manner. The longer stretches of roof are broken up at the corners, where the impact on solar shading will be minimal and the gable end elevations will be energized. The roof of the easternmost Rowhouse unit is kicked up in the style of the Community Flats building in order to nod to the scale of the adjacent 5-story building.

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



**Phil Kaplan**, Principal

Kaplan Thompson Architects



# A R C H E T Y P E

April 26, 2022

Department of Planning & Development  
Attn: James Rather, Development Review Manager City of Portland, Maine  
389 Congress Street, 4th Floor  
Portland, ME 04101

## **Re: Comment Response Letter**

Dougherty Commons Redevelopment  
57 Douglass Street

On behalf of Douglass Commons, LLC, we are pleased to respond to the comments that we received dated April 1st, 2022. This letter focuses on the architectural components of the project which were designed by Archetype Architect.

**Comment:** Applicant to provide clarification on materiality of lap siding, cornice and trim detailing for all housing types. Physical materials are encouraged to understand durability of proposed exterior finishes. To promote a strong cohesive identity of the proposed neighborhood character, a reduction in material types is recommended as well as color scheme continuity between Phase 1 & Complete Master Plan build-out buildings. Applicant to increase window fenestrations that face open space and parking lots to allow for greater visibility and natural light, specifically at Apartment building south façade at interior stairwell, Courtyard Flats A.1 & A.3, Townhouses B.2 & C.1, Rowhouses D.

**Response:** The lap siding will be cement clapboard, 9 inches to weather, the 9 inches to coincide with the mass and proportions of the building. There is a 24 inch stone base. All windows will have 4 inch trim a PVC product that can be painted. The clapboards will be painted a grey to match some of Co-Op buildings. We also picked up the sloped canopies to tie in with the Coop. The canopies are whimsical and offer the residents place to sit and identify entry. We have increased windows in the building. The natural colored siding, to resemble wood will be a Nichiha, the trims at top of building have been simplified per request of a board member. The top floor will be clad with a dark grey metal siding. The proposed roof is flat to provide future solar panels. The top floor in metal shingle helps reduce the building height. We also varied the height by running the Nichiha up beyond the building roof height.

Sincerely,



David Lloyd  
Maine Licensed Architect  
Archetype Architects







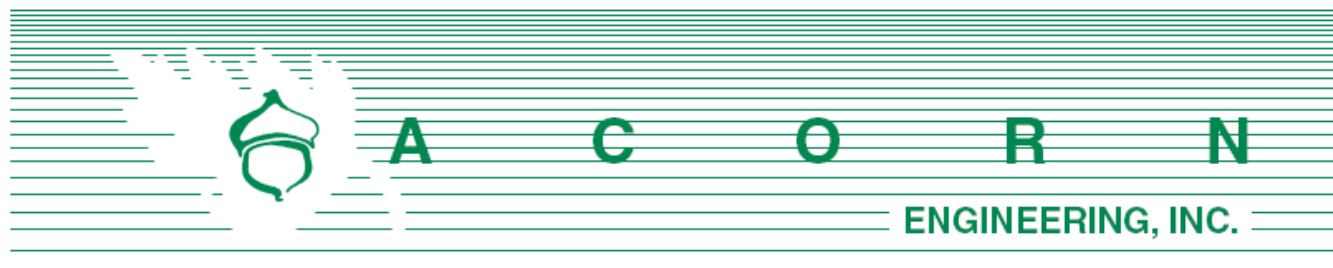












Department of Planning & Development  
 Attn: Jimmy Dealaman, Planner  
 City of Portland, Maine  
 389 Congress Street, 4th Floor  
 Portland, ME 04101

May 13, 2022

Subject: Comment Response Letter #2  
 Dougherty Commons Redevelopment

On behalf of Douglass Commons, LLC, we are pleased to respond to the second round of comments received May 9<sup>th</sup>, 2022.

### **Planning/DPW:**

**Comment** – *The additional parking area may have been added to the overall site plan (from last round of staff comment) but is not shown on either phased plan. Please show which phase/plan will undertake this site work.*

**Response** – The additional parking added to the full site plan will be completed by the second owner to build on the site. This will accommodate the preferred owner layout for each phase. A note has been added to the phased site plans to reflect this condition. In other words, it is not necessary or efficient to build that particular parking area during the initial construction, assuming only one developer proceeds during the “first round” of construction.

**Comment** – *The Fire Marshal requests that Phase 2 plan show Autoturn analysis for the interim hammerhead turnaround now proposed. We are unable to locate the last Autoturn provided for the fire truck looping through the site, so please provide as well for file.*

**Response** – An Auto Turn analysis has been provided for the Phase 2 interim hammerhead and the full site, please refer to Documents 46 and 46a in the submission materials.

**Comment** – *Staff recommend that the applicant consider adding a lighting pole or bollard at the location shown that appears to be a gap in trail lighting available. Even though there is existing lighting from 295 pole nearby (south of this location), additional lighting may likely be needed here.*

**Response** – Please see site plans C-10, C-11, and C-12 for the addition of a 16 foot light pole in this location.

**Comment** – *Public Works comments that solely relying on ambient light from cars is not*

*appropriate for ensuring pedestrian/transit rider safety. PW is fine with the current lighting at the transit stop on Congress, but continues to request that the applicant install a cobra head on the existing utility pole at the corner of Douglass & Congress, angled toward Congress.*

**Response** – The Applicant disagrees that this off-site public improvement should fall onto their project. There does not appear to be an ordinance or code requirement that exists that would trigger this requirement given this location is not along the frontage of the project. It should also be noted that the submitted picture in the first comment response letter was not intended to imply that vehicle headlights were the sole illumination at this location as there are multiple neighbors and businesses with consistent lighting in addition to the adjacent utility pole/cobra head and Turnpike/Congress Street spillover lighting that contributes to illumination.

**Comment** – *Provide PWD capacity to serve letter prior to hearing or a condition of approval will be needed.*

**Response** – In general, PWD has provided their verbal approval of the design and capacity to serve; however, we are awaiting the formal letter and will forward it upon receipt.

### Design Review

**Comment** – *Applicant to consider additional opportunities for communal open space at Apartment building, potentially at basement level with door access from shared Laundry Room to an outdoor amenity (ie patio, trellis, seating, planting etc.) that is easily accessible for residents.*

**Response** – Outdoor communal space behind the apartment building is not planned for several reasons. For accessible egress out of the basement, the plan would require a retaining wall at the property line creating an undesirable and expensive basin area presenting drainage issues. We would also like to preserve the privacy of the apartments on this level to the greatest extent possible as their only windows look out on this space. Furthermore, there is ample communal space already planned on site as well as the neighboring existing spaces in the park. For these reasons, we feel passive, non-programmed space at the rear of the site is the most appropriate design.

**Comment** – *Applicant to consider additional opportunities for private open space for residents (ie. Balconies, yards, decks, patios) at Apartment building.*

**Response** – The Applicant and their architect have explored balconies on the apartment building and have determined that to finance this affordable housing project the construction budget will not allow for this specific amenity.

**Comment** – *The planning board expressed interest in seeing vents on the elevations, please update accordingly.*

**Response** – Please see the updated elevation plans showing vents on the outside of the cooperative buildings.



## **Traffic Review**

**Comment** – *I would suggest that the applicant review site specific details that prevent expansion of the parking area to meet the 24-foot aisle width standard and document why the site can't accommodate the wider aisle width.*

**Response** – Specific constraints include existing gas and electrical infrastructure that drive the overall parking layout geometry as well as elevation challenges when matching back into the abutting land. As seen, there is little room between the edge of pavement property line in several instances. Additionally, there is a strong desire to incorporate landscape islands and vegetation within the parking field to break up parking and providing shading. By reducing two drive aisles to 22', we gain four feet to be put towards screening/shading which is not only a policy goal of the City, but a Site Plan standard. We have implemented this drive aisle design on numerous constructed residential projects without issues and at both workshops, multiple Planning Board members have expressed their support of this waiver.

**Comment** – *I have reviewed the parking demand study prepared by the applicant and in general I find it to be reasonable. I do not support the assumption that the project is less than half a mile from a rail station (criteria in the ITE Parking Generation Manual). The definition is intended for a commuter rail station and not an Amtrak station. Based upon my calculation the project will generate the following parking demand:*

*Mid-Rise Multi-Family 19 Units x 0.90 spaces per unit = 17 spaces*

*Low-Rise Multi-Family 28 Units x 0.76 spaces per unit = 21 spaces*

*Affordable Housing – Income Limits 73 Units x 0.53 spaces per unit = 39 spaces*

*Total = 77 spaces*

*This does increase the parking demand estimate slightly, but the proposed supply (78 spaces) is expected to be sufficient.*

**Response** – Please refer to the revised parking analysis that incorporates this alternative land-use-code analysis to provide an upper limit of the estimated parking demand. As mentioned by the peer reviewer, in either case the supply is sufficient. It should also be noted that overall, there are several conservative measures built into calculated demand.





## **Engineering Peer Review**

**Comment** – *The Phase I CM plan should show the impacts and required management associated with that phase of work; however the plan doesn't show any phasing or fencing associated with the Phase I space? The Phase I and Phase II CM plans are separate, but ultimately these will need to consider CM requirements associated with the other phase being under construction or up and operating. For example erosion control needs to be provided for all previously installed stormwater systems. I think these items are best addressed at the time when sequencing is known, so it could be part of a condition.*

**Response** – Please see the phased construction management plans for these changes, the previously labeled drawing C-04 is now C-05, and vice versa. This reflects the management associated with each phase of work. We are in agreement that when sequencing of the project is known, additional clarification will be provided to provide the contractor with clear direction.

**Comment** – *I think some additional clarifying notes should be provided on the Phase Grading plans clarifying how the work will integrate with each other depending on what phase happens first. Some of the notes provided area bit confusing (for example, the “Phase II Site to be filled...” note on the Phase II plan). The phased plans should be very clear that there may be a need to coordinate between the two phases either between a construction project and a completed site, or between two construction projects and a completed site, or between different phases of the work. Similar clarification will be necessary for the utility plan, but as with all of the plans, this may be better completed at the time when sequencing is known.*

**Response** – Please see additional notes added to the phased grading and utility plans. We are in agreement that when sequencing of the project is known, additional clarification will be provided to provide the contractor with clear direction.

**Comment** – *When the final system is selected, the plans and design information provided should reflect that system, and the manufacturer confirmation of the design should be for the final system. In addition, the Stormwater Maintenance Agreement should reflect this specific system, referring to the O&M requirements that will vary depending on the system selected. The draft agreement provided does not refer to these stormwater systems.*

**Response** – The stormwater maintenance agreement has been updated to include specifications for both the Filterra and FocalPoint systems. The agreement will be updated when the final system is selected.

We appreciate the review of this beneficial project by the various staff members and peer review engineers, and look forward to the upcoming Planning Board hearing on May 24<sup>th</sup>.

Sincerely,



Sam Lebel, P.E.  
Project Manager  
Acorn Engineering, Inc.









1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.

- CIVIL SITE NOTES:

- SPECIAL INSPECTION NOTES

- IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

- 5.2. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL SHOW UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
- 5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
- 5.4. SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER AND COORDINATED BY THE CONTRACTOR.

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

- ## PERMITTING NOTES

- GRADING AND DRAINAGE NOTES:

- EROSION CONTROL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.

- DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:
  - ROCK AND CONCRETE FOUNDATIONS
  - CONCRETE SLABS
  - BITUMINOUS ASPHALT PAVEMENT
  - CONCRETE PADS AND BLOCKS
  - FENCE POST AND FENCING
  - UNDERGROUND UTILITY LINES
  - ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS
  - STORM DRAIN PIPES AND APPURTENANCE STRUCTURES
  - OTHER TRASH & MISCELLANEOUS SOLID WASTES
2. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. CONTRACTOR TO REFER TO PHASE 1 ENVIRONMENTAL SITE ASSESSMENT BY CREDERE ASSOCIATES, INC. AND PHASE 2 ENVIRONMENTAL ASSESSMENT BY WOODARD AND CURRAN.
5. CONTRACTOR TO REFER TO AND ABIDE BY VRAP DOCUMENTS PREPARED BY CREDERE ASSOCIATES.

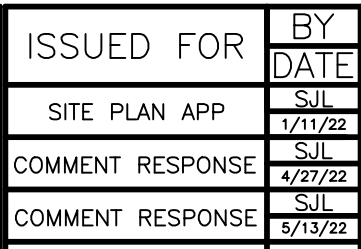
PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION







1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, INCLUDING ALL DEPT. OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
6. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
7. SETBACKS, BARRIERS, AND FENCES SHALL BE LOCATED FROM THE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
8. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES. SEE DETAIL.
9. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
10. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.

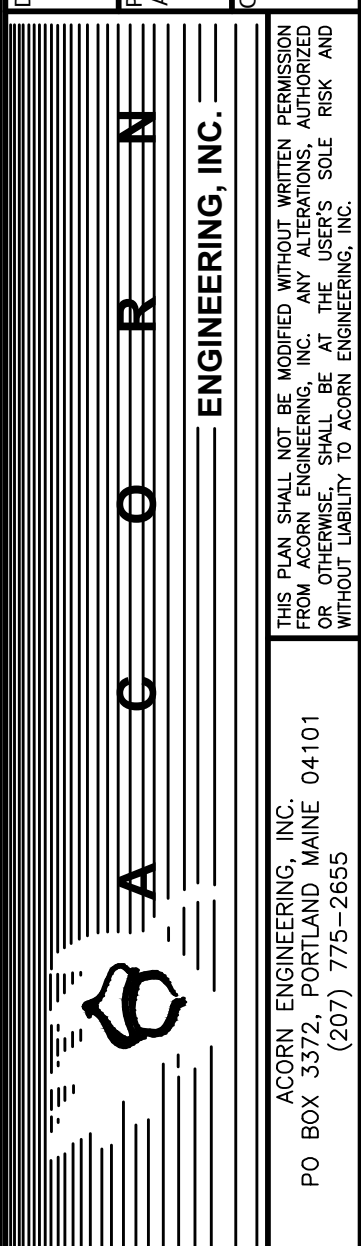


**DRAWING NAME:** OVERALL CONSTRUCTION MANAGEMENT PLAN

---

**PROJECT NAME/ ADDRESS:** DOUGHERTY COMMONS

OWNER OF RECORD:  
DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101



|              |            |
|--------------|------------|
| FILE:        | 1154_CIVIL |
| JN:          | 1154       |
| SCALE:       | AS NOTED   |
| DESIGNED BY: | SJL        |
| DRAWN BY:    | AWG        |
| CHECKED BY:  | SJL/WHs    |



DRAWING NO.  
**C-03**







1. EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, INCLUDING ALL DEPT. OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
6. SEPARATE MARKING SHALL BE PROVIDED FROM THE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES DETAIL.
8. DEMOLITION PLAN IS INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES, ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.



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NOT ISSUED FOR  
CONSTRUCTION

[illegible]

AWING NAME: \_\_\_\_\_

**INTERIM PHASE II CONSTRUCTION MANAGEMENT PLAN**

DOUGHERTY COMMONS

RD: DOUGLASS COMMONS, LLC

10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

**DRAWING NAME:**

PROJECT NAME/

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

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND MAINE 04101

FILE: 1154\_CIVIL

JN: 1154

SCALE: AS NOTED

DESIGNED BY: SJL

DRAWN BY: AWG

CHECKED BY: SJL/WHS



DRAWING NO.

C-05

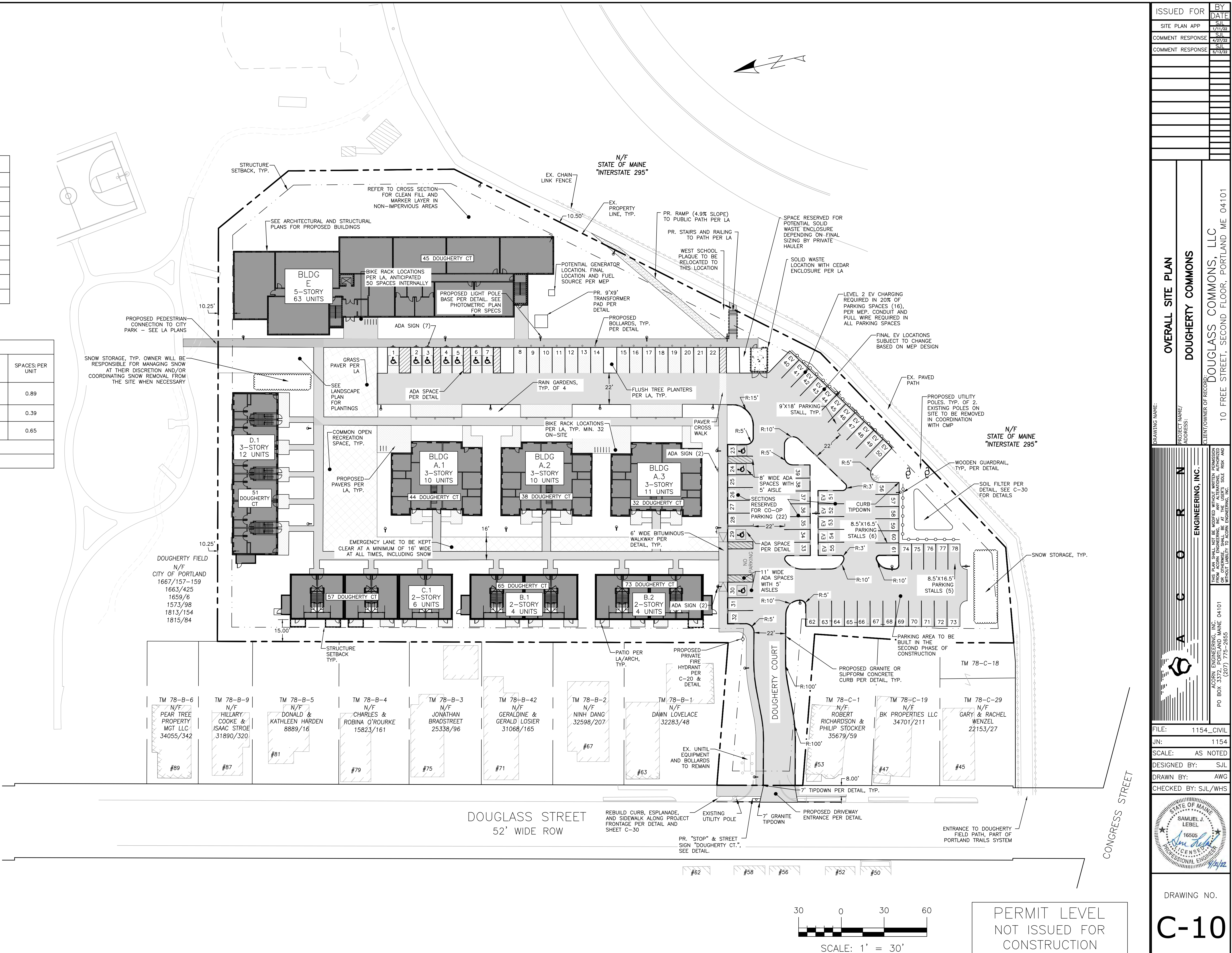


GENERAL NOTES:

1. ALL VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.

| SPACE AND BULK STANDARDS             |               |               |
|--------------------------------------|---------------|---------------|
| R-5A PRUD ZONE                       | REQUIRED      | PROVIDED      |
| MINIMUM LOT SIZE                     | 2.00 AC       | 3.34 AC       |
| MINIMUM STREET FRONTAGE              | 50'           | 60'           |
| FRONT YARD SETBACK                   | 10'           | 15'           |
| SIDE YARD SETBACK                    | 10'           | 10.25'        |
| REAR YARD SETBACK                    | 10'           | 10.5'         |
| MAXIMUM BUILDING HEIGHT              | 55'           | 53'           |
| MAX. # OF DWELLING UNITS ON PROPERTY | 182           | 120           |
| COMMON RECREATION OPEN SPACE         | 200 SF / D.U. | 300 SF / D.U. |

| PARKING TABLE                                                 |                |            |                   |                                  |                 |
|---------------------------------------------------------------|----------------|------------|-------------------|----------------------------------|-----------------|
| AREA                                                          | PARKING SPACES | UNIT COUNT | EV CHARGING (20%) | COMPACT SPACES (#56-61) (#74-78) | SPACES PER UNIT |
| 5-STORY (#1-22, #40-50, #56-73)                               | 56             | 63         | 11                | 11                               | 0.89            |
| 2 & 3-STORIES (#23-39, #51-55)                                | 22             | 57         | 5                 | 0                                | 0.39            |
| TOTAL                                                         | 78             | 120        | 16                | 11                               | 0.65            |
| * ALL SPACES 9'X18' UNLESS OTHERWISE NOTED                    |                |            |                   |                                  |                 |
| ** OFF-STREET PARKING REQUIREMENTS WAIVED PER SEC. 14-332.2.b |                |            |                   |                                  |                 |



ISSUED FOR

BY

DATE

SITE PLAN APP

1/11/23

COMMENT RESPONSE

2/2/23

COMMENT RESPONSE

2/2/23

OVERALL SITE PLAN

DOUGHERTY COMMONS

DOUGLASS COMMONS, LLC

10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

DRAWING NAME:

PROJECT NAME/ ADDRESS:

CLIENT/OWNER OF RECORD:

ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF THE ENGINEER. ANY CHANGES SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACOORN ENGINEERING, INC.

ACOORN ENGINEERING, INC.

PO BOX 3372, PORTLAND MAINE 04101

(207) 775-2555

FILE:

1154\_CIVIL

JN:

1154

SCALE:

AS NOTED

DESIGNED BY:

SJL

DRAWN BY:

AWG

CHECKED BY:

SJL/WH

STATE OF MAINE

SAMUEL J. LEBEL

16505

PROFESSIONAL ENGINEER

7/14/22

DRAWING NO.

C-10

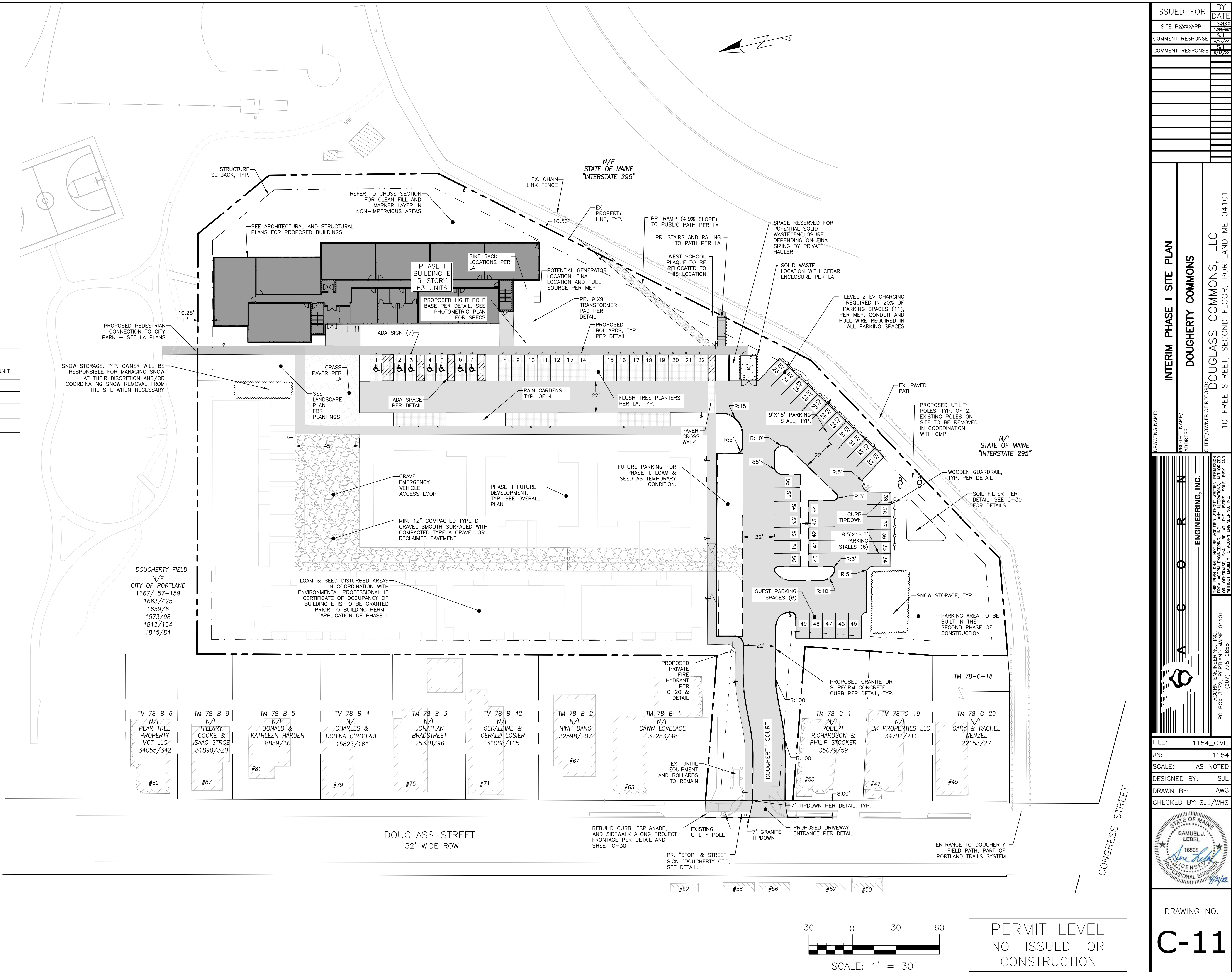


GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.

| SPACE AND BULK STANDARDS             |               |               |
|--------------------------------------|---------------|---------------|
| R5A ZONE                             | REQUIRED      | PROVIDED      |
| MINIMUM LOT SIZE                     | 2.00 AC       | 3.34 AC       |
| MINIMUM STREET FRONTAGE              | 50'           | 60'           |
| FRONT YARD SETBACK                   | 10'           | 215'          |
| SIDE YARD SETBACK                    | 10'           | 10.25'        |
| REAR YARD SETBACK                    | 10'           | 10.5'         |
| MAXIMUM BUILDING HEIGHT              | 55'           | 53'           |
| MAX. # OF DWELLING UNITS ON PROPERTY | 182           | 63            |
| COMMON RECREATION OPEN SPACE         | 200 SF / D.U. | 256 SF / D.U. |
| ** R5A PRUD STANDARDS                |               |               |

| PARKING TABLE                                                 |                |            |                   |             |
|---------------------------------------------------------------|----------------|------------|-------------------|-------------|
| AREA                                                          | PARKING SPACES | UNIT COUNT | EV CHARGING (20%) | SPACES:UNIT |
| 5-STORY                                                       | 56             | 63         | 12                | 0.88        |
| COMPACT (#34-39)                                              | 6              | -          | -                 | -           |
| * ALL SPACES 9'X18' UNLESS OTHERWISE NOTED                    |                |            |                   |             |
| ** OFF-STREET PARKING REQUIREMENTS WAIVED PER SEC. 14-332.2.b |                |            |                   |             |



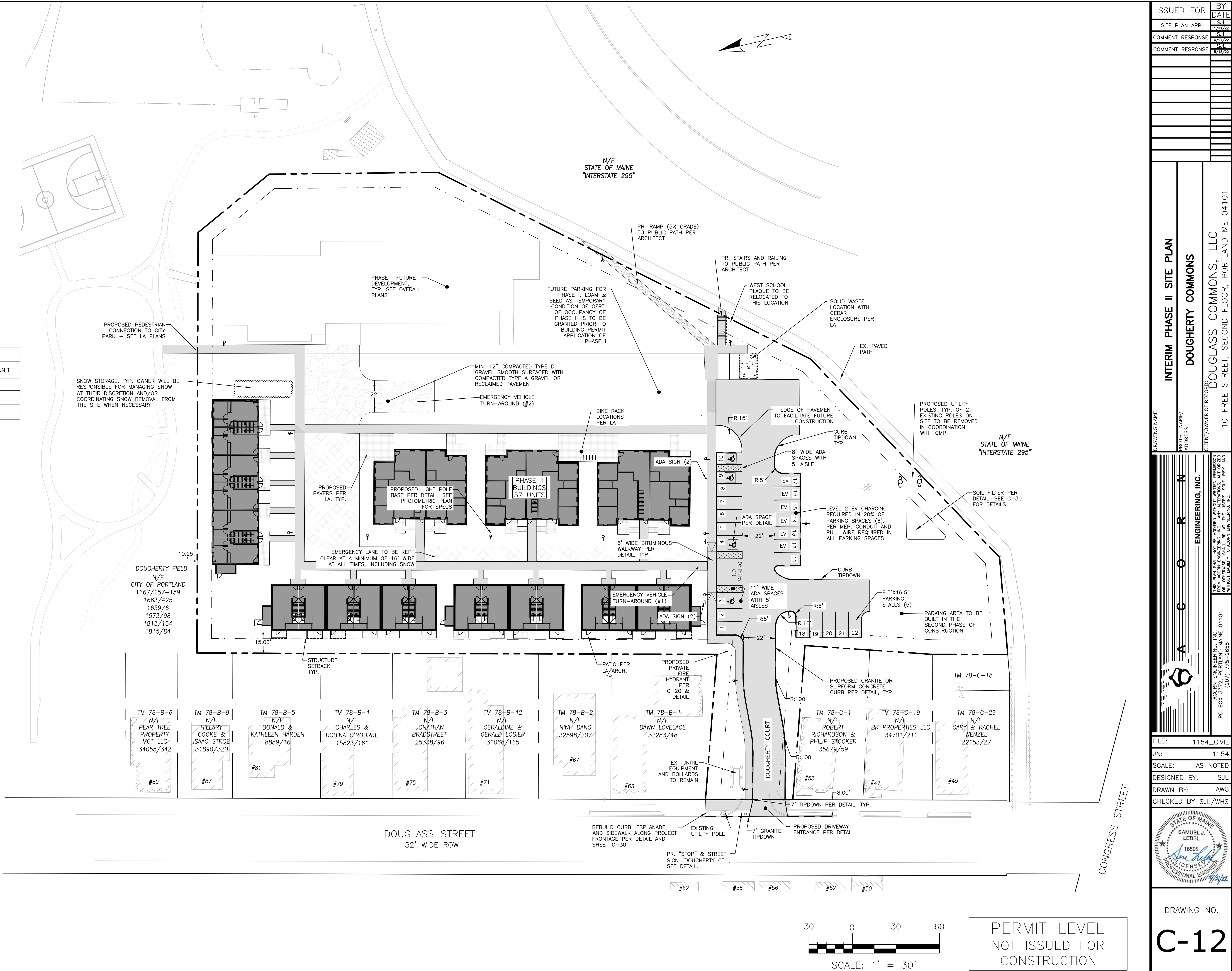


GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
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| SPACE AND BULK STANDARDS             |               |               |
|--------------------------------------|---------------|---------------|
| R5A ZONE                             | REQUIRED      | PROVIDED      |
| MINIMUM LOT SIZE                     | 2.00 AC       | 3.34 AC       |
| MINIMUM STREET FRONTAGE              | 50'           | 60'           |
| FRONT YARD SETBACK                   | 10'           | 15'           |
| SIDE YARD SETBACK                    | 10'           | 10.25'        |
| REAR YARD SETBACK                    | 10'           | 10.5'         |
| MAXIMUM BUILDING HEIGHT              | 55'           | 35'           |
| MAX. # OF DWELLING UNITS ON PROPERTY | 182           | 57            |
| COMMON RECREATION OPEN SPACE         | 200 SF / D.U. | 390 SF / D.U. |
| ** R5A PRUD STANDARDS                |               |               |

| PARKING TABLE                                                 |                |            |                   |             |
|---------------------------------------------------------------|----------------|------------|-------------------|-------------|
| AREA                                                          | PARKING SPACES | UNIT COUNT | EV CHARGING (20%) | SPACES:UNIT |
| COOPERATIVE BUILDINGS                                         | 22             | 57         | 5                 | 0.39        |
| * ALL SPACES 9'X18' UNLESS OTHERWISE NOTED                    |                |            |                   |             |
| ** OFF-STREET PARKING REQUIREMENTS WAIVED PER SEC. 14-332.2.b |                |            |                   |             |



ISSUED FOR  
SITE PLAN APP  
COMMENT RESPONSE  
COMMENT RESPONSE

BY  
DATE  
SJM  
1/11/23  
SJM  
4/27/23  
SJM  
7/13/23

INTERIM PHASE II SITE PLAN  
DOUGHERTY COMMONS

PROJECT NAME/  
ADDRESS:  
DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

CLIENT/OWNER OF RECORD  
DOUGHERTY COMMONS

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND MAINE 04101  
(207) 775-2555

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. OR THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1154\_CIVIL  
JN: 1154  
SCALE: AS NOTED  
DESIGNED BY: SJL  
DRAWN BY: AWG  
CHECKED BY: SJL/WH

STATE OF MAINE  
SAMUEL J. LEBEL  
16505  
PROFESSIONAL ENGINEER  
7/14/22

DRAWING NO.  
C-12

Page 851



1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH THE UTILITY COMPANIES. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WITHIN THE CONTRACT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACONR ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE INSTALLED BY M.E.P. UNLESS OTHERWISE SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METERS MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION SHALL BE COMPLETED BY M.E.P. ENGINEER IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNTIL, WHEN EXCAVATION OCCURS NEAR THE MAIN, ANODE BED, OR RECTIFIER, UNTIL DAMAGE CONTROL. DESIGN SHALL BE COORDINATED WITH CMP.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING, ALL ELECTRIC CONNECTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION.
9. DESIGN OF ALL ELECTRICAL EQUIPMENT SHALL BE APPROVED FROM CMP.
10. SECONDARY CONDUIT RUNS SHOWN FOR REFERENCE, SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS AND MEP DESIGN. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.
11. UTILITY LAAYOUT SUBJECT TO CHANGE DEPENDING ON PHASING IMPLEMENTATION.

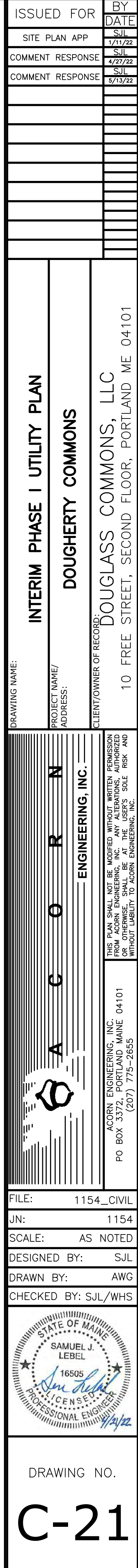


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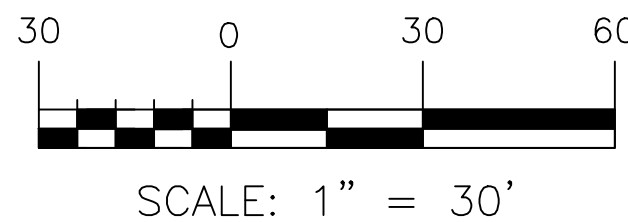
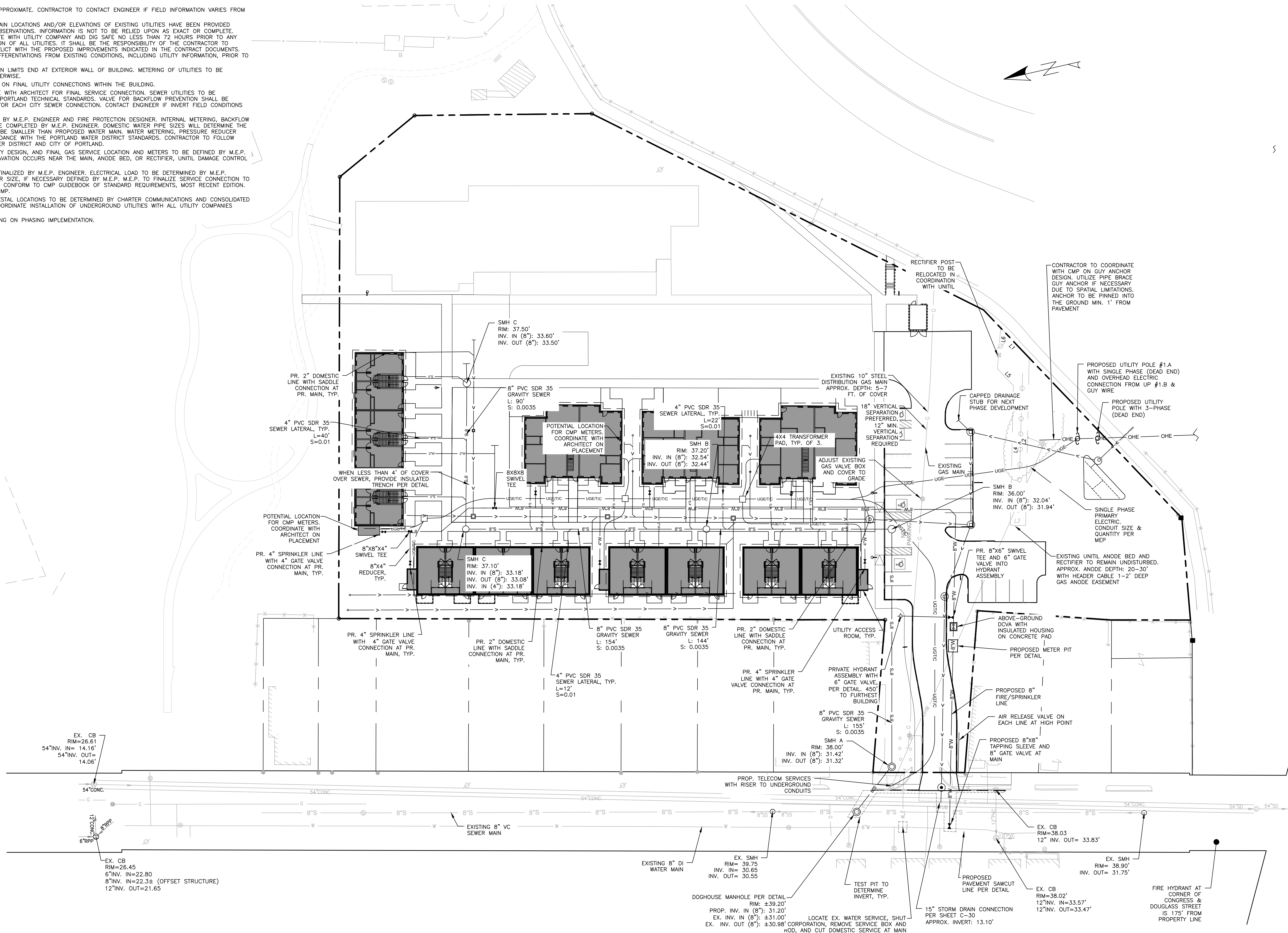
1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR IS TO VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR IS TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. **SEWER UTILITIES:** CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. **WATER UTILITIES:** FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE COMPLETED BY M.E.P. ENGINEER WITH THEIR PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. **GAS UTILITIES:** PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNTIL. WHEN EXCAVATION OCCURS NEAR THE MAIN, ANODE BED, OR RECTIFIER, UNTIL DAMAGE CONTROL MEASUREMENT SHALL BE COMPLETED BY M.E.P. ENGINEER.
8. **ELECTRIC UTILITIES:** ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL CONNECTIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND CONSOLIDATED TELEPHONE CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.
10. UTILITY LAUNCH SUBJECT TO CHANGE DEPENDING ON PHASING IMPLEMENTATION.





GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNTIL. WHEN EXCAVATION OCCURS NEAR THE MAIN, ANODE BED, OR RECTIFIER, UNTIL DAMAGE CONTROL DEPARTMENT SHALL BE COORDINATED WITH.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND CONSOLIDATED PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.
10. UTILITY LAYOUT SUBJECT TO CHANGE DEPENDING ON PHASING IMPLEMENTATION.



PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

| ISSUED FOR       | BY      |
|------------------|---------|
| SITE PLAN APP    | SJL     |
| COMMENT RESPONSE | 7/11/22 |
| COMMENT RESPONSE | SJL     |
| COMMENT RESPONSE | 7/27/22 |
| COMMENT RESPONSE | 7/27/22 |

INTERIM PHASE II UTILITY PLAN

DOUGHERTY COMMONS

DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

DRAWING NAME:

PROJECT NAME/

ADDRESS:

CLIENT/OWNER OF RECORD

ACORN ENGINEERING, INC.  
ENGINEERING, INC.

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND MAINE 04101  
(207) 775-2555

FILE: 1154\_CIVIL  
JN: 1154  
SCALE: AS NOTED  
DESIGNED BY: SJL  
DRAWN BY: AWG  
CHECKED BY: SJL/WHs



DRAWING NO.

C-22



- GENERAL NOTES:
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
  2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
  3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
  4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
  5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.

| STRUCTURE TABLE |        |                                              |                        |
|-----------------|--------|----------------------------------------------|------------------------|
| NAME            | RIM    | INV. IN / PIPE (SIZE)                        | INV. OUT / PIPE (SIZE) |
| CB-1            | 36.50' | 25.55' (15")                                 | 25.45' (15")           |
| CB-2            | 35.15' | 25.90' (12")<br>27.65' (12")                 | 25.80' (15")           |
| CB-3            | 35.15' | 26.70' (12")<br>26.30' (12")<br>29.70' (12") | 26.20' (12")           |
| CB-4            | 33.69' |                                              | 30.00' (12")           |
| CB-5            | 32.35' | 27.40' (12")<br>27.20' (4")                  | 27.10' (12")           |
| CB-6            | 36.00' | 28.30' (12")                                 | 28.30' (12")           |
| DB-1            | 35.70' | 31.00' (10")                                 | 30.90' (10")           |
| DB-2            | 35.90' | 31.50' (10")                                 | 31.40' (10")           |
| DB-3            | 36.10' | 32.00' (10")                                 | 31.90' (10")           |
| DB-4            | 36.04' |                                              | 32.35' (10")           |
| DMH-1           | 38.70' | 24.80' (15")                                 | 20.00' (15")           |
| DMH-2           | 31.85' | 27.60' (8")                                  | 27.40' (10")           |
| DMH-3           | 36.75' | 30.50' (10")<br>26.58' (10")                 | 26.58' (12")           |
| FB-1            | 37.00' | 29.35' (10")<br>29.40' (8")                  | 29.25' (12")           |
| FB-2            | 37.00' | 30.35' (10")                                 | 30.25' (10")           |
| FB-3            | 37.10' | 31.35' (10")<br>31.35' (4")                  | 31.25' (10")           |

FB = 2'X2' CONCRETE "F" BASIN

DB = 12" DIAMETER INLINE PVC DRAIN BASIN

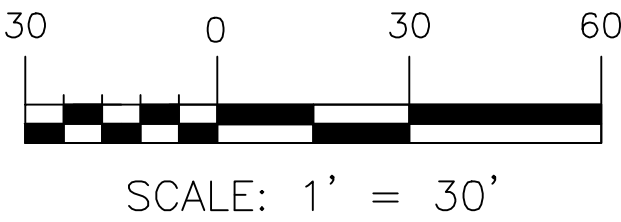
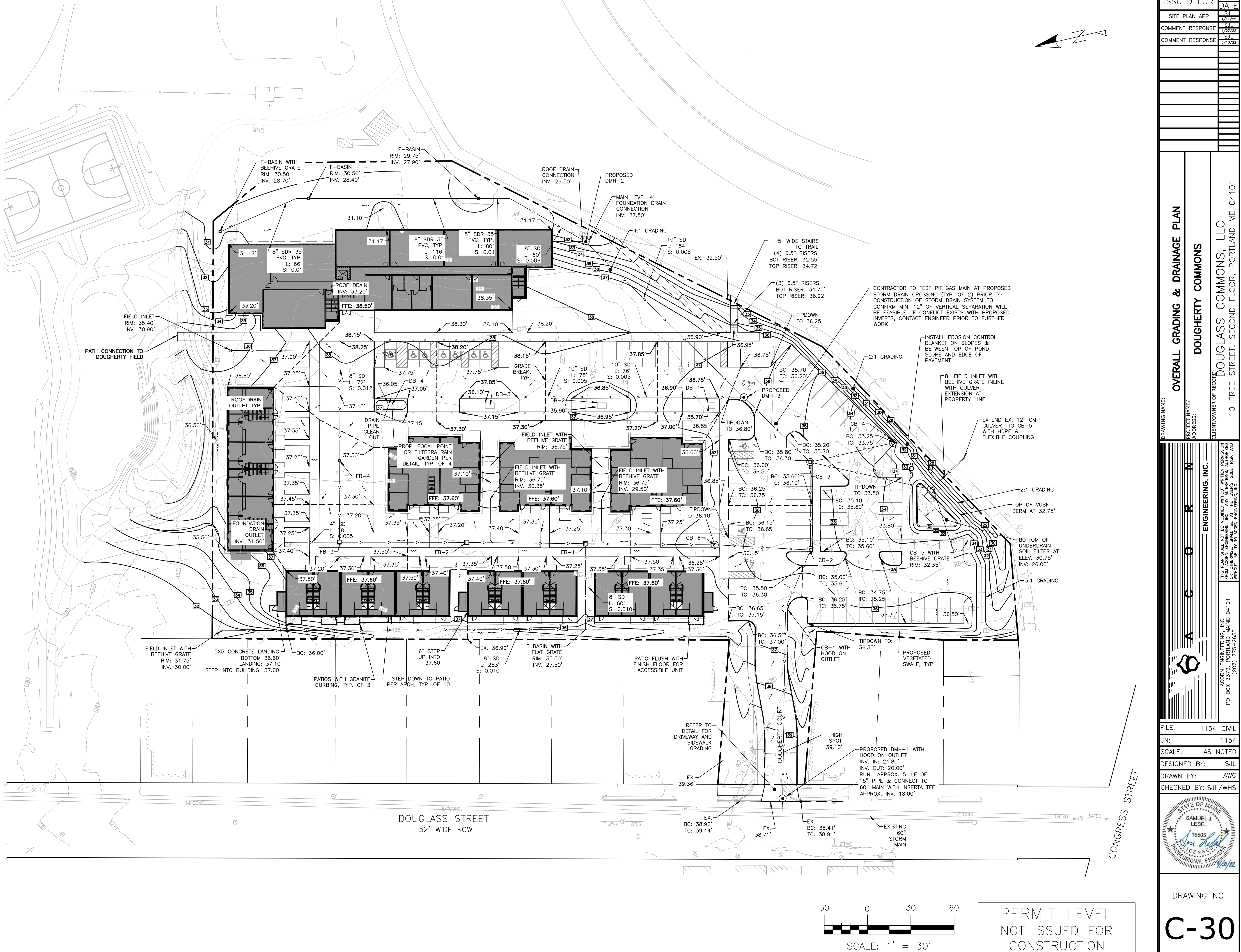
| AVERAGE GRADES AND BUILDING HEIGHT - E 5-STORY |        |
|------------------------------------------------|--------|
| NORTH CORNER ELEVATION                         | 31.17' |
| EAST CORNER ELEVATION                          | 31.17' |
| SOUTH CORNER ELEVATION                         | 38.35' |
| WEST CORNER ELEVATION                          | 33.20' |
| AVERAGE GRADE PLANE                            | 33.48' |
| ELEVATION AT ROOF                              | 86.50' |
| BUILDING HEIGHT                                | 53.02' |

| AVERAGE GRADES AND BUILDING HEIGHT - A 1-3 |        |
|--------------------------------------------|--------|
| NORTH CORNER ELEVATION                     | 37.60' |
| EAST CORNER ELEVATION                      | 37.60' |
| SOUTH CORNER ELEVATION                     | 37.60' |
| WEST CORNER ELEVATION                      | 37.60' |
| AVERAGE GRADE PLANE                        | 37.60' |
| ELEVATION AT ROOF                          | 70.93' |
| BUILDING HEIGHT                            | 33.33' |

| AVERAGE GRADES AND BUILDING HEIGHT - B 1-2 |        |
|--------------------------------------------|--------|
| NORTH CORNER ELEVATION                     | 37.60' |
| EAST CORNER ELEVATION                      | 37.60' |
| SOUTH CORNER ELEVATION                     | 37.60' |
| WEST CORNER ELEVATION                      | 37.60' |
| AVERAGE GRADE PLANE                        | 37.60' |
| ELEVATION AT ROOF                          | 62.60' |
| BUILDING HEIGHT                            | 25.00' |

| AVERAGE GRADES AND BUILDING HEIGHT - C-1 |        |
|------------------------------------------|--------|
| NORTH CORNER ELEVATION                   | 36.10' |
| EAST CORNER ELEVATION                    | 37.50' |
| SOUTH CORNER ELEVATION                   | 37.60' |
| WEST CORNER ELEVATION                    | 37.60' |
| AVERAGE GRADE PLANE                      | 37.20' |
| ELEVATION AT ROOF                        | 62.60' |
| BUILDING HEIGHT                          | 25.40' |

| AVERAGE GRADES AND BUILDING HEIGHT - D-1 |        |
|------------------------------------------|--------|
| NORTH CORNER ELEVATION                   | 35.50' |
| EAST CORNER ELEVATION                    | 36.60' |
| SOUTH CORNER ELEVATION                   | 37.60' |
| WEST CORNER ELEVATION                    | 37.50' |
| AVERAGE GRADE PLANE                      | 36.80' |
| ELEVATION AT ROOF                        | 70.93" |
| BUILDING HEIGHT                          | 34.13' |



PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

ISSUED FOR  
SITE PLAN APP  
COMMENT RESPONSE  
COMMENT RESPONSE

BY  
DATE  
SUL  
1/11/22  
SUL  
4/20/22  
SUL  
7/13/22

OVERALL GRADING & DRAINAGE PLAN

DOUGHERTY COMMONS

DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

DRAWING NAME:  
PROJECT NAME/  
ADDRESS:  
CLIENT/OWNER OF RECORD:

ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF THE ENGINEER. ANY CHANGES SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND MAINE 04101  
(207) 775-2555

FILE: 1154\_CIVIL  
JN: 1154  
SCALE: AS NOTED  
DESIGNED BY: SJL  
DRAWN BY: AWG  
CHECKED BY: SJL/WHs

STATE OF MAINE  
SAMUEL J. LEBEL  
16805  
PROFESSIONAL ENGINEER  
7/14/22

DRAWING NO.  
**C-30**

Page 855



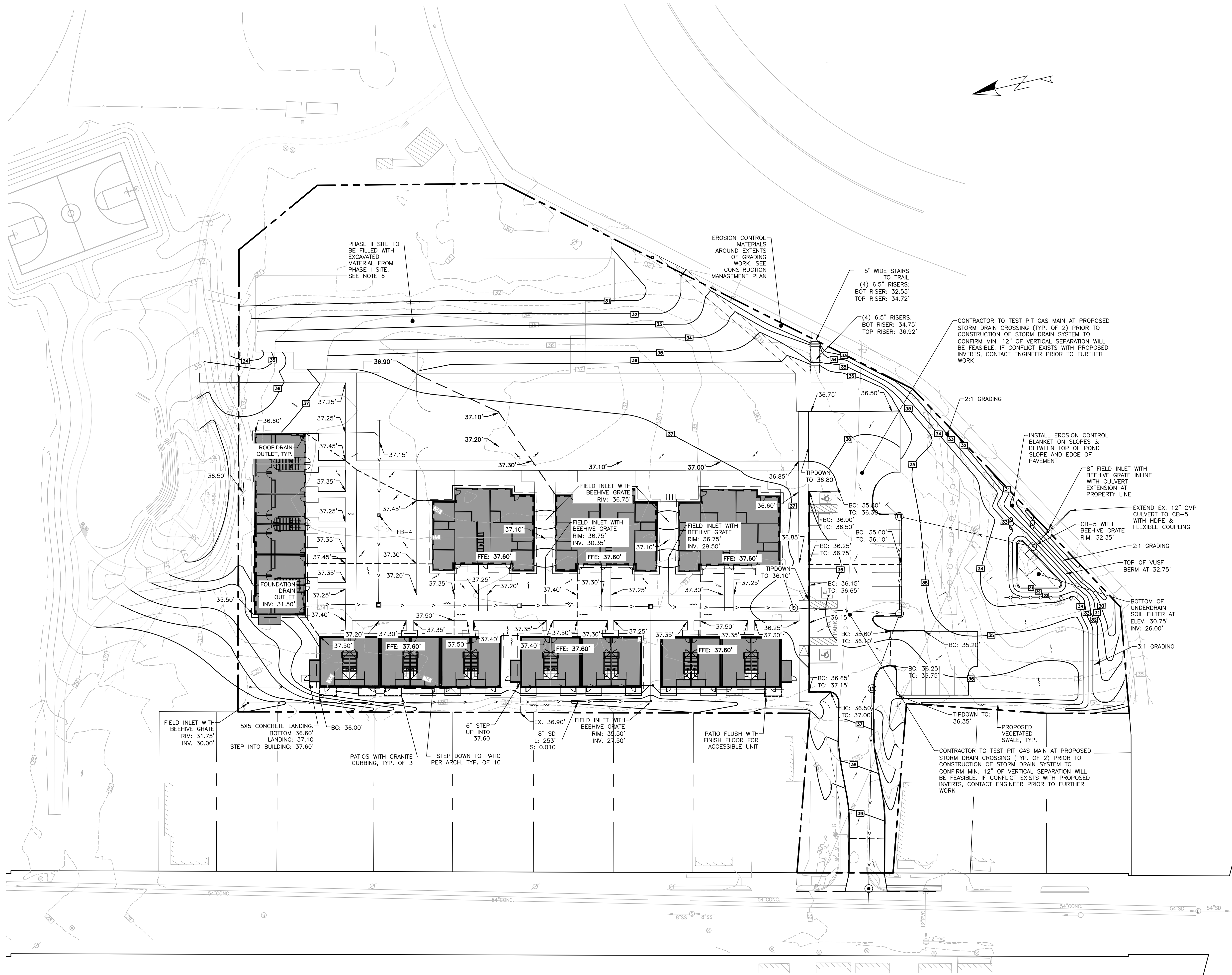
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADAGE OF ACTIVE CONSTRUCTION.
5. RETENTION BARRIERS SHALL BE INSTALLED DOWNGRADAGE OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. APPROXIMATE LOCATION OF CONTOURS, SLOPE TO THE IN BASED ON FINAL CUT/FILL AND NO MATERIAL IS ANTICIPATED TO LEAVE THE SITE AND NO IMPORTS ARE ANTICIPATED BESIDES LOAM AND AGGREGATES.

| AVERAGE GRADES AND BUILDING HEIGHT – A 1-3 |        |
|--------------------------------------------|--------|
| NORTH CORNER ELEVATION                     | 37.60' |
| EAST CORNER ELEVATION                      | 37.60' |
| SOUTH CORNER ELEVATION                     | 37.60' |
| WEST CORNER ELEVATION                      | 37.60' |
| AVERAGE GRADE PLANE                        | 37.60  |
| ELEVATION AT ROOF                          | 70.93' |
| BUILDING HEIGHT                            | 33.33' |

| AVERAGE GRADES AND BUILDING HEIGHT – B 1-2 |        |
|--------------------------------------------|--------|
| NORTH CORNER ELEVATION                     | 37.60' |
| EAST CORNER ELEVATION                      | 37.60' |
| SOUTH CORNER ELEVATION                     | 37.60' |
| WEST CORNER ELEVATION                      | 37.60' |
| AVERAGE GRADE PLANE                        | 37.60  |
| ELEVATION AT ROOF                          | 62.60' |
| BUILDING HEIGHT                            | 25.00' |

| AVERAGE GRADES AND BUILDING HEIGHT – C-1 |        |
|------------------------------------------|--------|
| NORTH CORNER ELEVATION                   | 36.10' |
| EAST CORNER ELEVATION                    | 37.50' |
| SOUTH CORNER ELEVATION                   | 37.60' |
| WEST CORNER ELEVATION                    | 37.60' |
| AVERAGE GRADE PLANE                      | 37.20  |
| ELEVATION AT ROOF                        | 62.60' |
| BUILDING HEIGHT                          | 25.40' |

| AVERAGE GRADES AND BUILDING HEIGHT – D-1 |        |
|------------------------------------------|--------|
| NORTH CORNER ELEVATION                   | 35.50' |
| EAST CORNER ELEVATION                    | 36.60' |
| SOUTH CORNER ELEVATION                   | 37.60' |
| WEST CORNER ELEVATION                    | 37.50' |
| AVERAGE GRADE PLANE                      | 36.80' |
| ELEVATION AT ROOF                        | 70.93" |
| BUILDING HEIGHT                          | 34.13' |



PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

|                  |                 |
|------------------|-----------------|
| ISSUED FOR       | BY              |
| SITE PLAN APP    | DATE            |
| COMMENT RESPONSE | S/JL<br>1/11/22 |
| COMMENT RESPONSE | S/JL<br>4/27/22 |
| COMMENT RESPONSE | S/JL<br>5/13/22 |

NAME: \_\_\_\_\_  
**INTERIM GRADING & DRAINAGE PLAN PHASE II**  
 NAME/ : \_\_\_\_\_  
**DOUGHERTY COMMONS**

WINNER OF RECORD: DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

**A C O R N**  
ENGINEERING, INC.

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND MAINE 04101  
(207) 775-2855

|              |            |
|--------------|------------|
| FILE:        | 1154_CIVIL |
| JN:          | 1154       |
| SCALE:       | AS NOTED   |
| DESIGNED BY: | SJL        |
| DRAWN BY:    | AWG        |
| CHECKED BY:  | SJL/WS     |



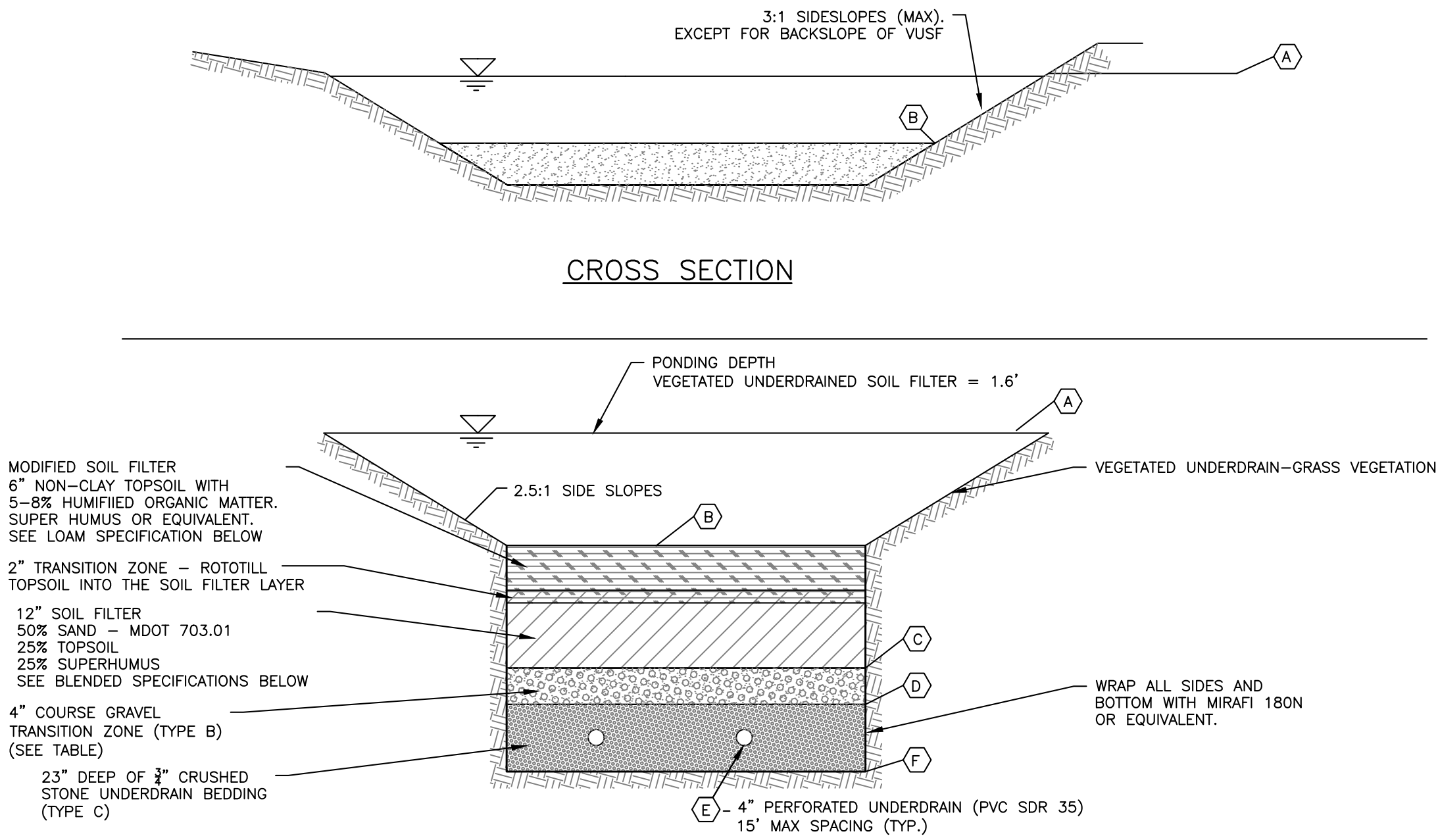
DRAWING NO.

C-32









- NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX, THE BOTTOM OF THE VEGETATED UNDERDRAIN SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX
  2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR), TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.
  3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.
  4. THE SEDIMENT FOREBAY SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE SOIL FILTER AND INSPECTED AND MAINTAINED DURING CONSTRUCTION. MAINTENANCE SHALL INCLUDE REMOVAL OF ANY ACCUMULATED SEDIMENT.
  5. A LANDSCAPE DESIGNER OR ARCHITECT SHOULD BE INVOLVED TO TO SELECT THE APPROPRIATE PLANTS FOR THE BIORETENTION CELL AND FOR THE SITE CONDITIONS. PLANTING PLAN BY OTHERS.
  6. MINIMUM UNDERDRAIN SLOPE 0.0025 TOWARDS THE OUTLET.
  7. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MAINE DEP - TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

| 6" SOIL FILTER BED -<br>LOAM TOPSOIL SPECIFICATION                                                                                                                              |                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| SIEVE SIZE                                                                                                                                                                      | % PASSING BY WEIGHT |
| #4                                                                                                                                                                              | 75-95               |
| #10                                                                                                                                                                             | 60-90               |
| #40                                                                                                                                                                             | 35-85               |
| #200                                                                                                                                                                            | 20-70               |
| 1. CLAY FRACTION <2% PASSING THE #200 SIEVE.                                                                                                                                    |                     |
| 2. LOAM SHALL BE LOOSE AND FRAGILE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES. |                     |

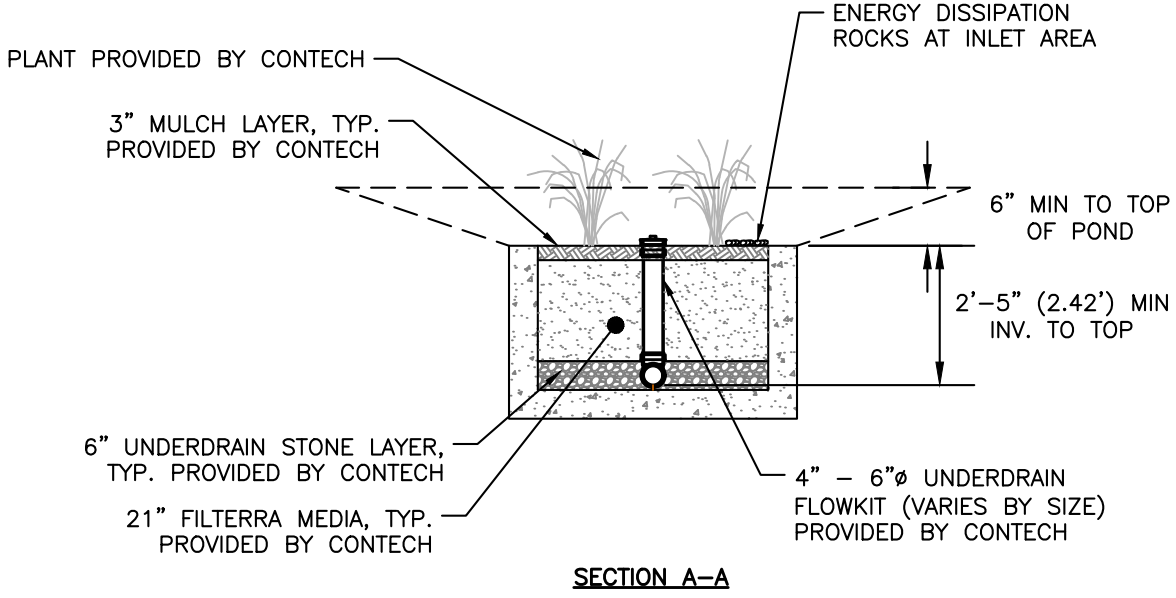
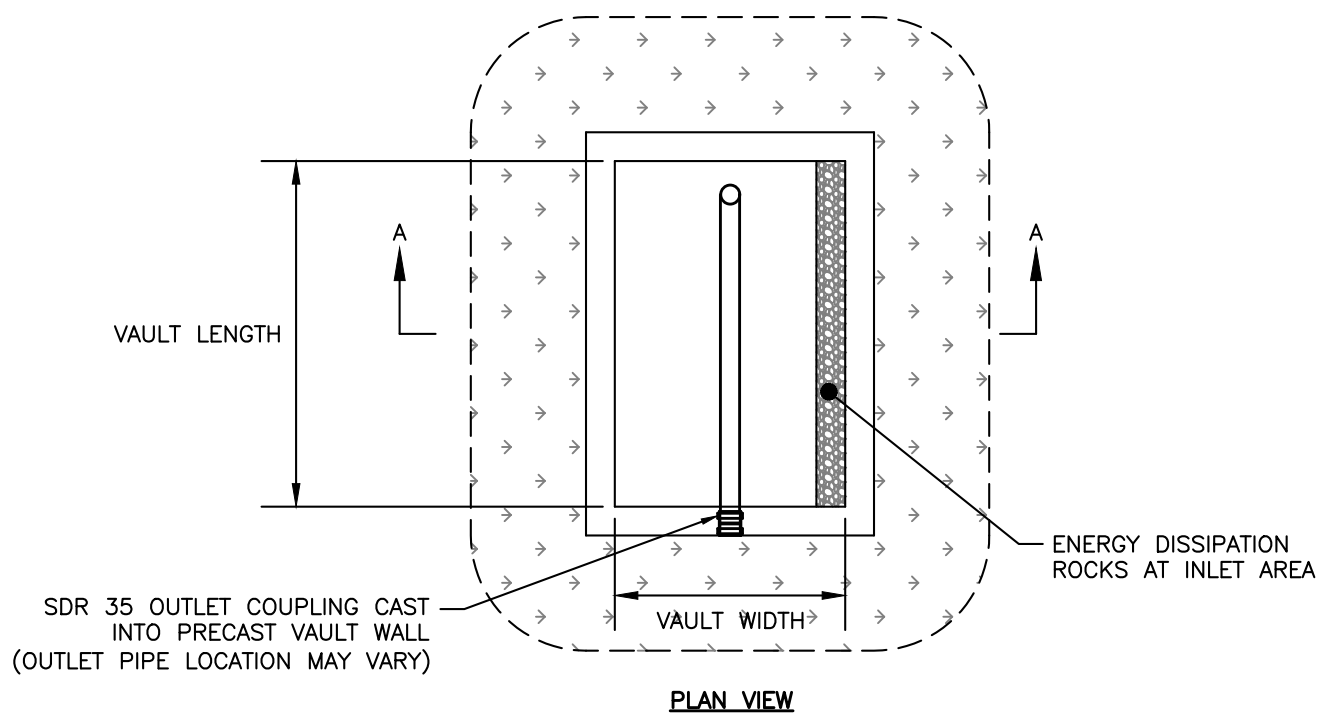
| SOIL FILTER BED -<br>SUPERHUMUS OR EQUIV. SPECIFICATION    |                     |
|------------------------------------------------------------|---------------------|
| SIEVE SIZE                                                 | % PASSING BY WEIGHT |
| 1"                                                         | 100                 |
| #200                                                       | 0-5                 |
| MINIMAL CLAY CONTENT, NO MORE THAN 3-5% PASSING #200 SIEVE |                     |

| 12" SOIL FILTER BED -<br>BLENDED SAND, LOAM, SUPERHUMUS<br>SIEVE ANALYSIS |                     |
|---------------------------------------------------------------------------|---------------------|
| SIEVE SIZE                                                                | % PASSING BY WEIGHT |
| #10                                                                       | 85-100              |
| #20                                                                       | 70-100              |
| #60                                                                       | 15-40               |
| #200                                                                      | 8-15                |
| 1. CLAY FRACTION <2% PASSING THE #200 SIEVE.                              |                     |
| 2. SUPERHUMUS OR EQUIVALENT                                               |                     |

| SCHEDULE               |        |
|------------------------|--------|
| ITEM                   | ELEV.  |
| (A) OVERFLOW INVERT    | 32.35' |
| (B) TOP OF SOIL FILTER | 30.75' |
| (C) TOP OF GRAVEL      | 29.25' |
| (D) TOP OF STONE       | 28.92' |
| (E) UNDERDRAIN INVERT  | 27.35' |
| (F) BOTTOM OF STONE    | 27.00' |

| SOIL FILTER BED -<br>TRANSITION ZONE (TYPE B) |                     |
|-----------------------------------------------|---------------------|
| SIEVE SIZE                                    | % PASSING BY WEIGHT |
| 1"                                            | 90-100              |
| 1/2"                                          | 75-100              |
| #4                                            | 50-100              |
| #20                                           | 15-80               |
| #50                                           | 0-15                |
| #200                                          | 0-5                 |

| SOIL FILTER BED -<br>UNDERDRAIN BEDDING (TYPE C) |                     |
|--------------------------------------------------|---------------------|
| SIEVE SIZE                                       | % PASSING BY WEIGHT |
| 1"                                               | 100                 |
| 3/4"                                             | 90-100              |
| 3/8"                                             | 0-75                |
| #4                                               | 0-25                |
| #10                                              | 0-5                 |



FILTERRA BIOSCAPE VAULT OFFLINE - BASIN  
NOT TO SCALE

| FILTERRA VAULT DATA TABLE |       |           |           |          |
|---------------------------|-------|-----------|-----------|----------|
| UNIT #                    | SIZE  | RIM ELEV. | BED ELEV. | INV. OUT |
| FT-1                      | 4'X5' | 36.70     | 35.70     | 30.90    |
| FT-2                      | 5'X5' | 36.90     | 35.90     | 31.40    |
| FT-3                      | 5'X5' | 37.10     | 36.10     | 31.90    |
| FT-4                      | 4'X5' | 36.95     | 35.95     | 32.35    |

VEGETATED UNDERDRAINED SOIL FILTER DETAIL  
NOT TO SCALE

PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

ISSUED FOR  
SITE PLAN APP

BY  
DATE  
SUL  
1/11/22

DRAINAGE DETAILS - 2

DOUGLASS STREET COMMONS

DOUGLASS COMMONS, LLC  
10 FREE STREET, SECOND FLOOR, PORTLAND ME 04101

DRAWING NAME:  
PROJECT NAME/  
ADDRESS:  
CLIENT/OWNER OF RECORD:

ACORN ENGINEERING, INC.  
PO BOX 3372, PORTLAND, MAINE 04101  
(207) 775-2655

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

FILE: 1154\_CIVIL

JN: 1154

SCALE: AS NOTED

DESIGNED BY: SUL

DRAWN BY: AWG

CHECKED BY: SUL/WHs

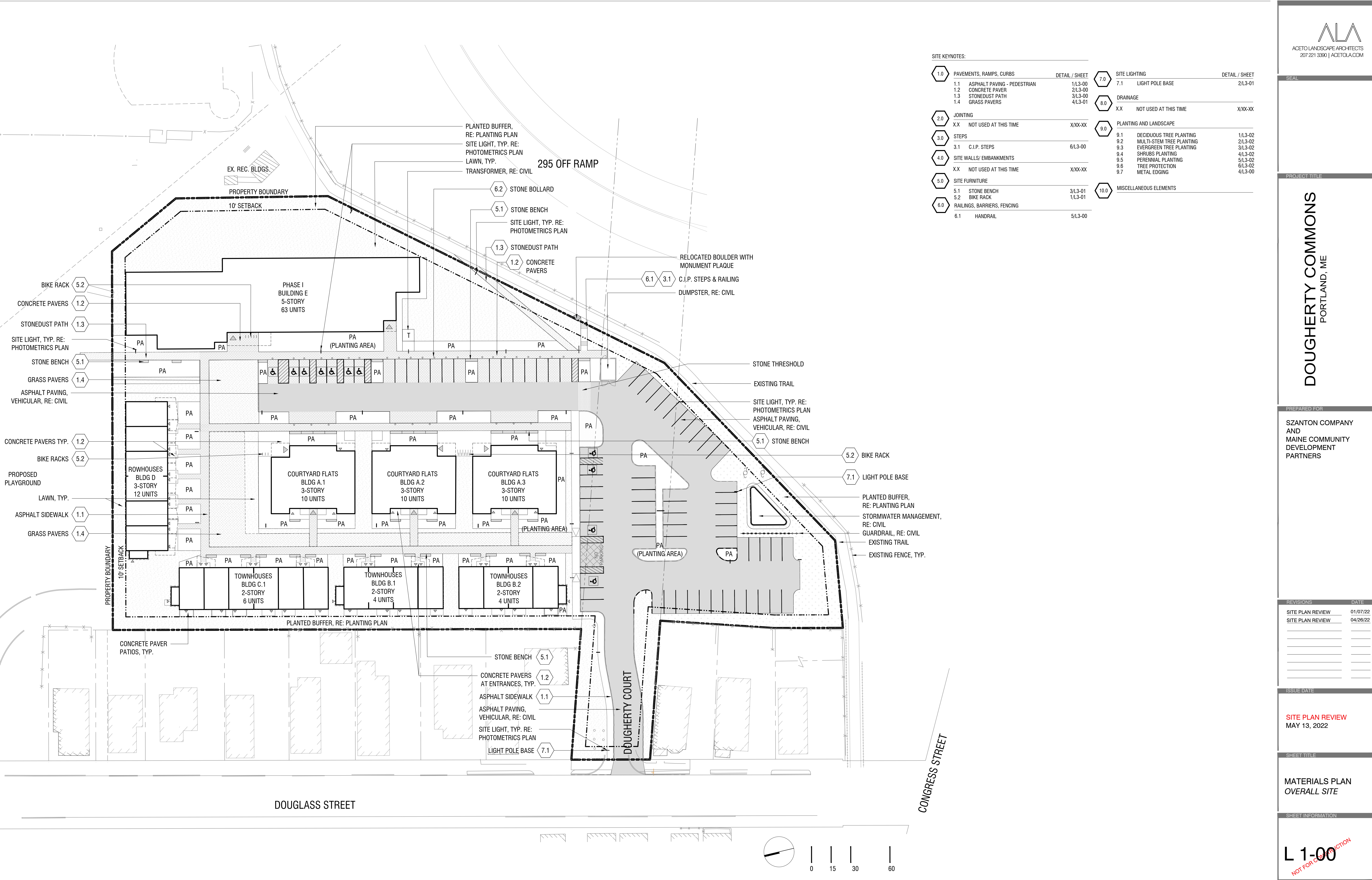
STATE OF MAINE  
SAMUEL J. LEBEL  
16505  
LICENSED PROFESSIONAL ENGINEER  
1/11/22

DRAWING NO.  
C-45









| SITE KEYNOTES: |                             |                |
|----------------|-----------------------------|----------------|
| 1.0            | PAVEMENTS, RAMPS, CURBS     | DETAIL / SHEET |
| 1.1            | ASPHALT PAVING - PEDESTRIAN | 1/L3-00        |
| 1.2            | CONCRETE PAVER              | 2/L3-00        |
| 1.3            | STONEDUST PATH              | 3/L3-00        |
| 1.4            | GRASS PAVERS                | 4/L3-01        |
| 2.0            | JOINTING                    |                |
| XX             | NOT USED AT THIS TIME       | X/XX-XX        |
| 3.0            | STEPS                       |                |
| 3.1            | C.I.P. STEPS                | 6/L3-00        |
| 4.0            | SITE WALLS/ EMBANKMENTS     |                |
| XX             | NOT USED AT THIS TIME       | X/XX-XX        |
| 5.0            | SITE FURNITURE              |                |
| 5.1            | STONE BENCH                 | 3/L3-01        |
| 5.2            | BIKE RACK                   | 1/L3-01        |
| 6.0            | RAILINGS, BARRIERS, FENCING |                |
| 6.1            | HANDRAIL                    | 5/L3-00        |
| 7.0            | SITE LIGHTING               | DETAIL / SHEET |
| 7.1            | LIGHT POLE BASE             | 2/L3-01        |
| 8.0            | DRAINAGE                    |                |
| XX             | NOT USED AT THIS TIME       | X/XX-XX        |
| 9.0            | PLANTING AND LANDSCAPE      |                |
| 9.1            | DECIDUOUS TREE PLANTING     | 1/L3-02        |
| 9.2            | MULTI-STEM TREE PLANTING    | 2/L3-02        |
| 9.3            | EVERGREEN TREE PLANTING     | 3/L3-02        |
| 9.4            | SHRUBS PLANTING             | 4/L3-02        |
| 9.5            | PERENNIAL PLANTING          | 5/L3-02        |
| 9.6            | TREE PROTECTION             | 6/L3-02        |
| 9.7            | METAL EDGING                | 4/L3-00        |
| 10.0           | MISCELLANEOUS ELEMENTS      |                |

SEAL

PROJECT TITLE

DOUGHERTY COMMONS  
PORTLAND, ME

PREPARED FOR

SZANTON COMPANY  
AND  
MAINE COMMUNITY  
DEVELOPMENT  
PARTNERS

| REVISIONS        | DATE     |
|------------------|----------|
| SITE PLAN REVIEW | 01/07/22 |
| SITE PLAN REVIEW | 04/26/22 |
|                  |          |
|                  |          |
|                  |          |
|                  |          |
|                  |          |
|                  |          |

ISSUE DATE

SITE PLAN REVIEW  
MAY 13, 2022

SHEET TITLE

MATERIALS PLAN  
OVERALL SITE

SHEET INFORMATION

L 1-00

NOT FOR CONSTRUCTION





**DOUGHERTY COMMONS**  
VIEW 2 - WOONERF





**DOUGHERTY COMMONS**  
VIEW 3 - COMMON





**DOUGHERTY COMMONS**  
VIEW 3 - COMMON





**DOUGHERTY COMMONS**  
VIEW 4 - COMMON





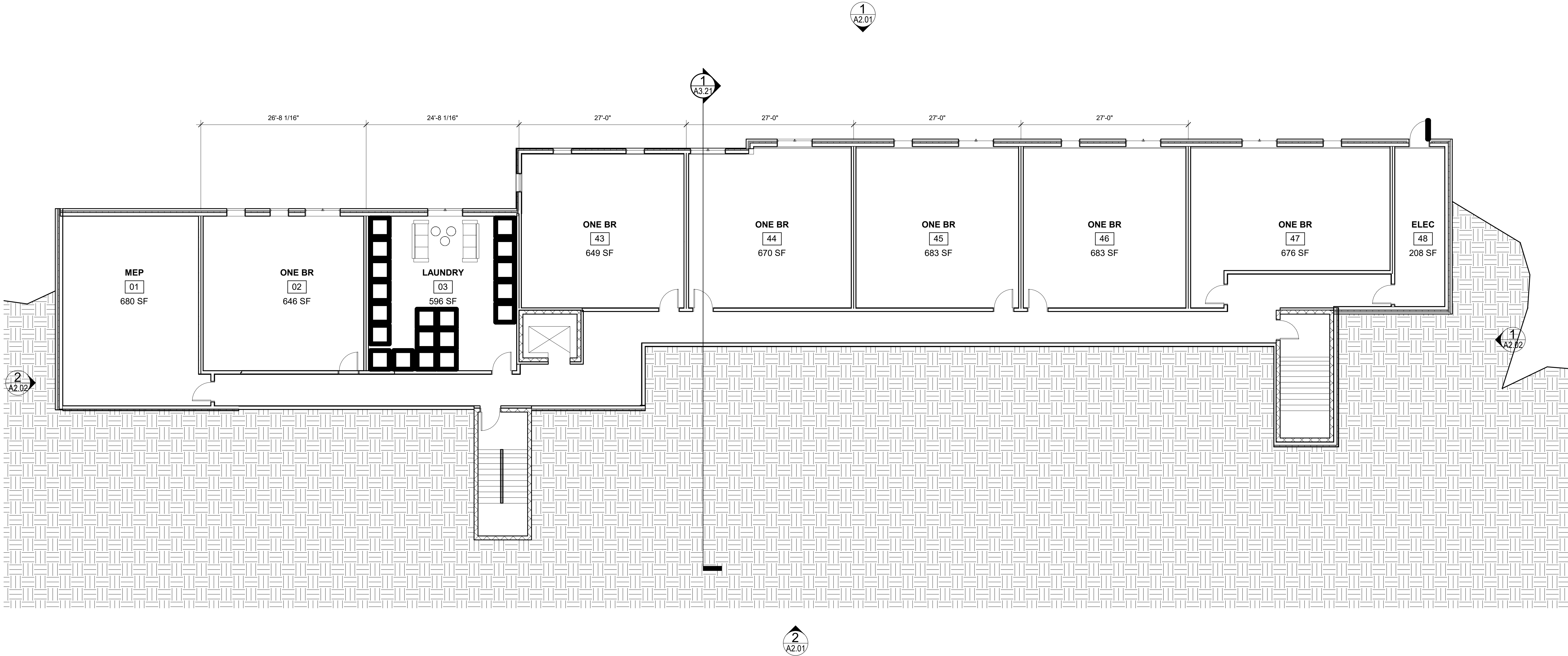
**DOUGHERTY COMMONS**  
VIEW 5 - PATHWAY





**DOUGHERTY COMMONS**  
VIEW 6 - PATHWAY





1 | BASEMENT  
1/8" = 1'-0"

|       |  |                                           |  |                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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|       |  | Project:<br>DOUGLASS STREET<br>APARTMENTS |  | Architect:<br><b>ARCHETYPE<br/>ARCHITECTS</b><br>48 Union Wharf Portland, Maine 04101<br>(207) 772-6022ARCHETYPE@ARCHETYPEPA.COM |  | Consultant:<br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><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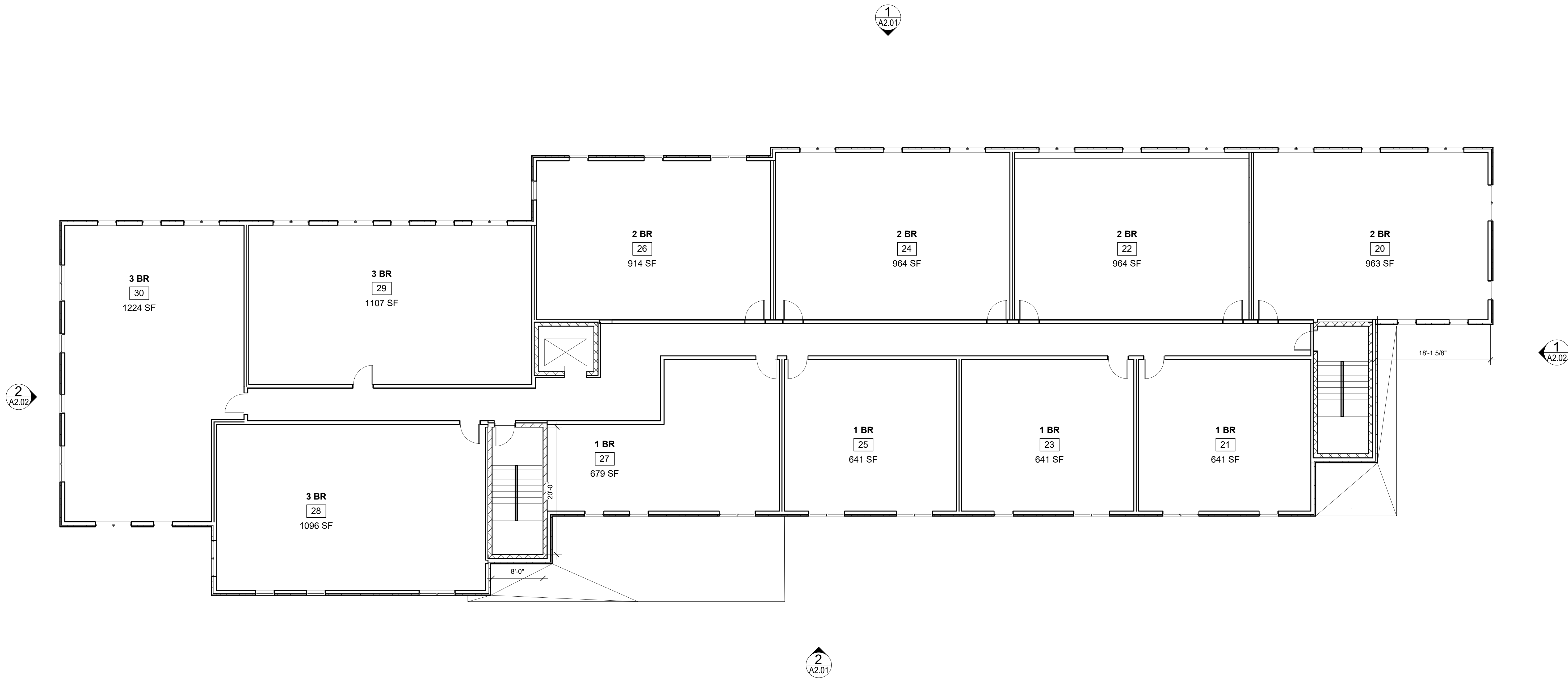




1 | 1ST FLOOR PLAN  
1/8" = 1'-0"

|               |  |                       |                                                                                                             |                        |             |  |
|---------------|--|-----------------------|-------------------------------------------------------------------------------------------------------------|------------------------|-------------|--|
| A1.01         |  | Date:<br>13 MAY, 2022 |                                                                                                             | Scale:<br>1/8" = 1'-0" | First Floor |  |
|               |  |                       |                                                                                                             |                        |             |  |
| Revisions:    |  |                       |                                                                                                             |                        |             |  |
| Project:      |  |                       | DOUGLASS STREET<br>APARTMENTS                                                                               |                        |             |  |
| Architect:    |  |                       | ARCHETYPE<br>ARCHITECTS<br>48 Union Wharf Portland, Maine 04101<br>(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM |                        |             |  |
| Consultant:   |  |                       |                                                                                                             |                        |             |  |
| Prepared For: |  |                       | Owner                                                                                                       |                        |             |  |

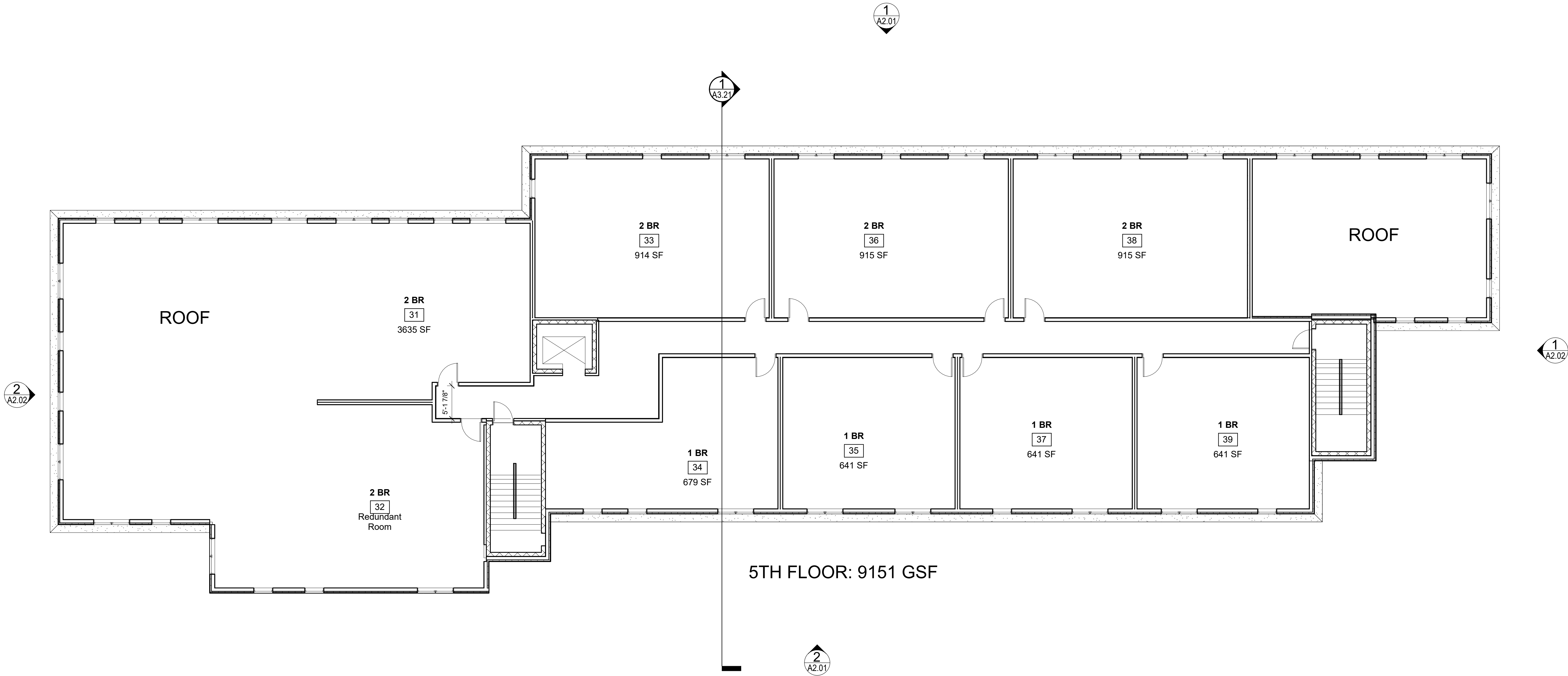




1 | FLOORS 2, 3, 4 AND 5 TYPICAL FLOOR PLAN  
1/8" = 1'-0"

|               |  |       |  |             |  |                                                                                                                               |  |                                           |  |            |  |                       |  |                        |  |                    |  |       |
|---------------|--|-------|--|-------------|--|-------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------|--|------------|--|-----------------------|--|------------------------|--|--------------------|--|-------|
| Prepared For: |  | Owner |  | Consultant: |  | Architect:<br><b>ARCHETYPE ARCHITECTS</b><br>48 Union Wharf Portland, Maine 04101<br>(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM |  | Project:<br>DOUGLASS STREET<br>APARTMENTS |  | Revisions: |  | Date:<br>13 MAY, 2022 |  | Scale:<br>1/8" = 1'-0" |  | Typical Floor Plan |  | A1.02 |
|               |  |       |  |             |  |                                                                                                                               |  |                                           |  |            |  |                       |  |                        |  |                    |  |       |

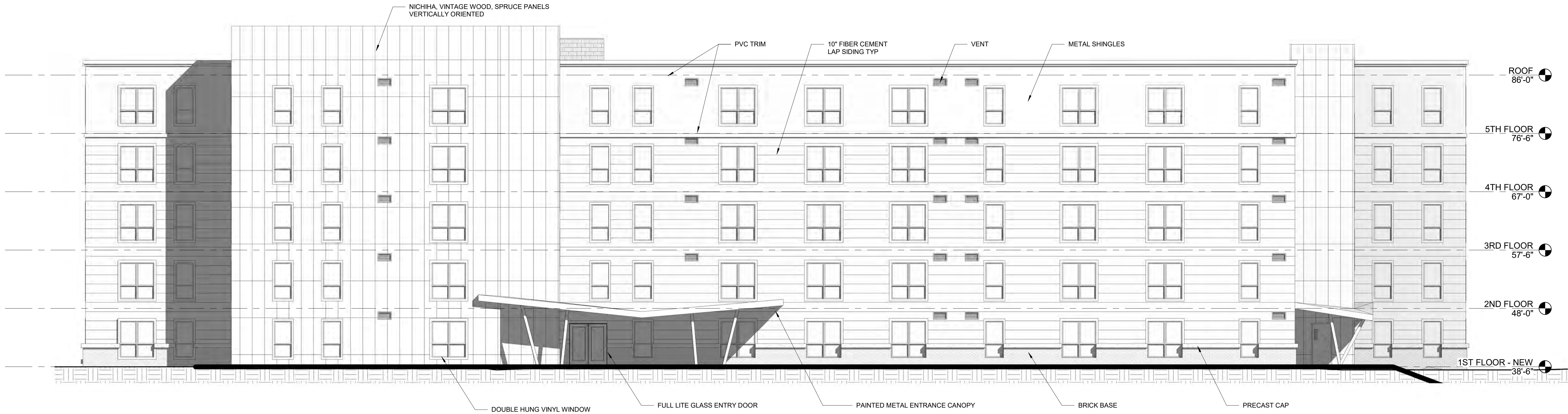




1 | 5TH FLOOR  
1/8" = 1'-0"

|       |                   |                        |            |                                           |                                                                                                                                   |             |                                   |                        |
|-------|-------------------|------------------------|------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------|------------------------|
| A1.05 | Date:<br>DEC 2021 | Scale:<br>1/8" = 1'-0" | Revisions: | Project:<br>DOUGLASS STREET<br>APARTMENTS | Architect:<br><b>ARCHETYPE<br/>ARCHITECTS</b><br>48 Union Wharf Portland, Maine 04101<br>(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM | Consultant: | Prepared For:<br><br><b>Owner</b> | Address<br>City, State |
|       | Fifth Floor Plan  |                        |            |                                           |                                                                                                                                   |             |                                   |                        |
|       |                   |                        |            |                                           |                                                                                                                                   |             |                                   |                        |





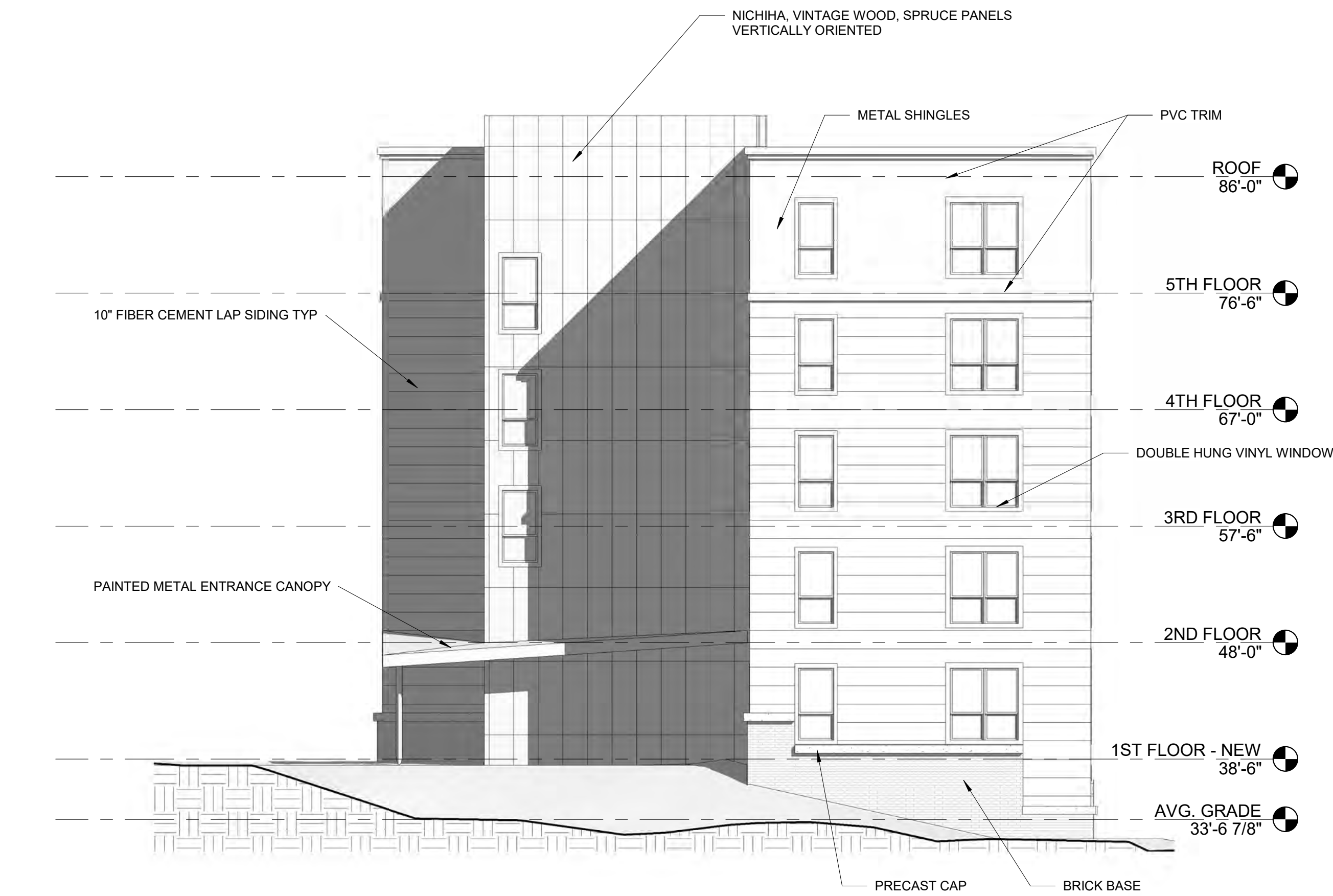
2 | Front Elevation  
1/8" = 1'-0"



1 | Rear Elevation  
1/8" = 1'-0"

|               |                                                                                  |                     |
|---------------|----------------------------------------------------------------------------------|---------------------|
| Prepared For: | Owner                                                                            |                     |
|               | Address<br>City, State                                                           |                     |
| Consultant:   |                                                                                  |                     |
|               |                                                                                  |                     |
| Architect:    | ARCHETYPE ARCHITECTS                                                             |                     |
|               | 48 Union Wharf Portland, Maine 04101<br>(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM |                     |
| Project:      | DOUGLASS STREET APARTMENTS                                                       |                     |
|               |                                                                                  |                     |
| Revisions:    |                                                                                  |                     |
|               |                                                                                  |                     |
| Date:         | 13 MAY, 2022                                                                     | Building Elevations |
| Scale:        | 1/8" = 1'-0"                                                                     |                     |
| A2.01         |                                                                                  |                     |





1 | Right Elevation  
1/8" = 1'-0"



2 | Left Elevation  
1/8" = 1'-0"

|                       |  |                        |                     |  |            |                                           |                                                                                                                                   |             |                        |  |  |
|-----------------------|--|------------------------|---------------------|--|------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|--|--|
| Date:<br>13 MAY, 2022 |  | Scale:<br>1/8" = 1'-0" | Building Elevations |  | Revisions: | Project:<br>DOUGLASS STREET<br>APARTMENTS | Architect:<br><b>ARCHETYPE<br/>ARCHITECTS</b><br>48 Union Wharf Portland, Maine 04101<br>(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM | Consultant: | Prepared For:          |  |  |
|                       |  |                        |                     |  |            |                                           |                                                                                                                                   |             | Owner                  |  |  |
|                       |  |                        |                     |  |            |                                           |                                                                                                                                   |             | Address<br>City, State |  |  |
| A2.02                 |  |                        |                     |  |            |                                           |                                                                                                                                   |             |                        |  |  |



























GENERAL NOTES:

- FOR INFORMATION REGARDING PROPOSED GROUND LEVEL LAYOUT, REFER TO SITE PLAN, SHEET C-10, MOST RECENT VERSION.
  - FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
  - FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
  - UNIT TABULATION PROVIDED BY ARCHETYPE ARCHITECTS; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
  - TOTAL SITE AREA INCLUDES 3.34 ACRES (145,490 S.F.). SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS PROVIDED BY OWEN HASKELL, INC. ON A PLAN TITLED BOUNDARY SURVEY, DATED MARCH 2021.
  - AS OF 1/7/2021, THE SITE IS ENTIRELY BOUNDED BY THE R5 ZONE PER THE CITY OF PORTLAND'S GIS WEBSITE.
  - LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP CHART, BOOK 78, LOTS: C-2, B-7. THE MENTIONED LOTS HAVE BEEN RECENTLY COMBINED INTO ONE PARCEL.
  - PROPOSED DEVELOPMENT REMAINS OUTSIDE THE 100-YR FLOOD FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 230051 0013 B, INDEX DATED 7/17/1986.
  - THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO ONE HUNDRED AND TWENTY (120) DWELLING UNITS IN THE PLANNED RESIDENTIAL UNIT DEVELOPMENT STANDARD.
  - ANY PROPERTY MARKER PROPOSED WITHIN A PEDESTRIAN OR VEHICULAR WAY SHALL BE FLUSH OR BELOW GRADE AT THE DISCRETION OF THE PROFESSIONAL LAND SURVEYOR AND/OR ENGINEER.
  - THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF THE ACCESS DRIVEWAY INCLUDING ALL DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
  - THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 302 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
  - THE OWNER MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
    - POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:
- BOOK \_\_\_\_\_ PAGE \_\_\_\_\_
14. PROPERTY DEPICTED IS OWNED BY DOUGLASS COMMONS, LLC. WITH DEED RECORDED IN **BOOK XXX, PAGE XXX.**

WAIVERS & CONDITIONS OF APPROVAL:

TBD

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: \_\_\_\_\_ DATE: \_\_\_\_\_

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RECORDING INFORMATION  
STATE OF MAINE,  
CUMBERLAND COUNTY  
REGISTRY OF DEEDS

RECEIVED: \_\_\_\_\_

RECORDED IN \_\_\_\_\_

ATTEST: \_\_\_\_\_

REGISTRAR

| UNIT TABULATION |           | BLDG D (TBD) |           | BLDG A (TBD) |           | BLDG B (TBD)                                                                      |           |
|-----------------|-----------|--------------|-----------|--------------|-----------|-----------------------------------------------------------------------------------|-----------|
| UNIT NUMBER     | SIZE (SF) | BLDG D (TBD) | SIZE (SF) | BLDG A (TBD) | SIZE (SF) | BLDG B (TBD)                                                                      | SIZE (SF) |
| BLDG 1 (TBD)    | 12,000 SF | BLDG D (TBD) | 464 SF    | BLDG A (TBD) | 967 SF    | BLDG B (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 464 SF    | BLDG D (TBD) | 1019 SF   | BLDG A (TBD) | 519 SF    | BLDG B (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 1019 SF   | BLDG D (TBD) | 464 SF    | BLDG A (TBD) | 519 SF    | BLDG B (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 464 SF    | BLDG D (TBD) | 1019 SF   | BLDG A (TBD) | 772 SF    | BLDG B (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 1019 SF   | BLDG D (TBD) | 464 SF    | BLDG A (TBD) | 772 SF    | BLDG B (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 464 SF    | BLDG D (TBD) | 1019 SF   | BLDG A (TBD) | 508 SF    | BLDG C (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 1019 SF   | BLDG D (TBD) | 464 SF    | BLDG A (TBD) | 697 SF    | BLDG C (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 464 SF    | BLDG D (TBD) | 1019 SF   | BLDG A (TBD) | 967 SF    | BLDG C (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 1019 SF   | BLDG D (TBD) | 508 SF    | BLDG A (TBD) | 519 SF    | BLDG C (TBD)                                                                      | 1019 SF   |
| BLDG D (TBD)    | 464 SF    | BLDG A (TBD) | 697 SF    | BLDG A (TBD) | 519 SF    | 1 UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS |           |
| BLDG D (TBD)    | 1019 SF   | BLDG A (TBD) | 772 SF    | BLDG A (TBD) | 772 SF    |                                                                                   |           |
| BLDG D (TBD)    | 464 SF    | BLDG A (TBD) | 519 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 1019 SF   | BLDG A (TBD) | 772 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 464 SF    | BLDG A (TBD) | 772 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 1019 SF   | BLDG A (TBD) | 519 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 464 SF    | BLDG A (TBD) | 519 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 1019 SF   | BLDG A (TBD) | 772 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 464 SF    | BLDG A (TBD) | 772 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |
| BLDG D (TBD)    | 1019 SF   | BLDG A (TBD) | 772 SF    | BLDG B (TBD) | 1019 SF   |                                                                                   |           |







| OPEN SPACE EXHIBIT |             |           |
|--------------------|-------------|-----------|
| LANDSCAPE          | <div></div> | 29,225 SF |
| HARDSCAPE          | <div></div> | 7,100 SF  |
| TOTAL              |             | 36,325 SF |
| REQUIRED           |             | 24,000 SF |

|                  |             |
|------------------|-------------|
| ISSUED FOR       | BY DATE     |
| SITE PLAN REVIEW | SJL 1/11/22 |
| COMMENT RESPONSE | SJL 4/27/22 |
|                  |             |
|                  |             |
|                  |             |
|                  |             |
|                  |             |
|                  |             |
|                  |             |
|                  |             |
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|               |                                                             |
|---------------|-------------------------------------------------------------|
| DRAWING NAME: | OVERALL PLAN OPEN SPACE AREA EXHIBIT                        |
| PROJECT NAME: | DOUGHERTY COMMONS                                           |
| CLIENT:       | DOUGLASS COMMONS, LLC<br>10 FREE STREET, PORTLAND, ME 04101 |



ACORN  
ENGINEERING, INC.

65 HANOVER STREET  
PORTLAND, MAINE 04104  
(207) 775-2655

|             |            |
|-------------|------------|
| FILE:       | 1154_CIVIL |
| JN:         | 1154       |
| SCALE:      | 1' : 50'   |
| DESIGN BY:  | SJL        |
| DRAWN BY:   | AWG        |
| CHECKED BY: | WHS        |

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

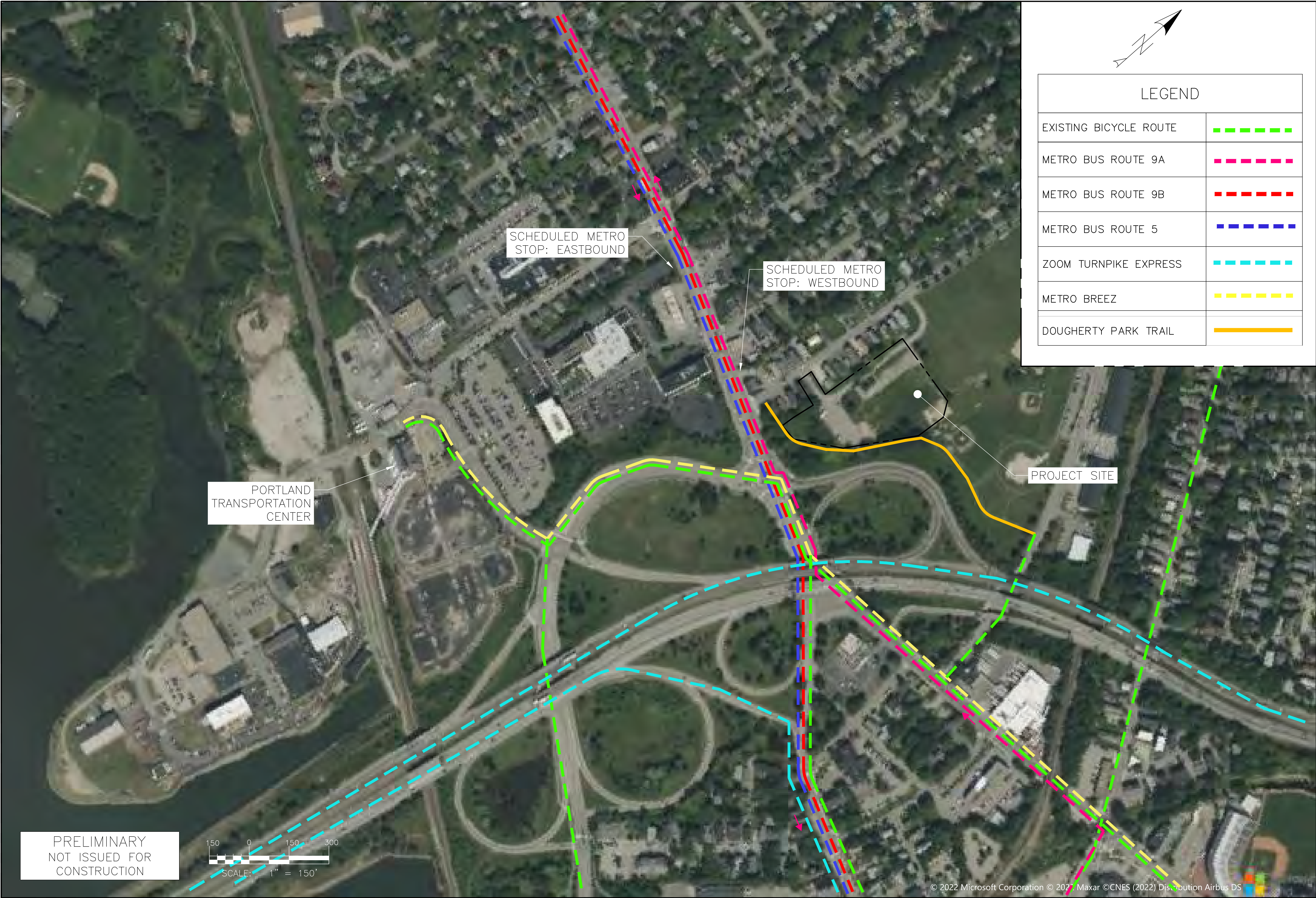
|             |
|-------------|
| DRAWING NO. |
| EX.         |











| LEGEND                 |             |
|------------------------|-------------|
| EXISTING BICYCLE ROUTE | <div></div> |
| METRO BUS ROUTE 9A     | <div></div> |
| METRO BUS ROUTE 9B     | <div></div> |
| METRO BUS ROUTE 5      | <div></div> |
| ZOOM TURNPIKE EXPRESS  | <div></div> |
| METRO BREEZ            | <div></div> |
| DOUGHERTY PARK TRAIL   | <div></div> |

ISSUED FOR: 

BY: 

DATE: 

WHS

COMMENT RESPONSE: 

7/29/22

MULTIMODAL TRANSPORTATION EXHIBIT

DOUGHERTY COMMONS

DOUGLASS COMMONS, LLC.

PORTLAND, ME

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC. 04101

65 HANOVER ST. PORTLAND, MAINE 04101

(207) 775-2655

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FILE: 1154\_CIVIL

JN: 1154

SCALE: AS NOTED

DESIGNED BY: WHS

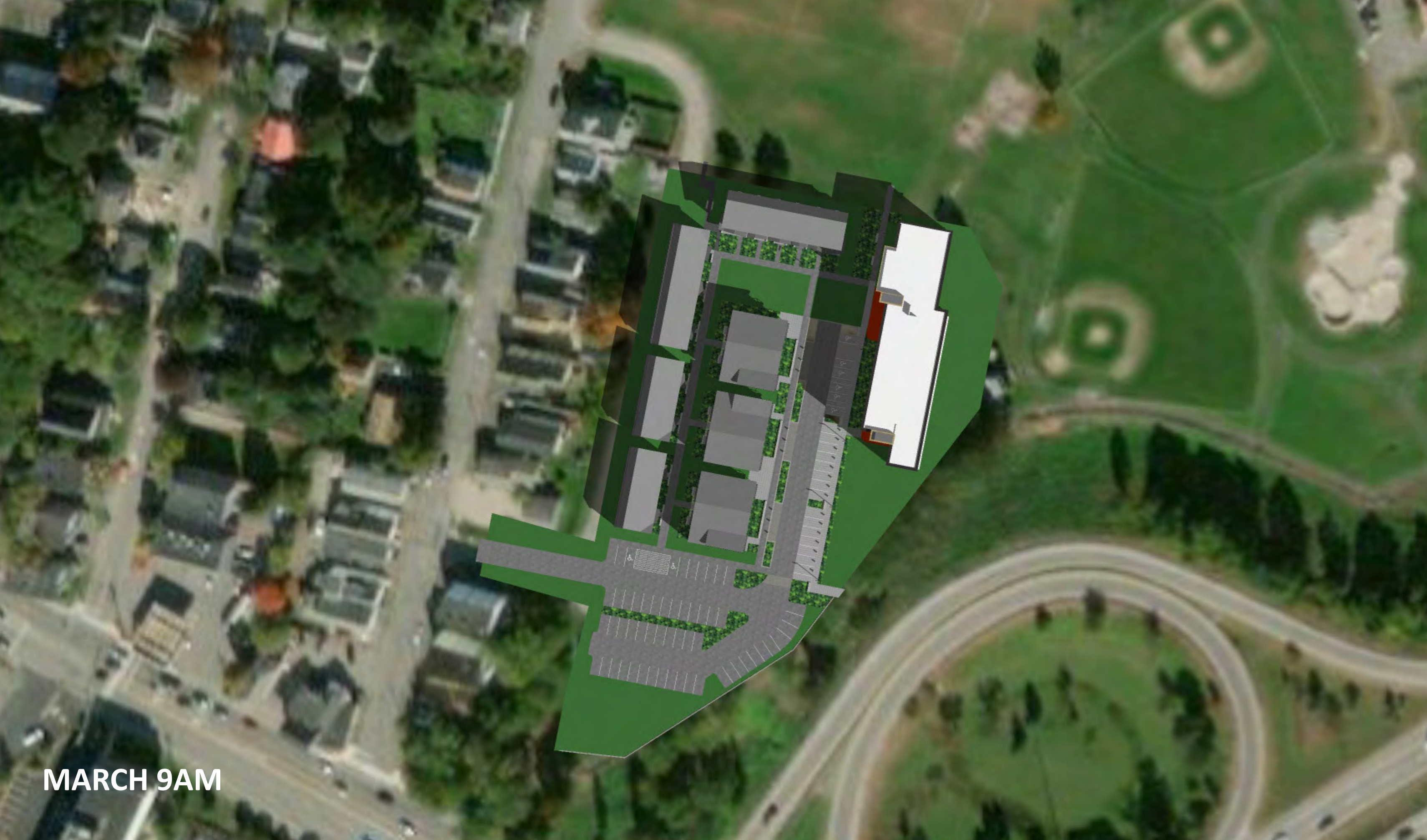
DRAWN BY: SJL

CHECKED BY: WHS

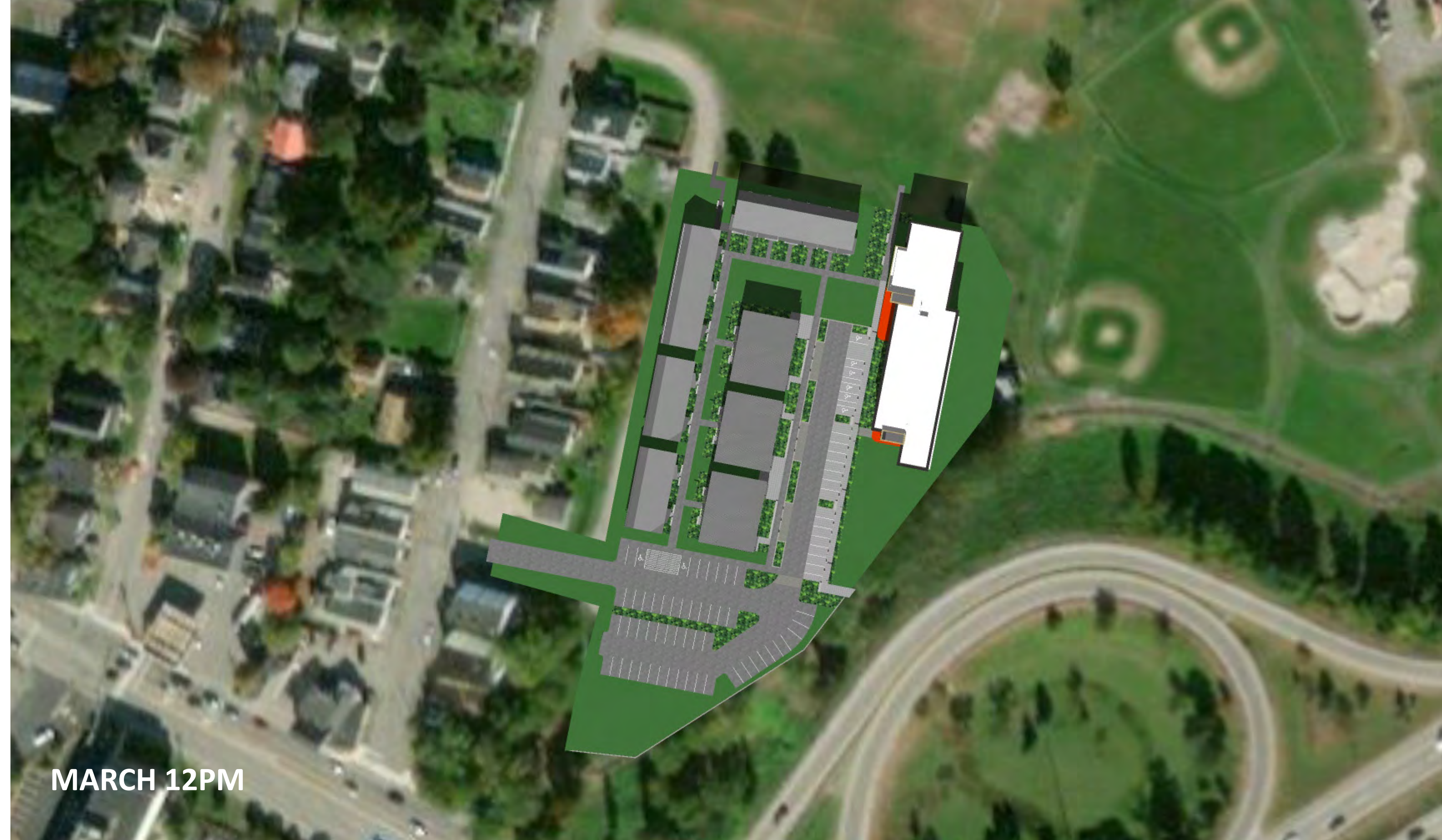
DRAWING NO.

EX-1

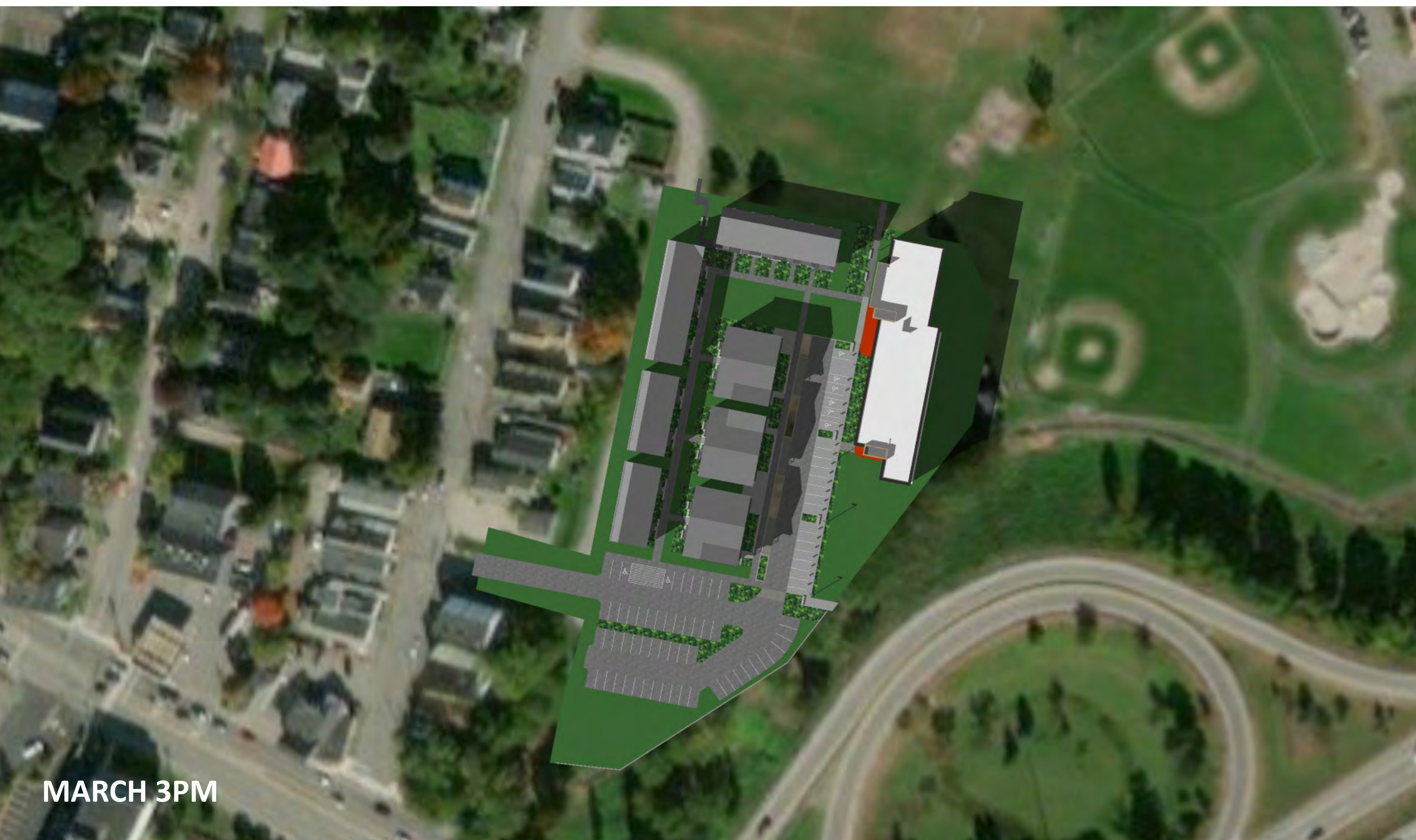




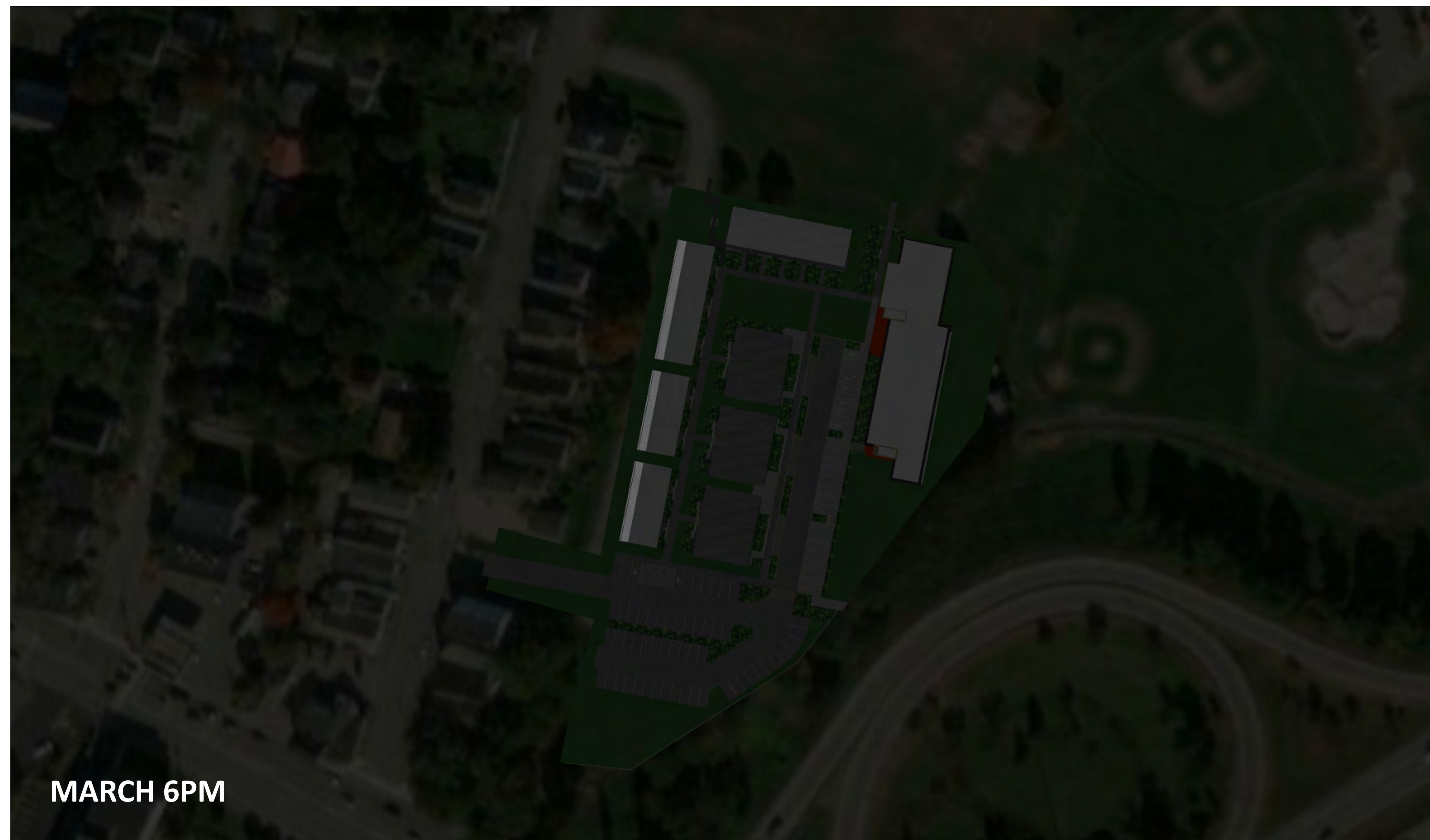
MARCH 9AM



MARCH 12PM



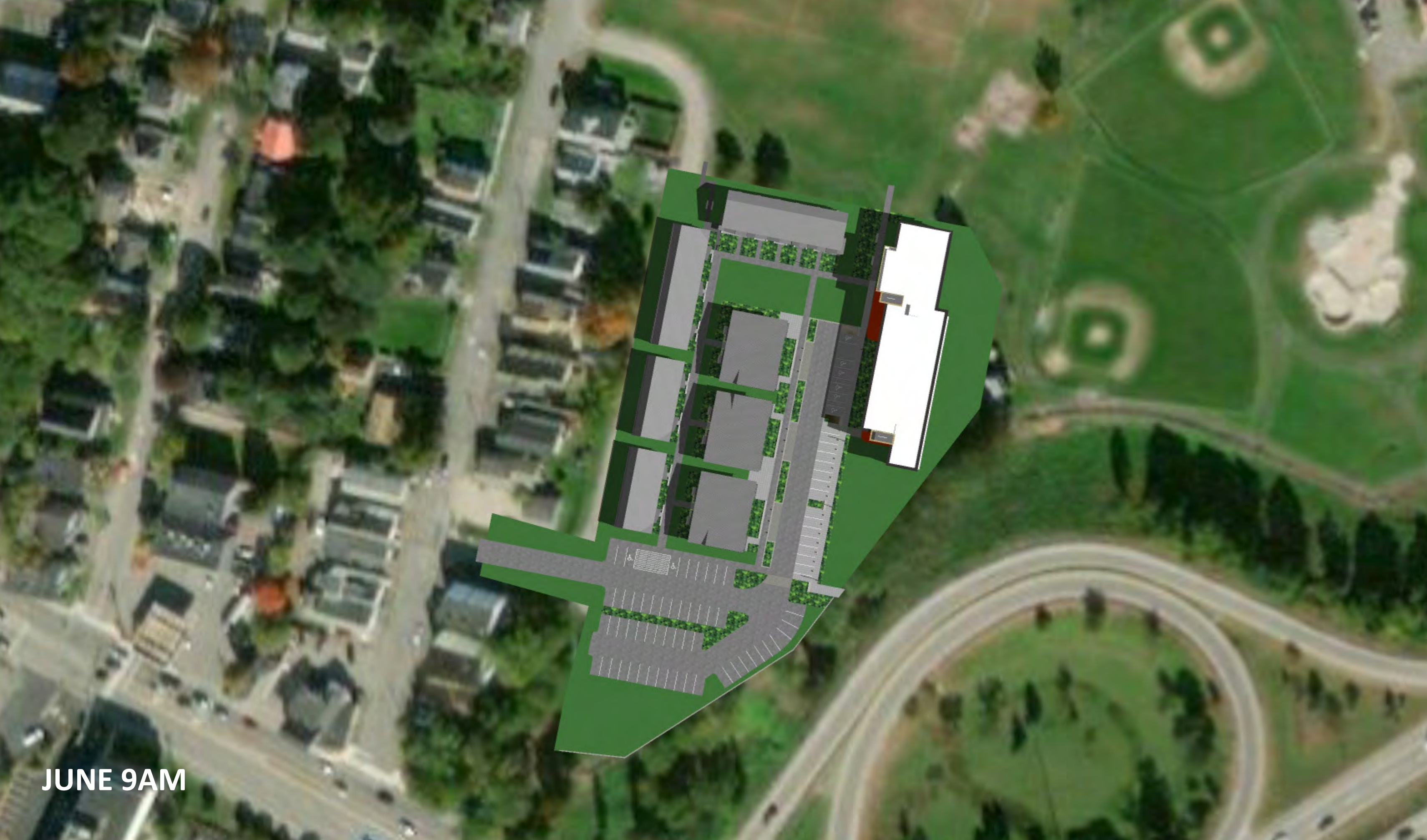
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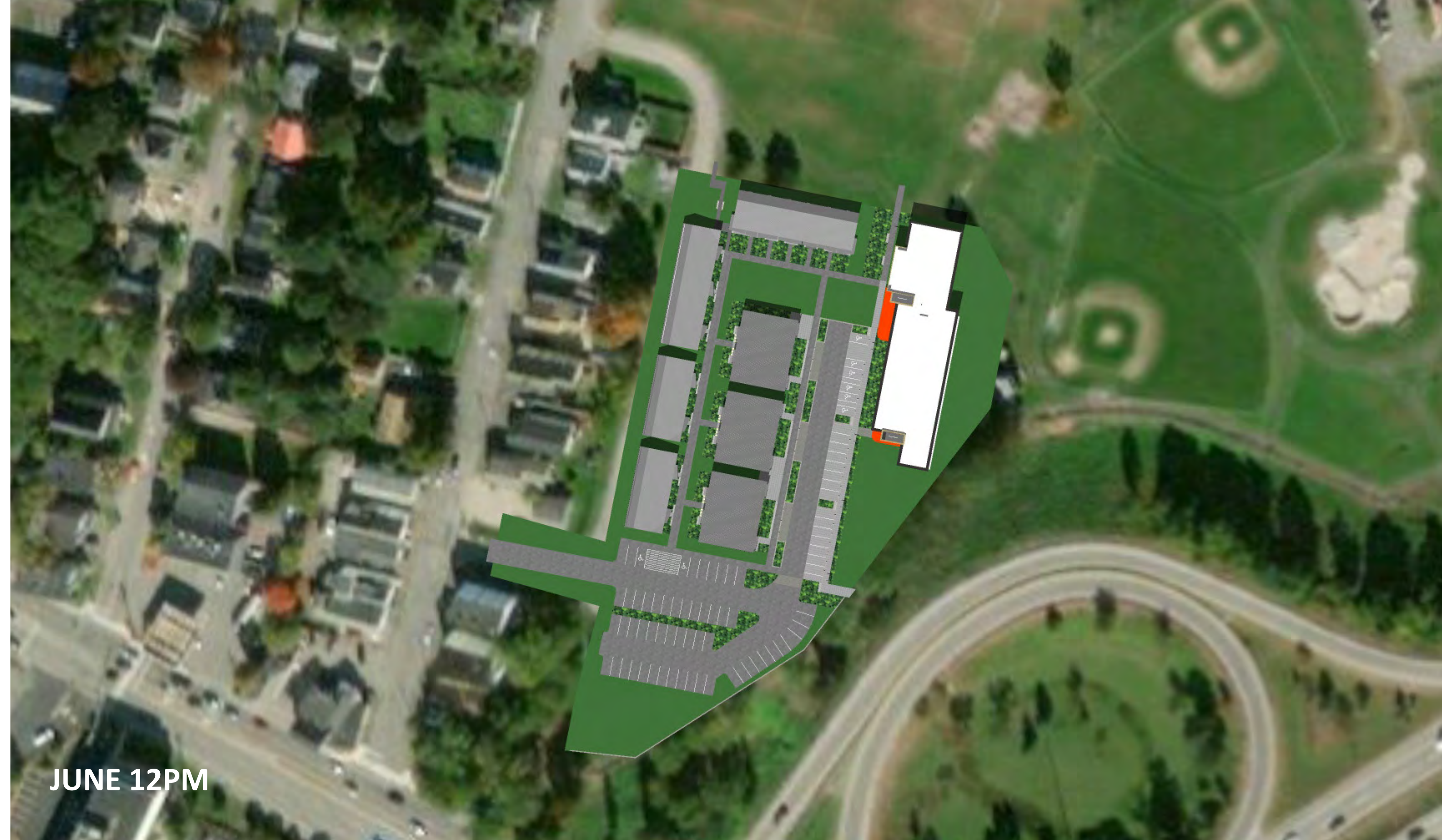
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**DOUGLASS COURT**  
SHADOW STUDY

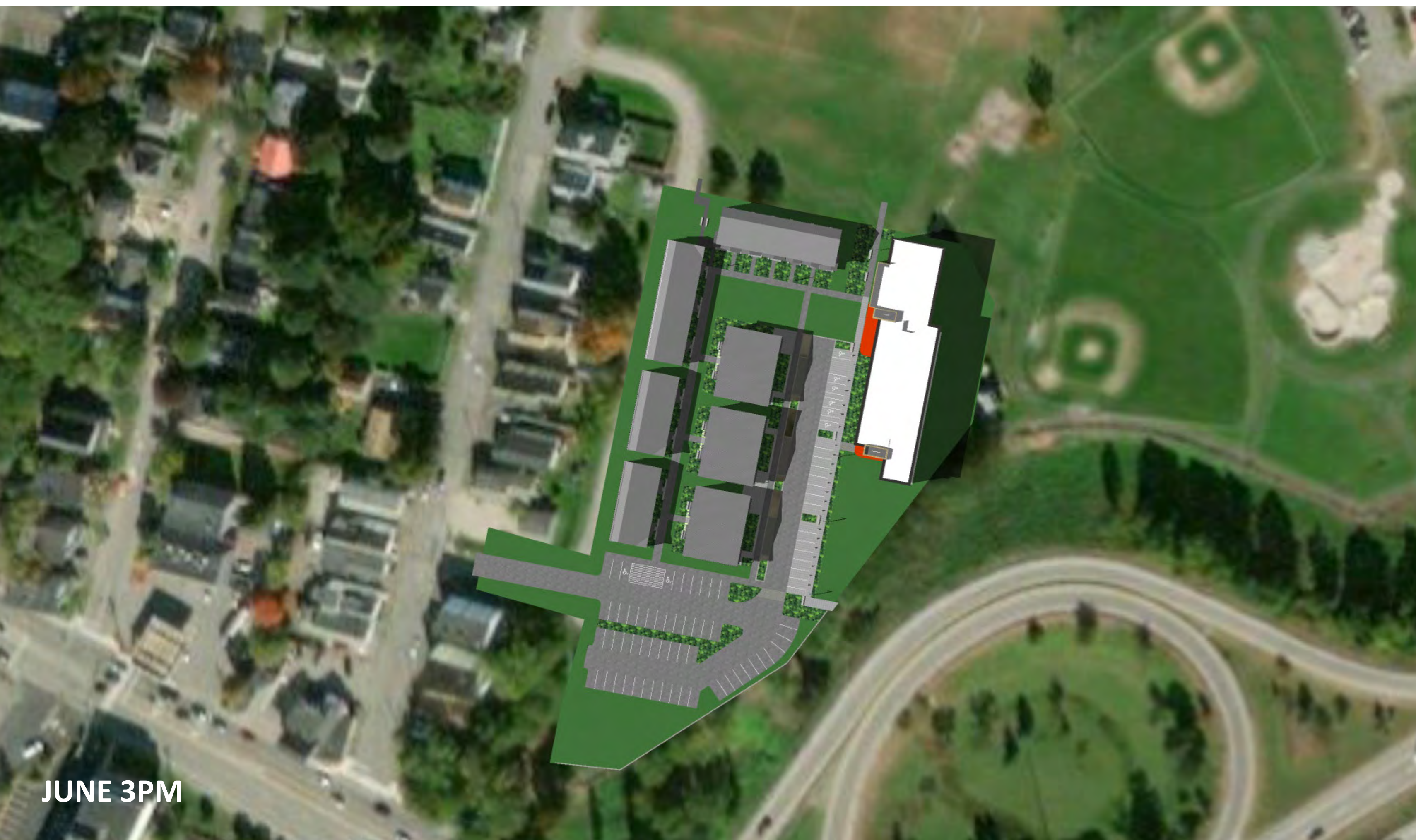




JUNE 9AM



JUNE 12PM



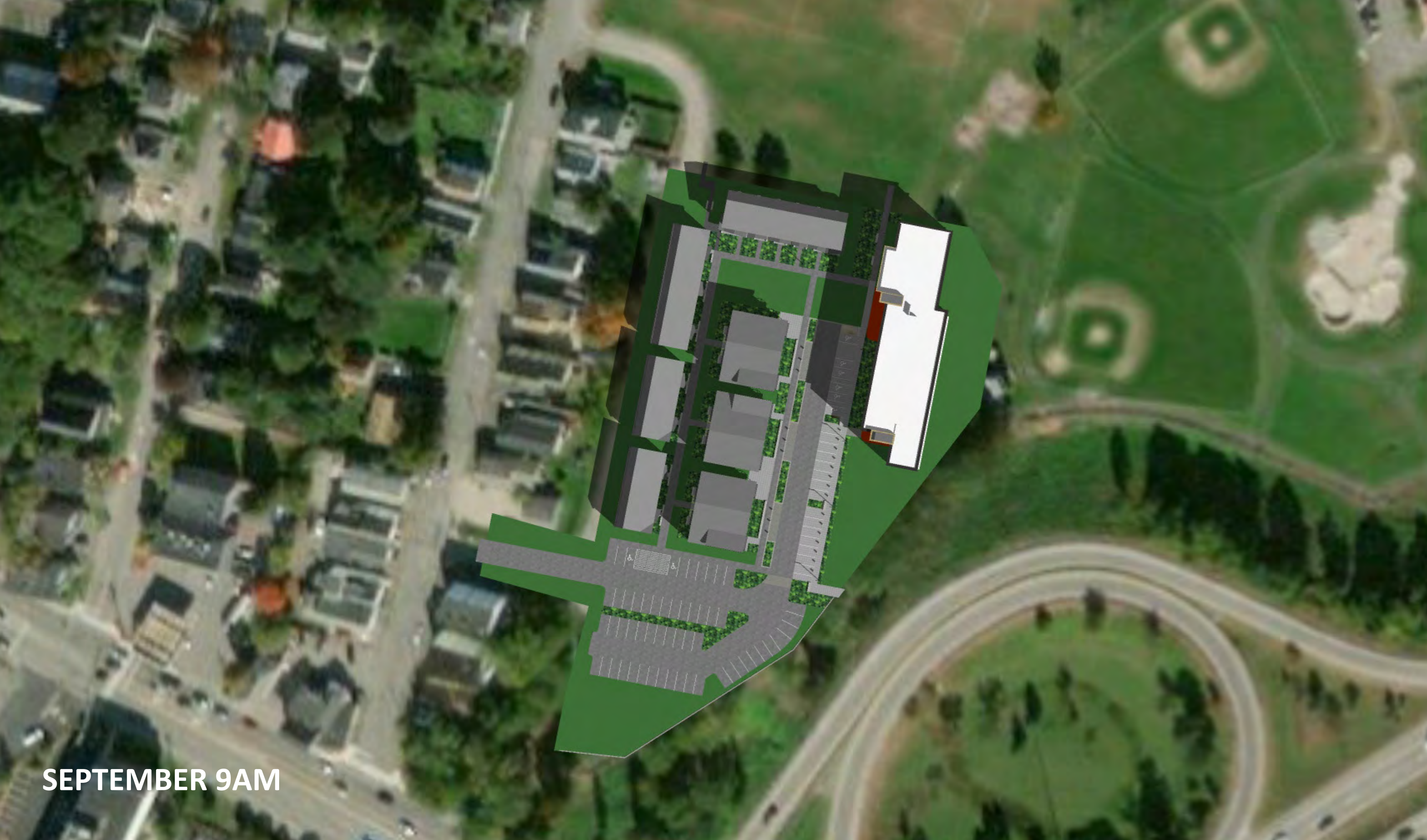
JUNE 3PM



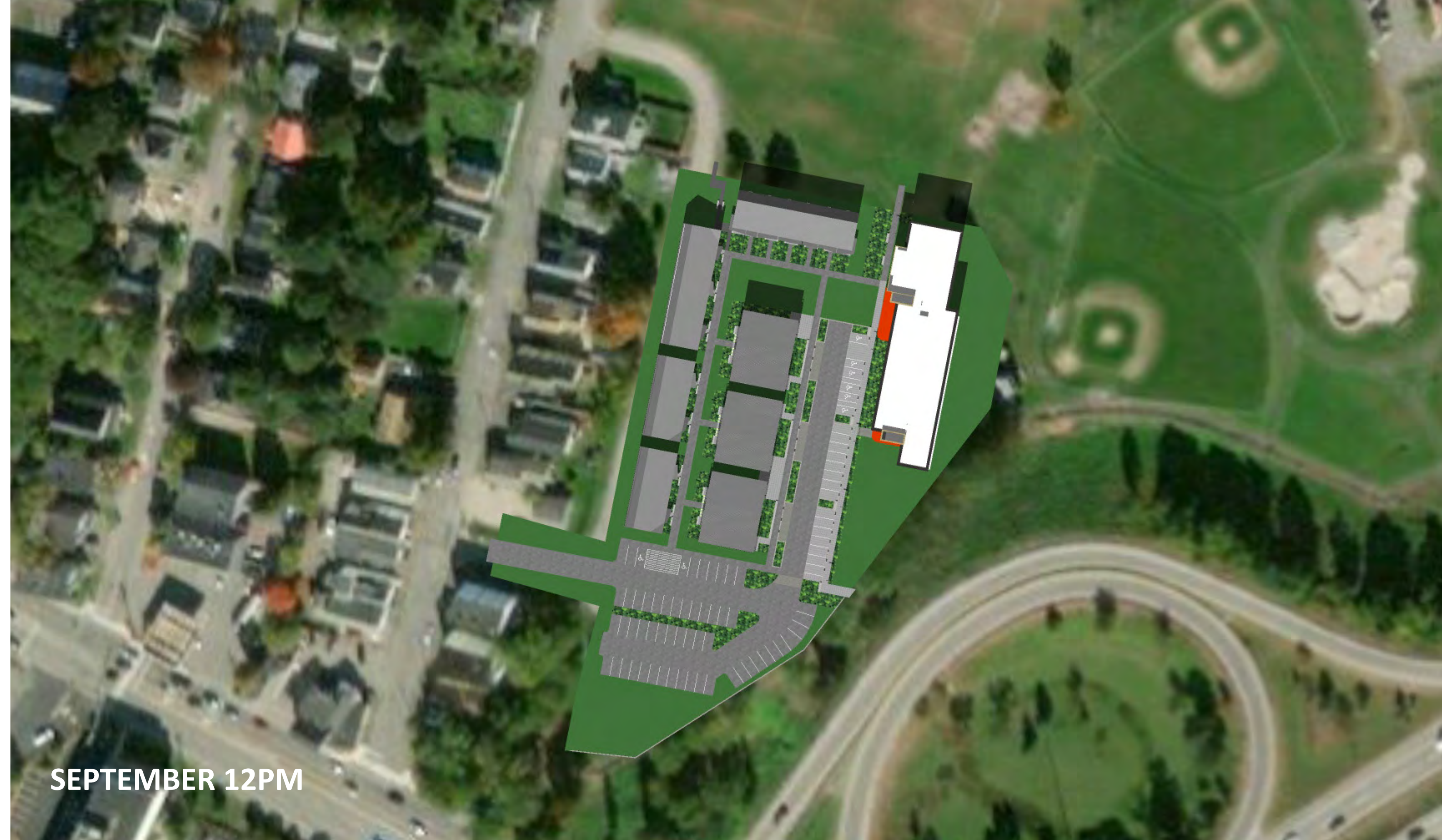
JUNE 6PM

DOUGLASS COURT  
SHADOW STUDY

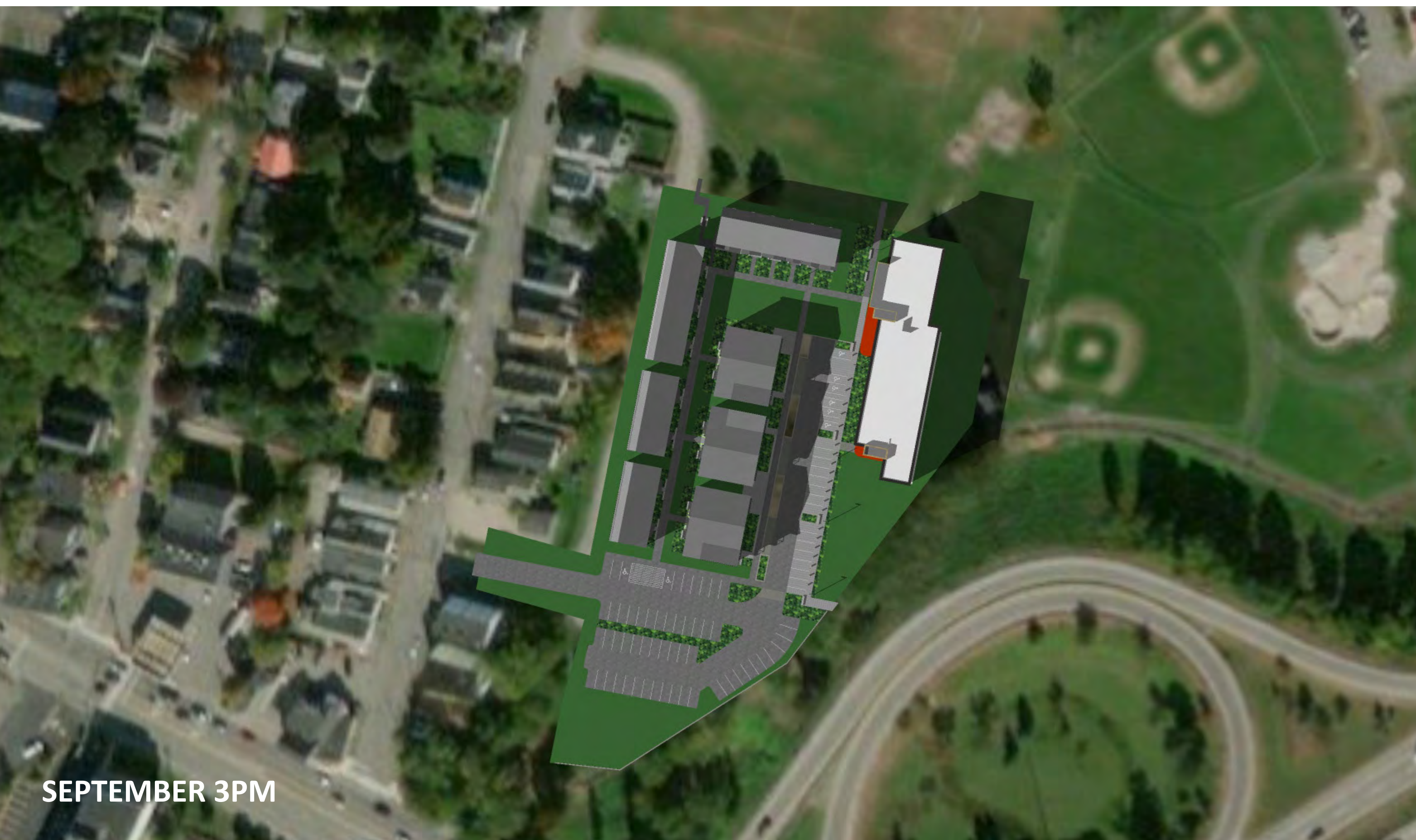




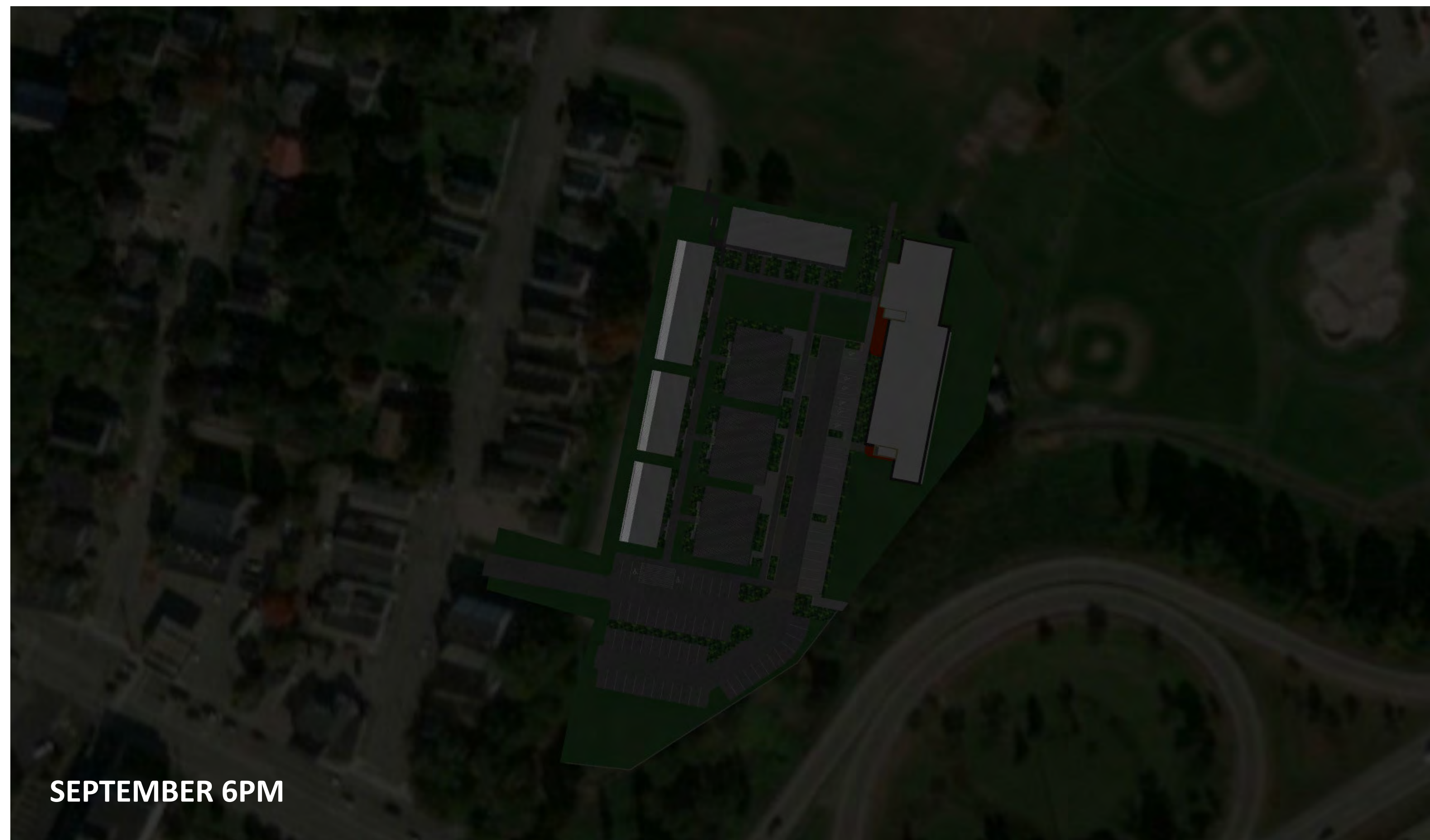
SEPTEMBER 9AM



SEPTEMBER 12PM



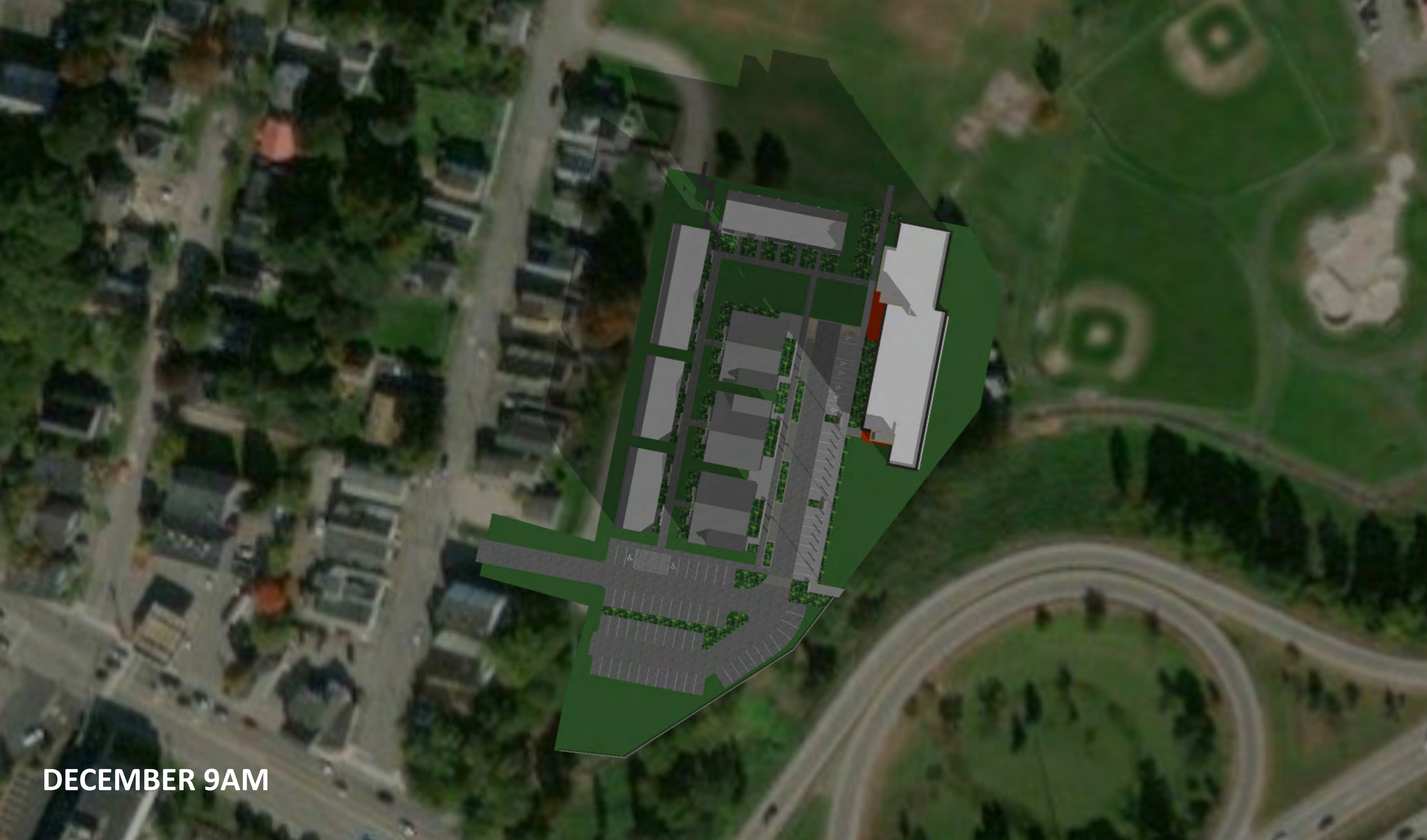
SEPTEMBER 3PM



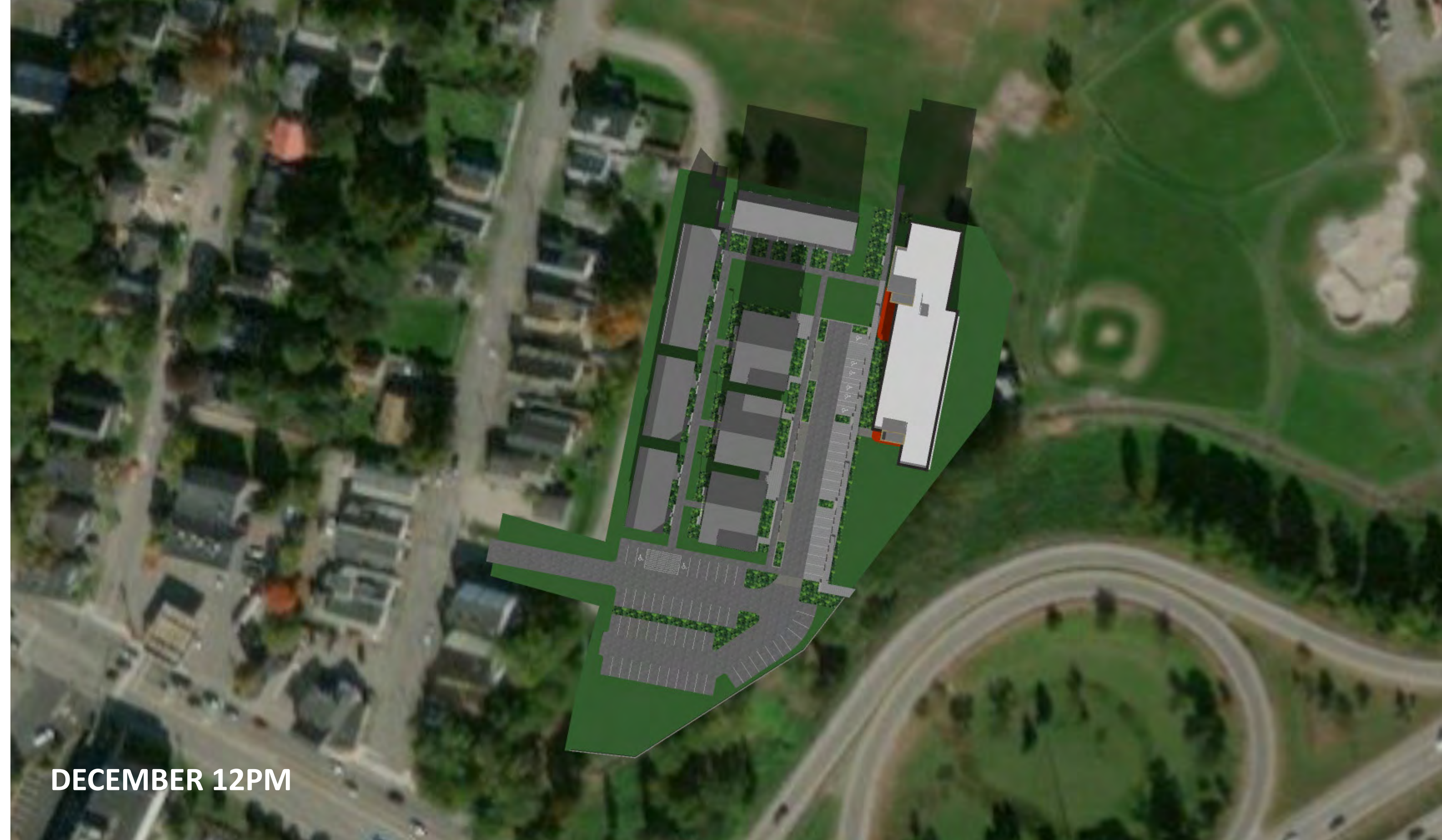
SEPTEMBER 6PM

**DOUGLASS COURT**  
SHADOW STUDY

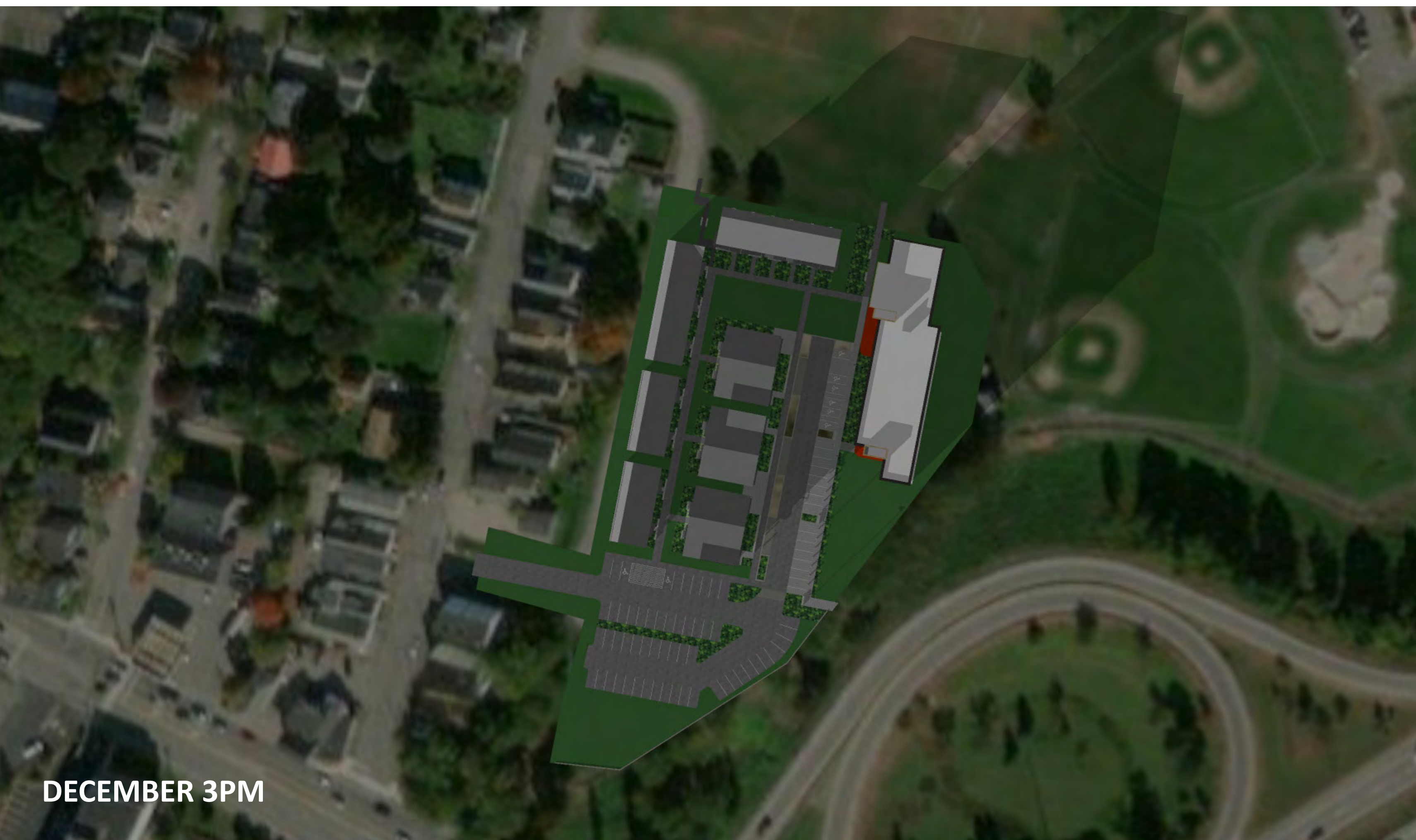




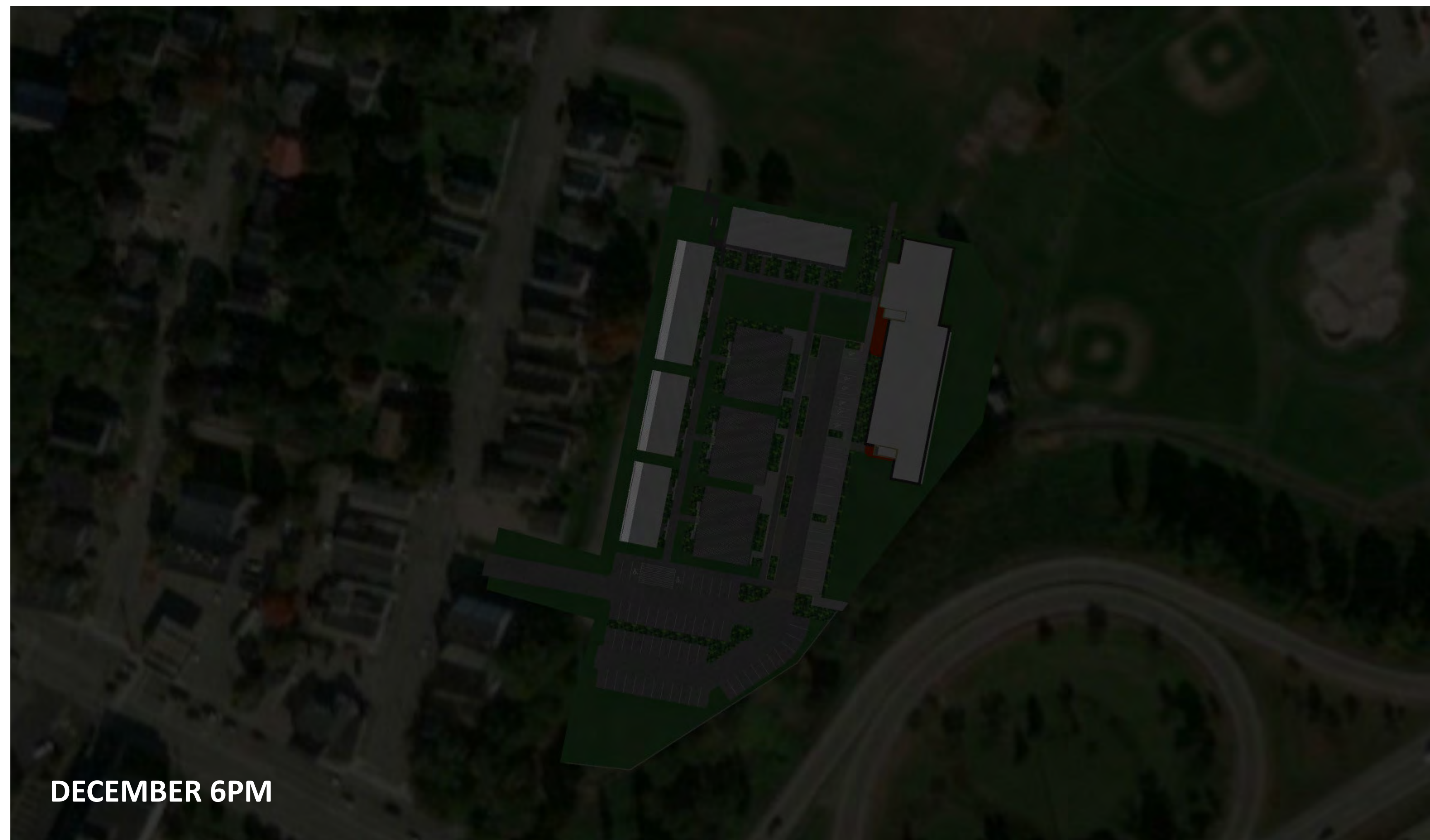
DECEMBER 9AM



DECEMBER 12PM



DECEMBER 3PM



DECEMBER 6PM

**DOUGLASS COURT**  
SHADOW STUDY





**DOUGHERTY COMMONS**  
VIEW OF DEVELOPMENT FROM DOUGLAS STREET





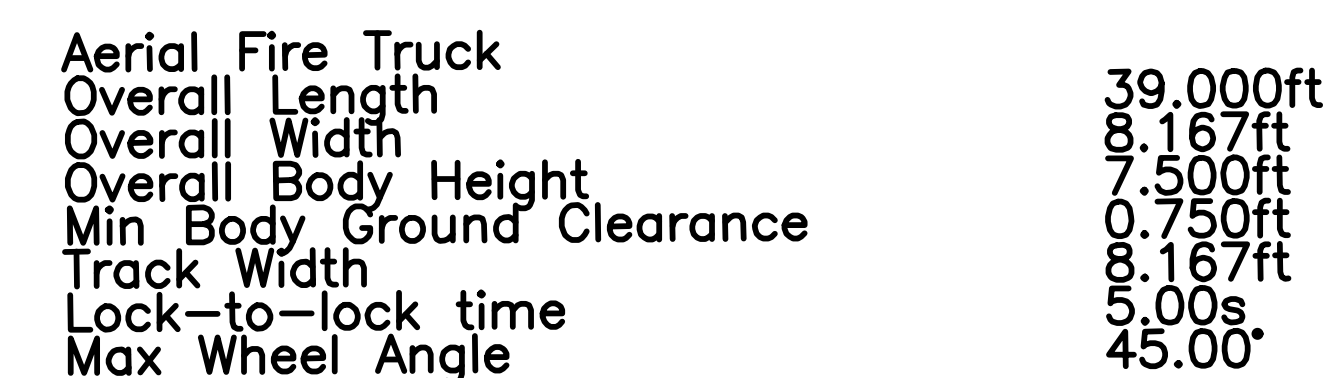
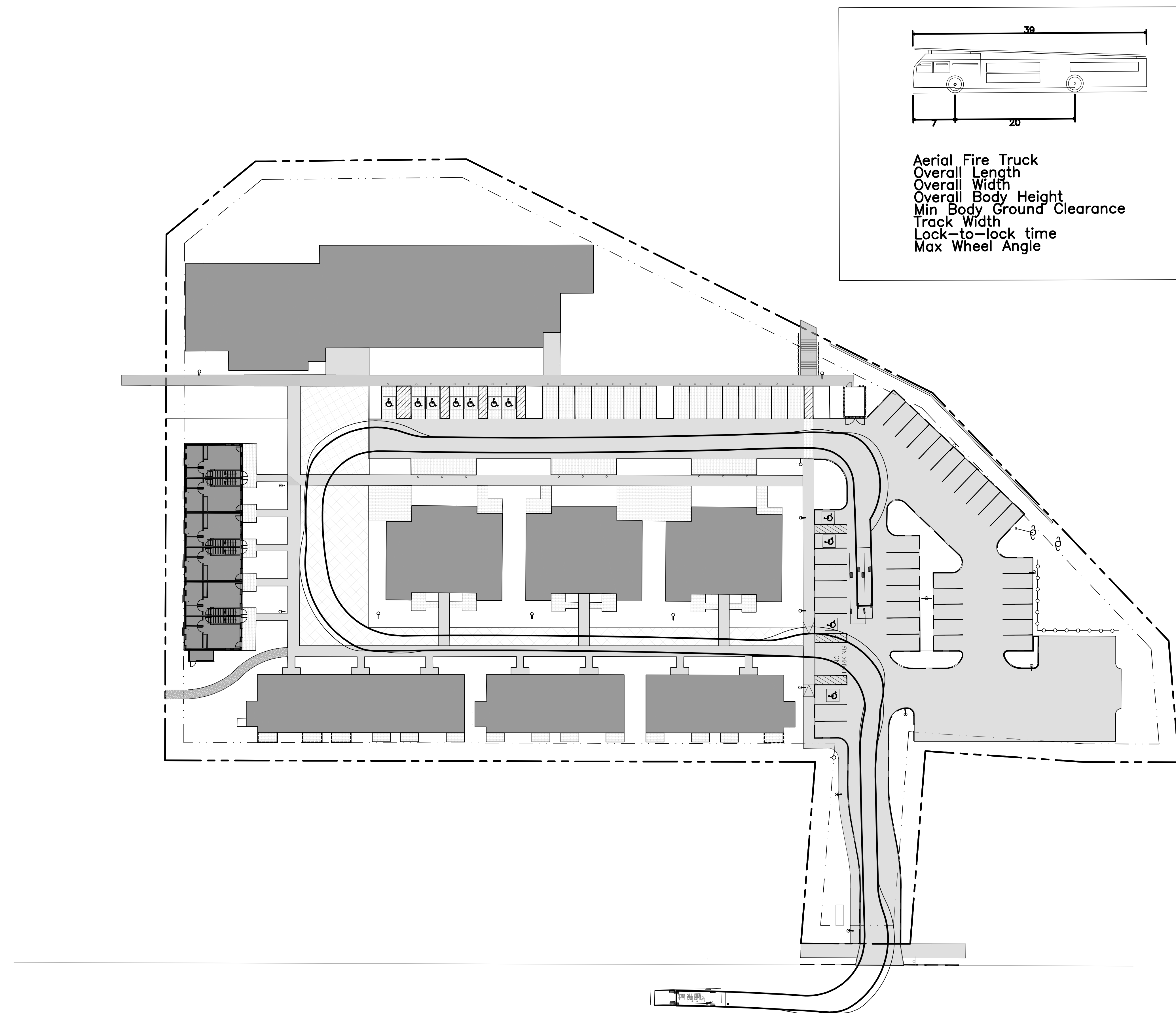
**DOUGHERTY COMMONS**  
VIEW OF DEVELOPMENT FROM CONGRESS STREET





**DOUGHERTY COMMONS**  
VIEW OF DEVELOPMENT FROM 295 OFF-RAMP





PERMIT LEVEL  
NOT ISSUED FOR  
CONSTRUCTION

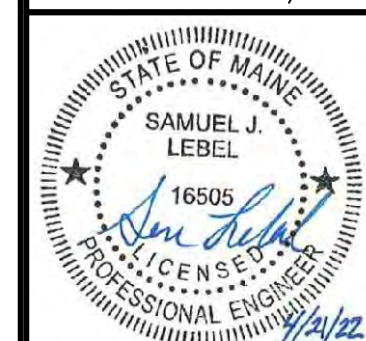
|                             |                                         |
|-----------------------------|-----------------------------------------|
| DRAWING NAME:               |                                         |
| FIRE TRUCK TURNING TEMPLATE |                                         |
| DOUGHERTY COMMONS           |                                         |
| PROJECT NAME/ ADDRESS:      | DOUGLASS COMMONS, LLC                   |
|                             | 10 FREE STREET SECOND FLOOR PORTLAND ME |

**ACORN ENGINEERING, INC.**  
P.O. BOX 33707, DALLAS, TEXAS 75237  
TELEPHONE (214) 775-2655  
FACSIMILE (214) 775-2655

**A C O R N**  
**ENGINEERING, INC.**

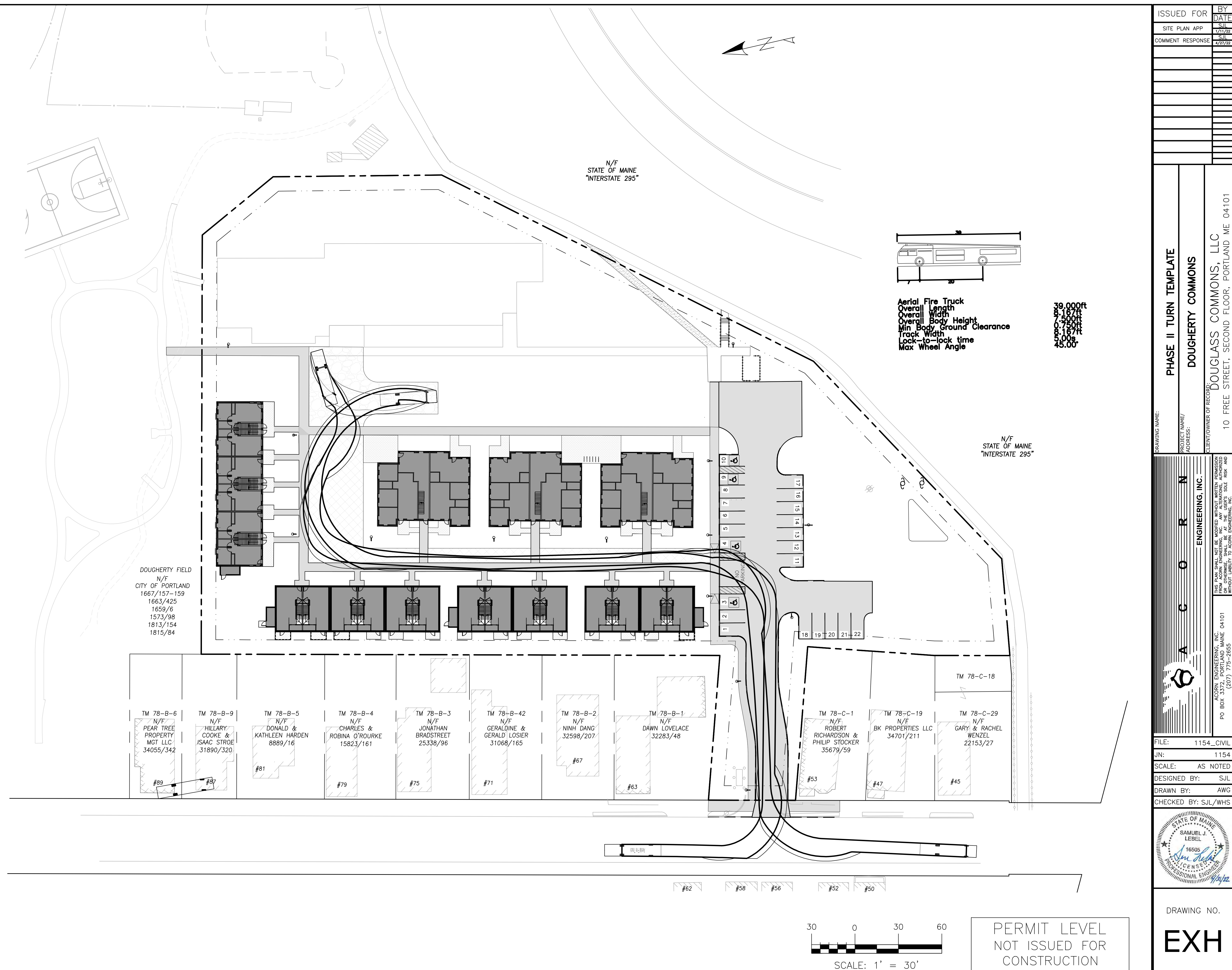
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|              |            |
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| FILE:        | 1154_CIVIL |
| JN:          | 1154       |
| SCALE:       | AS NOTED   |
| DESIGNED BY: | SJL        |
| DRAWN BY:    | AWG        |
| CHECKED BY:  | SJL/WH     |



DRAWING NO.  
**EXH**







**Attached please find a letter drafted by the Libbytown Neighborhood Association regarding proposed parking for the apartments to be built on Douglass St.**

**Thanks in advance for your consideration,**

**Maureen S. Morse**

**LNA Chair**

The Libbytown Neighborhood is excited to see the development at Dougherty Field moving apace and appreciates the mix of incomes and demographics that it will bring to the neighborhood. However, we are concerned that the scheme seems to call for an overabundance of parking. As you certainly are aware, societal overdependence on motor vehicles has led to all manner of environmental, economic, and social problems. Furthermore, the LNA has been a strong supporter and advocate for this project. We support the mission but also seek greater vibrancy and more beauty for the neighborhood. Parking lots run counter to these goals. As the project is receiving significant public subsidy, it would seem necessary that the need is demonstrated.

As such we have the following questions:

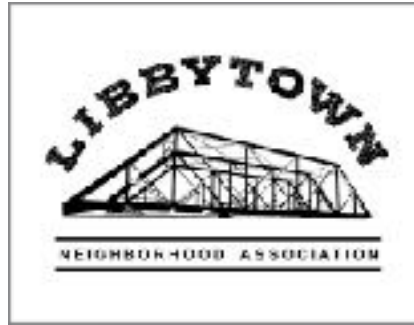
- Has there been a study of the amount of available on-street parking? There appears to already be an overabundance on St. James Street alone.
- Can the area designated for parking be put to better community use, such as a parklet. NB: The area where the Libbytown Community Garden now sits was at one time designated for parking Libbytown Neighborhood Association Portland Maine
- Has an assessment been as to the environmental impact of the parking?
  - Given the dire need for affordable housing, is there any indication that you would have any trouble filling the units if they did not come with parking? If no parking were provided and the lot was put to use as more housing, would those additional units rent? Would it strain the supply of on-street parking?
  - Why is de-bundling the parking (reducing rent for tenants who opt-out of parking) not part of the program?
  - Is there a fiduciary benefit to the development team for building parking?
- Have you made a workforce/demographic analysis to support the 1:1 parking ratio? For example, would all the tenants need ADA access?

- Given the cost of creating parking, how much of the project costs will parking consume?
- Is the project so well funded that the residents will not benefit from the long-term dividend from not having to maintain parking?
  - Given the high cost of maintaining parking (taxes, storm water fees, snow plowing, snow removal, re-paving, re-striping, etc.) can you provide figures of how much of the operating budget the parking will consume?
- Given the shortage of labor and specifically snow management personnel, what is the plan to conduct winter operations?
  - Given that parking lot plowing is most efficient in lots that contain no obstructions (e.g., trees) and contain ample space for snow storage, how do you intend to balance operational costs against a moderately scenic landscape that would provide shade.
- Has a TDM been prepared? Have you explored options in-lieu of parking such as car share, bike parking, etc? If not, doing so could save significant project costs if the ratio were lowered.
- Have you considered requesting the City designate an area for snow ban parking, for example on lightly used areas of St. James St, similar to on-street snow ban parking along the Eastern Promenade?
- If the parking for the co-operative housing is debundled then why is that not factored in?
- Parking on St. James Street will not only reduce the amount of impermeable surface but will also effectively narrow St. James Street which will reduce speeding along that stretch.

Given these concerns, we recommend a professional Traffic Demand Management study that gives strong consideration to utilizing on-street parking, reducing tenant parking to required ADA spaces; and to thus reduce the monthly rent accordingly.

With Regards,  
Maureen S. Morse  
LNA Chair

--  
[207-838-6120](tel:207-838-6120)  
[917-696-5649](tel:917-696-5649)  
[ZacharyBarowitz.com](mailto:ZacharyBarowitz.com)



January 26, 2022

Nathan Szanton  
The Szanton Company  
10 Free St.  
Portland ME, 04101

Dear Mr. Szanton,

The Libbytown Neighborhood is excited to see the development at Dougherty Field moving apace and appreciates the mix of incomes and demographics that it will bring to the neighborhood. However, we are concerned that the scheme seems to call for an overabundance of parking. As you certainly are aware, societal overdependence on motor vehicles has led to all manner of environmental, economic, and social problems. Furthermore, the LNA has been a strong supporter and advocate for this project. We support the mission but also seek greater vibrancy and more beauty for the neighborhood. Parking lots run counter to these goals. As the project is receiving significant public subsidy, it would seem necessary that the need is demonstrated.

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Libbytown Neighborhood Association Portland Maine

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With Regards,  
Maureen S. Morse  
LNA Chair

## RE: LNA Letter re parking at Douglass Street project

2 views

Subscribe ☐**Nathan Szanton**

Feb 17

to Maureen Morse, Emma Scudder, Damon Yakovleff, Fred's primary email, Zack Barowitz, [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov), [Azarro@portlandmaine.gov](mailto:Azarro@portlandmaine.gov), [rrodriguez@portlandmaine.gov](mailto:rrodriguez@portlandmaine.gov), [vpelletier@portlandmaine.gov](mailto:vpelletier@portlandmaine.gov), Carl Szanton, Amy Cullen, Liz Trice ([liztrice@gmail.com](mailto:liztrice@gmail.com)), Matthew Peters, Brian Eng ([bri.d.eng@gmail.com](mailto:bri.d.eng@gmail.com))

Dear Maureen,

As promised, attached is our response to your letter of January 26. We look forward to continuing conversation with LNA members and other neighbors at our Neighborhood Meeting on March 9.

As always, though, don't hesitate to get in touch with us at any time.

Thanks again for your letter.

Best,

Nathan Szanton



February 17, 2022

Ms. Maureen S. Morse, Chair  
Libbytown Neighborhood Association  
(by email)

**Re: Dougherty Court Parking Plan**

Dear Maureen,

Thank you very much for reaching out and sharing your thoughts about parking at our development at the site of former West School, which we've decided to name Dougherty Court. You raise important questions and highlight key reasons to avoid overbuilding parking. We agree with you that surface parking lots have many drawbacks, and we seek to create a walkable, pedestrian-oriented neighborhood that minimizes dependence on cars as much as possible. Our current site-wide plans are to construct only 69 parking spaces (56 for the apartments and 13 for the co-ops) for 120 units of housing (63 apartment and 57 co-op). That's an overall ratio of only 0.575 parking spaces per unit of housing. Please see our answers below to the questions you raised for additional explanation of our thought process.

*Has there been a study of the amount of available on-street parking? There appears to already be an overabundance on St. James Street alone.*

We have not formally studied the amount of available on-street parking, but like you, we have observed the availability of nearby on-street parking. It is only because of the on-street parking availability that exists nearby that we feel comfortable constructing only 69 parking spaces for 120 dwelling units.

*Can the area designated for parking be put to better community use, such as a parklet. NB: The area where the Libbytown Community Garden now sits was at one time designated for parking Libbytown Neighborhood Association Portland Maine*

While we would love to replace on-site parking with parklets, we feel that we have reduced on-site parking to the minimum amount that is commercially viable in this location. If we were downtown, we would have likely made a different decision.

*Has an assessment been made as to the environmental impact of the parking?*

Such an analysis will be included in the City's review of our site plan submission, as well as in MaineHousing's review of the site plan as we secure financing.

*Given the dire need for affordable housing, is there any indication that you would have any trouble filling the units if they did not come with parking? If no parking were provided and the lot was put to use as more housing, would those additional units rent? Would it strain the supply of on-street parking?*

We feel that constructing fewer on-site parking spaces and more apartments would run too much risk of harming our ability to lease the apartments. We feel that it would strain the supply of on-street parking, causing prospective residents to choose to live elsewhere. Importantly, though, if we experience that our surface parking is underutilized or unnecessary, we will consider adding additional housing to the site in a later development phase.

*Why is de-bundling the parking (reducing rent for tenants who opt-out of parking) not part of the program?*

Our rental housing building will offer 56 parking spaces for 63 units, which will mean that we cannot offer one parking space to each household. However, we are not planning on charging tenants an additional price for a parking space, due to concerns about the commercial viability of additional tenant charges.

*Is there a fiduciary benefit to the development team for building parking?*

Yes, we believe that creating more housing and less parking would tip the balance of parking scarcity too far to keep the building fully leased.

*Have you made a workforce/demographic analysis to support the 1:1 parking ratio? For example, would all the tenants need ADA access?*

Our plans have evolved and we no longer are planning to a 1:1 ratio, but the current 0.89:1 ratio is based on our experience leasing units at our four other Portland properties.

*Given the cost of creating parking, how much of the project costs will parking consume?*



The marginal cost of building parking, over and above the cost of landscaping that same area, is about \$8/sq. ft. Each parking space, including the requisite circulation space, consumes roughly 400 sq. ft.. Thus, the marginal cost of each parking space is about \$3,200. Multiplied by 56 parking spaces, that's about \$179,200. Out of an overall construction cost of our project of \$14.5 million, that's about 1.2%.

*Is the project so well funded that the residents will not benefit from the long-term dividend from not having to maintain parking?*

You're right that a long-term dividend in effect would be created by avoiding surface parking, but we feel that fewer on-site spaces impairs our ability to market the building. Again, if we find in the future that our parking is not being fully utilized, we may move to build additional housing in lieu of some of the surface parking.

*Given the high cost of maintaining parking (taxes, storm water fees, snow plowing, snow removal, re-paving, re-striping, etc.) can you provide figures of how much of the operating budget the parking will consume?*

We estimate the cost of maintaining parking spaces to be roughly equivalent to the cost of maintaining other hardscaped or landscaped areas.

*Given the shortage of labor and specifically snow management personnel, what is the plan to conduct winter operations?*

Current labor shortages certainly make it more difficult. At our other four Portland properties we are still able to hire snow management personnel and we expect a similar dynamic for Dougherty Court.

*Given that parking lot plowing is most efficient in lots that contain no obstructions (e.g., trees) and contain ample space for snow storage, how do you intend to balance operational costs against a moderately scenic landscape that would provide shade.*

It's important to us to build an attractive parking lot that does not simply read as a sea of parking. To that end, we are planning trees and other landscaping in the islands between parking bays.

*Has a TDM been prepared? Have you explored options in-lieu of parking such as car share, bike parking, etc? If not, doing so could save significant project costs if the ratio were lowered.*

No, but we will commission a TDM if requested by the Planning Board. As with all our properties, we encourage transportation by transit, bicycle, and car share and expect many residents to take advantage of these options. We will offer residents indoor, secure bicycle storage, as well as outdoor bike racks.

*Have you considered requesting the City designate an area for snow ban parking, for example on lightly used areas of St. James St, similar to on-street snow ban parking along the Eastern Promenade?*

We have not, largely because most of our residents will be parking on-site.

*If the parking for the co-operative housing is debundled then why is that not factored in?*

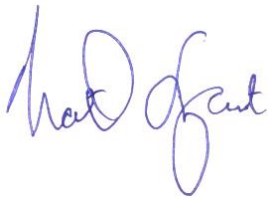
We're not quite sure what you mean by factored in, but it's true that our co-op development partners have made a different calculation regarding the need for on-site parking. We simply have a different philosophy about the importance of dedicated parking on site at this location.

*Parking on St. James Street will not only reduce the amount of impermeable surface but will also effectively narrow St. James Street which will reduce speeding along that stretch.*

That's no doubt true. We imagine that many of the co-op residents will park on St. James Street and deliver the narrowing effect that you mention.

Thank you again for reaching out. We value our relationship with LNA, and while we may not see completely eye-to-eye on this matter, we certainly hope to work together on this project wherever possible. If you'd like to discuss further, please feel free to reach out to me, or Carl Szanton (207-712-6191; [cszanton@szantoncompany.com](mailto:cszanton@szantoncompany.com)).

Sincerely,



Nathan S. Szanton  
President, The Szanton Company

**From:** Nathan Szanton

**Sent:** Monday, January 31, 2022 10:02 AM

**To:** Maureen Morse <[maureensheamorse@gmail.com](mailto:maureensheamorse@gmail.com)>

**Cc:** Emma Scudder <[scudder.emma@gmail.com](mailto:scudder.emma@gmail.com)>; Damon Yakovleff <[damon.yakovleff@gmail.com](mailto:damon.yakovleff@gmail.com)>; Fred's primary email <[fdillon@maine.rr.com](mailto:fdillon@maine.rr.com)>; Zack Barowitz <[zbarowitz@gmail.com](mailto:zbarowitz@gmail.com)>; [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov); 'Azarro@portlandmaine.gov'

<[Azarro@portlandmaine.gov](mailto:Azarro@portlandmaine.gov)>; [rrodriguez@portlandmaine.gov](mailto:rrodriguez@portlandmaine.gov); [vpelletier@portlandmaine.gov](mailto:vpelletier@portlandmaine.gov); Carl Szanton <[cszanton@szantoncompany.com](mailto:cszanton@szantoncompany.com)>; Amy Cullen <[acullen@szantoncompany.com](mailto:acullen@szantoncompany.com)>; Liz Trice ([liztrice@gmail.com](mailto:liztrice@gmail.com)) <[liztrice@gmail.com](mailto:liztrice@gmail.com)>; Matthew Peters <[matt@elysiancommunities.com](mailto:matt@elysiancommunities.com)>; Brian Eng ([bri.d.eng@gmail.com](mailto:bri.d.eng@gmail.com)) <[bri.d.eng@gmail.com](mailto:bri.d.eng@gmail.com)>

**Subject:** RE: LNA Request for Review of Parking at Douglass St. Project

Dear Maureen,

Thank you for your letter of January 26, on behalf of the Libbytown Neighborhood Association, about parking at our Douglass Street development. We agree with you that overbuilding of parking is poor planning on many levels.

Our team is reviewing your letter now, and will respond substantively within the next couple of weeks, via email. (We will copy everyone who is copied on this email.)

Thank you and the LNA for engaging with us. We appreciate that you took the time to gather your thoughts and share them with us.

All Best--

Nathan Szanton



Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

## Public Comment - 57 Douglass Street - Soil Conditions from Marsh/City Dump History

**George Rheault** <george.rheault@gmail.com>

Tue, Mar 22, 2022 at 10:25 AM

To: Planning Board <planningboard@portlandmaine.gov>, James Dealaman <jdealaman@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, jmy <jmy@portlandmaine.gov>, Abigail Reed <areed@portlandmaine.gov>

One of the biggest challenges for this site (other than its close proximity to the massive noise and pollution generated by the heavily traveled confluence of I-295, [Fore River Parkway](#) and Congress Street) is the condition of the underlying soils.

1.) Have planning staff explored in-depth any geo-technical studies produced by the City over time (when saving the West School was entertained before its demolition) or more recently by the applicant as part of its due diligence to date?

2.) Attached is a photo of the old West School. It is a very modest single-story structure yet it had major settlement issues associated with it during its relatively brief life, and the reasons why should get examined by planning staff if co-op buyers are going to be asked to take the risk of purchasing dwellings here. It cost the City of Portland somewhere around \$200,000 circa 2015 to demolish it (costs that presumably are not being recovered by the sale to the applicant) though the final cost and exactly when the demolition was officially completed is unknown though planning staff should be able to get that information relatively easy from other city departments.

3.) The former brickyards here were presumably attracted to the extensive clay deposits that once covered the wetlands marsh that existed here previous to European settlement (the excavations they made probably is why the city later turned it into a dump). What kind of implications for building dwellings on the site of former marshland should be explored by planning staff, especially since sea level rise may change the groundwater profile here in a few short decades (and very much within the duration of a 30-year mortgage)?

4.) Are there any city records which document the depth and extent of the city dump that once existed here (has anyone even seen a photo of the dump itself and when it officially stopped being used for that purpose)? Will pilings be necessary to properly stabilize and protect any structures and how much of the existing contents of the city dump will need to be removed in order to ensure long-term foundation stability here? It appears that small eruptions of dump waste have already migrated to the surface so obviously the "cover" on the dump is very superficial (hence why the West School had to be abandoned).

Please protect the financial and physical well-being of the future families residing here by asking the hard questions now.

Thank you.



137706\_2\_wtm.JPG  
4041K







Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

## Public Comment - 57 Douglass Street: Unresolved Right, Title & Interest - paper street obligations

George Rheault &lt;george.rheault@gmail.com&gt;

Tue, Mar 22, 2022 at 10:27 AM

To: Planning Board <planningboard@portlandmaine.gov>, James Dealaman <jdealaman@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, jmy <jmy@portlandmaine.gov>, Abigail Reed <areed@portlandmaine.gov>

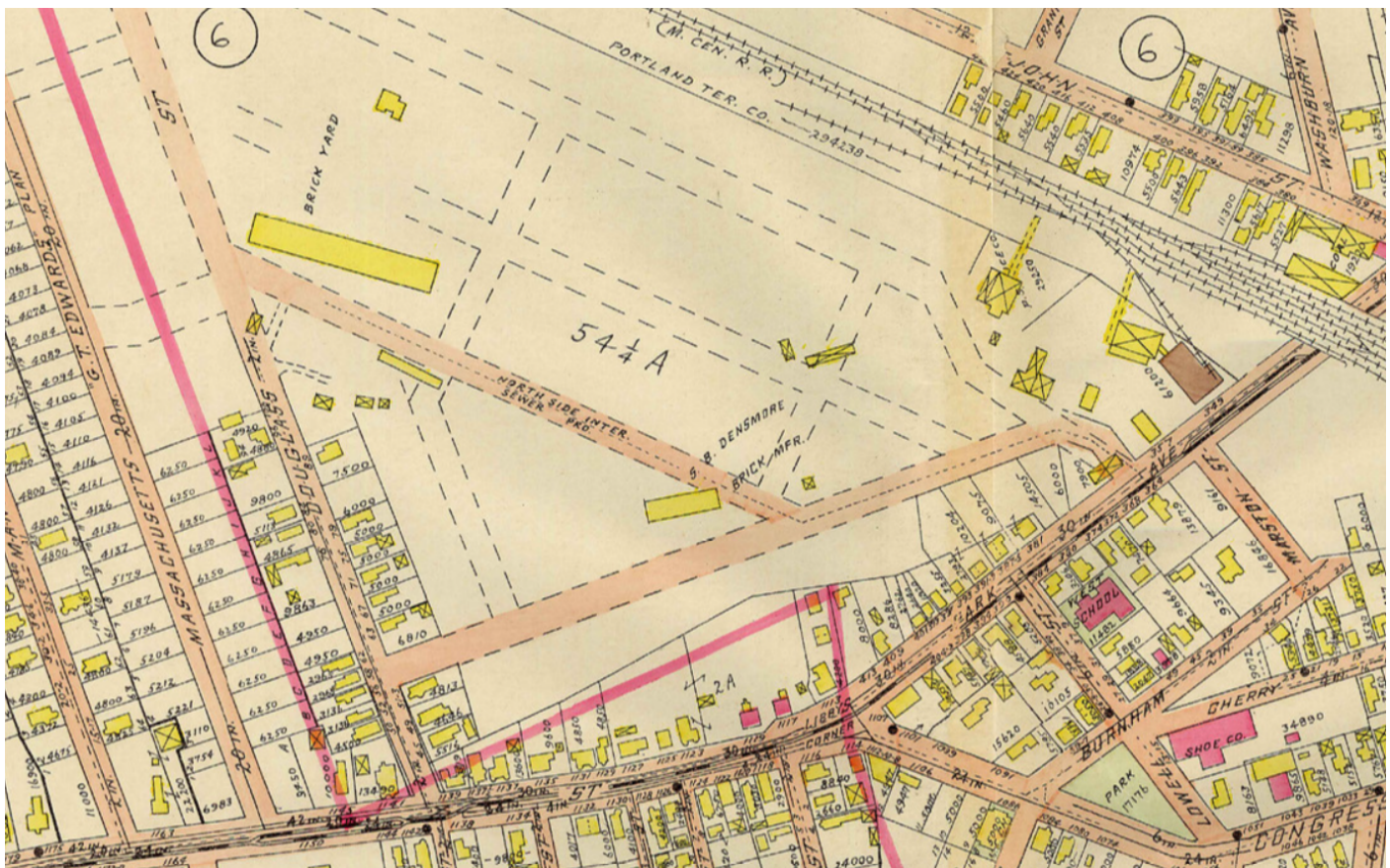
The issue of paper streets remains outstanding with respect to the application before you.

Considering how the Planning Department has recently held up another project in the vicinity (subdivision of 3 lots on an unimproved portion of Caroline Street) on the basis of questions about paper streets, it is really unconscionable that the applicant has not been asked similar questions, including providing justification from legal counsel on the status/question of the paper streets. It should be noted that the paper streets question was used as one excuse by city planning officials to keep the Caroline Street project from even having a Planning Board workshop scheduled to date.

The title survey provided by the applicant is clear as mud with respect to the possibility of still-in-force paper street claims. The Cumberland County Registry of Deeds reference is hard to navigate - the online access shows the relevant document ACTUALLY begins on Page 83 of Book 958 (no search for the Page 96 or 97 cited on the survey gets returned in the CCRD online database) from October 1915. The whereabouts and contents of the document referenced as "City Plan 406/63" on the title survey is also unknown, but should be produced to the public.

The buyers of these modest co-op units should be protected by the Planning Board process from future title problems that should be resolved and sorted out NOW.

Below is an excerpt from the 1913-1914 Richards Atlas for Portland showing the layout of the paper streets proposed by J.B. Brown & Sons for this area that later became a city dump. The complete source map can be found here: ["Richards Atlas : Plate 7" \(portlandlibrary.com\)](https://portlandlibrary.com/richards-atlas-plate-7)





MAINE REAL ESTATE TAX PAID

**WARRANTY DEED  
(Maine Statutory Short Form)**

**CHARLES LORING POST NO. 25 AMVETS**, a Maine nonprofit corporation, having a mailing address of 186 Washington Avenue, Portland, Maine 04101 ("Grantor"), for consideration paid, grants to **MAINE MODERN DEVELOPMENT INC.**, a Maine corporation, having a mailing address of 8 Chases Lane, Saco, Maine 04072, with Warranty Covenants, certain real estate situated in the City of Portland, County of Cumberland and State of Maine, being more particularly described in the Exhibit A attached hereto and made a part hereof.

Meaning and intending to convey and hereby conveying the same premises conveyed to the Grantor herein by Warranty Deed from Rita H. Orlando, Henry S. Orlando and Aladino A. Orlando to the Grantor dated January 11, 1966 and recorded in the Cumberland County Registry of Deeds in Book 2942, Page 257.

IN WITNESS WHEREOF, Charles Loring Post No. 25 AMVETS has caused this instrument to be executed this 6<sup>th</sup> day of February, 2018.

**CHARLES LORING POST NO. 25 AMVETS**

Martha Kelley

By: Richard Paiement for post 25 amvets  
Richard Paiement  
Its: Commander

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss.

February 6, 2018

Then personally appeared the above-named Richard Paiement, in his capacity as Commander of Charles Loring Post No. 25 AMVETS and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said Charles Loring Post No. 25 AMVETS.

Before me,

Martha Kelley  
Notary Public / Attorney At Law

Martha Kelley  
Print name:

My commission expires: \_\_\_\_\_



EXHIBIT A

A certain parcel of land situated on the westerly side of Washington Avenue in the City of Portland, County of Cumberland, and State of Maine, bounded and described as follows:

Beginning at a point on the westerly sideline of Washington Avenue at the southeast corner of the land of Charles Loring Post #25 AMVETS, which point is also the northeast corner of the land of David L. Harmon, and which point is located 54.77 feet south, as measured along the sideline of Washington Avenue, from the southerly sideline of Gould Street;

Thence, S 65° 24' 04" W by the land of Harmon 87.30 feet to the land now or formerly of Tristan L. Cuthbert (see Book 31504, Page 61);

Thence, N 23° 03' 15" W by the land of Cuthbert 6.00 feet;

Thence, N 65° 24' 04" E by the remaining land of the AMVETS 87.14 feet to Washington Avenue;

Thence, S 24° 35' 56" E by Washington Avenue 6.00 feet to the point of beginning.

Said parcel contains 523 square feet and is shown on "Boundary & Topographic Survey at 180 Washington Avenue, Portland, Maine made for record owner David Harmon July 22, 2016 Owen Haskell, Inc. Job No. 2016-188P" revised 06/21/17.

Subject to the right to the drainage easement described in a deed from Benedict Francis to Enrico Orlando dated April 16, 1920 and recorded in the Cumberland County Registry of Deeds in Book 1047, Page 394, subject to the covenant contained in said deed.

Received  
Recorded Register of Deeds  
Feb 08, 2018 08:12:14A  
Cumberland County  
Nancy A. Lane